

DIVISION FIVE  
SPECIAL PROVISIONS & TECHNICAL SPECIFICATIONS  
FOR  
SEACLIFF AREA MAIN REPLACEMENT, PHASE II

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## SECTION 500. DESCRIPTION OF WORK

The Contractor shall furnish, in accordance with the Soquel Creek Water District (SCWD) Standard Specifications and Standard Plans, these Special Provisions, and the Contract Documents, all labor, materials, tools, and equipment and perform all work required in:

- Installation of eight hundred twenty five (825)  $\pm$  lineal feet (LF) of 16-inch water main with valves and fittings on Searidge Dr., State Park Dr., and Center Ave.
- Installation of ninety four (94)  $\pm$  lineal feet (LF) of 16-inch water main within steel casing under the Union Pacific Railroad tracks on State Park Dr.
- Installation of thirteen hundred ninety five (1,395)  $\pm$  lineal feet (LF) of 12-inch water main with valves and fittings on Center Ave. between Broadway and Seaclyff Dr.
- Installation of eleven hundred feet (1,100)  $\pm$  lineal feet (LF) of 14-inch water main with valves and fittings on Seaclyff Dr. between North Ave. and Spreckles Dr..
- Installation eight hundred nineteen feet (819)  $\pm$  lineal feet (LF) of 12-inch water main and water main extension with valves and fittings on Spreckles Dr. between Seaclyff Dr. and Soquel Dr.
- Installation two hundred and sixteen (216)  $\pm$  lineal feet (LF) of 6-inch water main with valves and fittings on East St. between North Ave. and Center Ave., and from south East St. to Center Ave.
- Installation nineteen (19)  $\pm$  lineal feet (LF) of 8-inch water main extension on Hillcrest Ave. and across from 335 Spreckles Dr.
- Installation thirty-three (33)  $\pm$  lineal feet (LF) of 6-inch water main extension on Sea Terrace Way.
- Installation of three (3) in-line valves: one 6-inch valve on Searidge Dr., one 8-inch valve on North Ave., and one 8-inch valve on Spreckles Dr.
- Installation of a 1-inch Air Release Valve assembly
- Replacement of thirty-two (32) existing standard water service lines with 1-inch P.E. tubing.
- Relocation of existing standard water service to existing water main at 163 and 165 East St. with 1-inch P.E. tubing and customer side service line.
- Tie-over of two (2) existing standard water services with 1-inch P.E. tubing on Spreckles Dr.

- Reconnection of two (2) 2-inch existing fire & domestic combination services with 2-inch P.E. tubing, includes new gate valves.
- Reconnection of one (1) 4-inch fire service with a 4-inch gate valve on Spreckles Dr.
- Installation of two (2) James Jones J-3740 6-inch steamer fire hydrants with 6-inch PVC laterals and all appurtenances, to replace existing wharf head hydrants.
- Reconnection of two (2) existing 6-inch steamer fire hydrants, with 6-inch PVC lateral and all related valves and appurtenances.
- Tie-in to existing 6-inch and 12-inch AC water main at the intersection of McGregor Dr. and Searidge Dr.
- Tie-in to existing 8-inch water main on Hillcrest Dr.
- Tie-in to existing 8-inch PVC water main on Seaclyff Dr. and State Park Dr..
- Tie-in to existing 16-inch water main at butterfly valve on Center Ave..
- Three (3) tie-ins to existing 12-inch water main at butterfly valves on Center Ave.
- Tie-in to existing 6-inch water main on Center Ave. and East St.
- Tie-in to existing 8-inch AC water main on North Ave. at East St. by cutting in a tee with valves and appurtenances.
- Tie-in to existing 6-inch AC water main on Center Ave. and Santa Clara Ave.
- Hot tap tie-in to existing 8-inch AC water main on North Ave. and Seaclyff Dr. with 8" x 8" tapping sleeve and 8-inch valve, along with fittings and appurtenances.
- Tie-in to existing 4-inch water main on Sea Terrace Way at Seaclyff Dr.
- Hot tap tie-in to existing 8-inch water main on Spreckles Ave. with 8" x 8" tapping sleeve and 8-inch valve, along with fittings and appurtenances.
- Tie-in to existing 12" Tee at Spreckles Dr. near Soquel Dr.
- Abandonment of existing 2-inch, 4-inch, 6-inch and 8-inch water main in Searidge Dr., State Park Dr., Center Ave., East St., North Ave., and Seaclyff Dr. along with all associated valves.
- Application of eighty-six thousand twenty (86,020) ± square feet (SF) Type II Slurry Seal per Cal-Trans Standard Specifications, Section 37-2.
- All other incidental work.

The work site is located in Aptos, Santa Cruz County, CA.

## **SECTION 501. SPECIFICATIONS & PLANS**

The Contractor shall perform the work specified herein in accordance with the SCWD Standard Specifications and Standard Plans adopted by the Board of Directors on August 2, 1994, including subsequent updates published on the District's web page ([www.soquelcreekwater.org](http://www.soquelcreekwater.org)), Standard Specifications and Standard Plans of the California Department of Transportation, and Standard Specifications & Standard Plans of the County of Santa Cruz, California.

SCWD Standard Specifications and Standard Plans are available for purchase at the SCWD Office for an additional \$25 per set. (For more information, please call 831-475-8500.)

In case of conflict between the SCWD Standard Specifications and Standard Plans and these special provisions, the special provisions shall take precedence and be used in lieu of such conflicting portions.

## **SECTION 502. CHECKLIST FOR BIDDERS**

- Bid Opening is scheduled for 11/12/08 at 2:00 PM in the SCWD Board Room, 5180 Soquel Drive, Soquel, CA 95073.
- DO NOT REMOVE BID DOCUMENTS FROM THESE BOUND SPECIFICATIONS.** Unbound bid documents will result in immediate disqualification.
- SIGN & INCLUDE ALL ADDENDUM(S) WITH THE BID DOCUMENTS. Bid Documents with missing addendums will result in immediate disqualification.
- Include a bidder's bond, certified check, or cashier's check for the amount equal to 10% of the bid amount.
- Complete and Fill-Out the Yellow Sheets and Proposal in the Bid Documents. The lowest qualified competitive bidder shall complete the green sheets after the project has been awarded.

If you have any questions, please contact the Engineering Department at 831-475-8500.

**SECTION 503. BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES**

It is estimated that a maximum of 30 days shall pass from the date sealed bids are opened until the "Notice to Proceed" is issued.

The Contractor shall return the executed contract accompanied by bonds and insurance certificates following the award of the contract. The District shall issue a letter and Purchase Order authorizing the Contractor to begin construction. The Contractor shall begin work per the Start Date set on the "Notice to Proceed," unless the District has approved a time extension. The District may delay the start of work due to such factors as inclement weather, material availability, and other unforeseen factors.

**SECTION 503.1 CONTRACT TIME OF COMPLETION**

Contract Time of Completion shall be **125-working** days following the effective date of the Notice to Proceed.

The Contractor shall not perform work before 8:00 AM or after 5:00 PM each workday except for emergencies as defined in the SCWD Standard Specifications and Standard Plans. The Contractor shall not work on Saturdays, Sundays or holidays. For the purposes of this section the word "work" shall mean all noise producing activities including but not limited to starting of trucks or equipment, haulage, erection, construction, demolition, and transiting the access roads.

**SECTION 503.2 LIQUIDATED DAMAGES**

The District shall enforce Liquidated Damages per Section 108.09, "Assessment of Damages for Delay" of SCWD Standard Specifications if the Contractor fails to complete the in the time specified herewith.

<b>SCHEDULE OF LIQUIDATED DAMAGES</b>		
<b>ORIGINIAL AMOUNT OF CONTRACT</b>		<b>PER DIEM AMOUNT OF LIQUIDATED DAMAGES</b>
<b>FOR MORE THAN</b>	<b>UP TO AND INCLUDING</b>	
\$0.00	\$100,000.00	\$250.00
\$100,000.00	\$500,000.00	\$500.00
\$500,000.00	\$1,000,000.00	\$750.00
\$1,000,000.00	\$2,000,000.00	\$1,000.00
OVER \$2,000,000.00		AS SPECIFIED

The Contractor should refer to Division One, Sections 101-108, "General Conditions," of the SCWD Specifications for additional provisions.

### ***SECTION 503.3 PRECONSTRUCTION CONFERENCE***

The Contractor shall meet with the District at the District Office following award of contract, but prior to commencement of site work. The Contractor shall furnish to the District at the preconstruction meeting the following items:

- A list of names, titles, addresses and telephone numbers of the Contractor's personnel related to the project. Emergency and after-hours telephone numbers are to be included.
- A construction schedule setting forth the sequence in which construction will proceed. The schedule shall be a time-scale critical path type. Refer to Section 106.06, "Schedule" of SCWD Standard Specifications.
- Material Submittals, Safety Plan, Welders Certification, Etc. (5 copies minimum) per Section 107.10, "Submittals" of SCWD Standard Specifications.
- A Traffic Control Plan per Section 203, "Traffic Control" of SCWD Standard Specifications and these Special Provisions.
- A general notice describing the construction project and the expected impact on nearby residences. The Contractor shall also outline the Contractors' willingness to minimize inconveniences to local residences. The Contractor shall deliver (not mail) the notice to local businesses and residents in the area 5 days prior to the Start of Construction. The Contractor shall include on the notice the Contractor's telephone number and the contact person's name. The Contractor shall submit the notice to the District for approval prior to distribution.

### ***SECTION 503.4 PUBLIC MEETING***

The Contractor shall, if requested by the District, attend a public meeting prior to the start of construction. The time commitment for the public meeting shall be no more than 2 hours.

### ***SECTION 503.5 INSURANCE REQUIREMENTS***

The Contractor shall provide and maintain the following commercial general liability and automobile liability insurance:

#### **Coverage**

Coverage for commercial general liability and automobile liability insurance shall be at least as broad as the following:

1. Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 0001)
2. Insurance Services Office (ISO) Business Auto Coverage (Form CA 0001), covering Symbol 1 (any auto)

## **Limits**

The Contractor shall maintain limits no less than the following:

1. General Liability - One million dollars (\$1,000,000) per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit or products-completed operations aggregate limit is used, either the general aggregate limit shall apply separately to the project/location (with the ISO CG 2503, or ISO CG 2504, or insurer's equivalent endorsement provided to the Soquel Creek Water District) or the general aggregate limit and products-completed operations aggregate limit shall be twice the required occurrence limit.
2. Automobile Liability - One million dollars (\$1,000,000) for bodily injury and property damage each accident limit.

## **Required Provisions**

The general liability and automobile liability policies are to contain, or be endorsed to contain, the following provisions:

1. The Soquel Creek Water District, its directors, officers, employees, and authorized volunteers are to be given insured status (via ISO endorsement CG 2010, CG 2033, or insurer's equivalent for general liability coverage) as respects: liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor; premises owned, occupied or used by the Contractor; and automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the Soquel Creek Water District, its directors, officers, employees, or authorized volunteers.
2. For any claims related to this project, the Contractor's insurance shall be primary insurance as respects the Soquel Creek Water District, its directors, officers, employees, or authorized volunteers. Any insurance, self-insurance, or other coverage maintained by the Soquel Creek Water District, its directors, officers, employees, or authorized volunteers shall not contribute to it.
3. Any failure to comply with reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to the Soquel Creek Water District, its directors, officers, employees, or authorized volunteers.

4. The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.
5. Each insurance policy required by this agreement shall state, or be endorsed to state, that the insurance carrier or the Contractor shall not cancel coverage, except after thirty (30) days (10 days for non-payment of premium) prior written notice by U.S. mail has been given to the Soquel Creek Water District.

Such liability insurance shall indemnify the Contractor and his/her sub-contractors against loss from liability imposed by law upon, or assumed under contract by, the Contractor or his/her sub-contractors for damages on account of such bodily injury (including death), property damage, personal injury, completed operations, and products liability.

The general liability policy shall cover bodily injury and property damage liability, owned and non-owned equipment, blanket contractual liability, completed operations liability, explosion, collapse, underground excavation, and removal of lateral support.

The automobile liability policy shall cover all owned, non-owned, and hired automobiles.

All of the insurance shall be provided on policy forms and through companies satisfactory to the Soquel Creek Water District.

#### **Deductibles and Self-Insured Retentions**

Any deductible or self-insured retention must be declared to and approved by the Soquel Creek Water District. At the option of the Soquel Creek Water District, the insurer shall either reduce or eliminate such deductibles or self-insured retentions.

#### **Acceptability of Insurers**

Insurance is to be placed with insurers having a current A.M. Best rating of no less than A:VII or equivalent or as otherwise approved by the Soquel Creek Water District.

#### **Workers' Compensation and Employer's Liability Insurance**

The Contractor and all sub-contractors shall insure (or be a qualified self-insured) under the applicable laws relating to workers' compensation insurance, all of their employees working on or about the construction site, in accordance with the "Workers' Compensation and Insurance Act", Division IV of the Labor Code of the State of California and any Acts amendatory thereof. The Contractor shall provide employer's liability insurance with limits of no

less than \$1,000,000 each accident, \$1,000,000 disease policy limit, and \$1,000,000 disease each employee.

### **Responsibility for Work**

Until the completion and final acceptance by the Soquel Creek Water District of all the work under and implied by this agreement, the work shall be under the Contractor's responsible care and charge. The Contractor shall rebuild, repair, restore and make good all injuries, damages, re-erections, and repairs occasioned or rendered necessary by causes of any nature whatsoever.

The Contractor shall provide and maintain builder's risk insurance (or installation floater) covering all risks of direct physical loss, damage or destruction to the work in the amount specified in the General Conditions, to insure against such losses until final acceptance of the work by the Soquel Creek Water District. Such insurance shall insure at least against the perils of fire and extended coverage, theft, vandalism and malicious mischief, and collapse. The Soquel Creek Water District, its directors, officers, employees, and authorized volunteers shall be named insured on any such policy. The making of progress payments to the Contractor shall not be construed as creating an insurable interest by or for the Soquel Creek Water District or be construed as relieving the Contractor or his/her subcontractors of responsibility for loss from any direct physical loss, damage or destruction occurring prior to final acceptance of the work by the Soquel Creek Water District.

The Contractor shall waive all rights of subrogation against the Soquel Creek Water District, its directors, officers, employees, or authorized volunteers.

### **Evidences of Insurance**

Prior to execution of the agreement, the Contractor shall file with the Soquel Creek Water District a certificate of insurance (Acord Form 25-S or equivalent) signed by the insurer's representative evidencing the coverage required by this agreement. Such evidence shall include an additional insured endorsement signed by the insurer's representative and evidence of waiver of rights of subrogation against the Soquel Creek Water District (if builder's risk insurance is applicable). Such evidence shall also include confirmation that coverage includes or has been modified to include Required Provisions 1-5.

The Contractor shall, upon demand of the Soquel Creek Water District, deliver to the Soquel Creek Water District such policy or policies of insurance and the receipts for payment of premiums thereon.

### **Continuation of Coverage**

If any of the required coverages expire during the term of this agreement, the Contractor shall deliver the renewal certificate(s) including the general liability additional insured endorsement and evidence of waiver of

rights of subrogation against the Soquel Creek Water District (if builder's risk insurance is applicable) to the Soquel Creek Water District at least ten (10) days prior to the expiration date.

### **Sub-Contractors**

In the event that the Contractor employs other contractors (sub-contractors) as part of the work covered by this agreement, it shall be the Contractor's responsibility to require and confirm that each sub-contractor meets the minimum insurance requirements specified above.

### ***SECTION 503.6 HOLD HARMLESS AND INDEMNIFICATION***

To the fullest extent permitted by law, Contractor shall indemnify and hold harmless and defend Soquel Creek Water District, its directors, officers, employees, or authorized volunteers, and each of them from and against:

- a. Any and all claims, demands, causes of action, damages, costs, expenses, losses or liabilities, in law or in equity, of every kind or nature whatsoever for, but not limited to, injury to or death of any person including Soquel Creek Water District and/or Contractor, or any directors, officers, employees, or authorized volunteers of Soquel Creek Water District or Contractor, and damages to or destruction of property of any person, including but not limited to, Soquel Creek Water District and/or Contractor or their directors, officers, employees, or authorized volunteers, arising out of or in any manner directly or indirectly connected with the work to be performed under this agreement, however caused, regardless of any negligence of Soquel Creek Water District or its directors, officers, employees, or authorized volunteers, except the sole negligence or willful misconduct or active negligence of Soquel Creek Water District or its directors, officers, employees, or authorized volunteers;
- b. Any and all actions, proceedings, damages, costs, expenses, penalties or liabilities, in law or equity, of every kind or nature whatsoever, arising out of, resulting from, or on account of the violation of any governmental law or regulation, compliance with which is the responsibility of Contractor;
- c. Any and all losses, expenses, damages (including damages to the work itself), attorneys' fees, and other costs, including all costs of defense, which any of them may incur with respect to the failure, neglect, or refusal of Contractor to faithfully perform the work and all of the Contractor's obligations under the agreement. Such costs, expenses, and damages shall include all costs, including attorneys' fees, incurred by the indemnified parties in any lawsuit to which they are a party.

Contractor shall defend, at Contractor's own cost, expense and risk, any and all such aforesaid suits, actions, or other legal proceedings of every kind that may be brought or instituted against Soquel Creek Water District or its directors, officers, employees, or authorized volunteers.

Contractor shall pay and satisfy any judgment, award or decree that may be rendered against Soquel Creek Water District or its directors, officers, employees, or authorized volunteers, in any and all such suits, actions, or other legal proceedings.

Contractor shall reimburse Soquel Creek Water District or its directors, officers, employees, or authorized volunteers, for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided.

Contractor's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by the Soquel Creek Water District, or its directors, officers, employees, or authorized volunteers.

## **SECTION 504. GENERAL CONSTRUCTION**

### ***SECTION 504.1 REFERENCED SPECIFICATIONS***

The Contractor shall perform the work specified herein in accordance with Soquel Creek Water District Standard Specifications and Plans, adopted by the Board of Directors on August 2, 1994, including periodic updates that have been approved by the Chief Engineer and published on the District's web page ([www.soquelcreekwater.org](http://www.soquelcreekwater.org)), applicable provisions of the State of California Standard Specifications (CALTRANS) current edition, and the current edition of the County of Santa Cruz Design Criteria Manual when applicable.

### ***SECTION 504.2 ORDER OF WORK***

The District reserves the right to determine the order of work.

### ***SECTION 504.3 EXISTING CONDITIONS***

Existing utilities, structures and natural features, where known, have been indicated at their approximate locations on the Contract Plans. The locations of such features are intended only as an aid to the Contractor and in no way relieves them of the responsibility of determining and verifying the size and locations of all potential conflicts which might be encountered in the performance of the work, whether indicated on the plans or not.

The Contractor shall restore drainage patterns and facilities to pre-existing conditions.

#### ***SECTION 504.4 COUNTY REQUIREMENTS***

The District is in the process of securing a County Encroachment Permit. The Contractor shall review said permits prior to construction and shall comply with all requirements as stated in the permits. The Contractor shall comply with the General Provisions of the Encroachment Permit which are included in the appendices. The District shall pay all fees associated with necessary permits for this project.

The District may not accept the contract work until the Contractor has submitted a written statement (specifically referencing relative compaction and road surface restoration requirements) issued by the County of Santa Cruz, advising that the Contractor has complied with all County requirements and that the completed work is acceptable.

The Contractor is advised that the County may not permit the closure of any county maintained road. All roads included in the project are subject to remaining open. The Contractor shall include all costs associated with maintaining roads open to traffic in the contract unit or lump sum prices for other items of work. The District will not consider any additional compensation.

#### ***SECTION 504.5 TRAFFIC CONTROL***

##### **Description**

The Contractor shall provide the District with a traffic control plan five (5) days prior to the start of construction. The District and County of Santa Cruz shall approve the plan prior to beginning construction. The Contractor shall provide a plan in compliance with the State of California, Department of Transportation “California Manual on Uniform Traffic Control Devices for Streets and Highways,” latest edition. The Contractor shall ensure the plan be in general conformance with the provisions of Standard Plan No. T12, “Traffic Control System for Lane Closure on Multilane Conventional Highways” and/or Standard Plan No. T13, “Traffic Control System for Lane Closure on Two Lane Conventional Highways” of the Cal-Trans Standard Plans.

The Contractor shall provide flaggers that are trained in the proper fundamentals of flagging moving traffic as per CAL/OSHA Construction Safety Orders, Section 1599(f) and submit to the District the name of each flagger to be used and certified evidence that the flagger has been trained according to the current version of the “California Manual on Uniform Traffic Control Devices for Streets and Highways.”

The Contractor shall install “Construction Zone, Speed Limit 15 MPH” signs on semi-permanent posts prior to construction along the proposed construction area. The Contractor shall maintain the signs throughout construction of the project and shall not remove the signs until directed by the District. The Contractor shall cover other speed limit signs along the pipeline alignment. The Contractor shall ensure the covers remain until the “Construction Zone, Speed Limit 15 MPH” signs are removed.

The Contractor shall install informational warning signs and project signs on streets affected by the main installation and shall remain in place during the entire construction period. The Contractor shall maintain sign security and reinstall the signs if they fall or are knocked over.

The Contractor shall install the following signage along the pipeline alignment:

- Two (2) 30”x30” (C23) orange-background signs stating “ROAD WORK AHEAD.”
- Two (2) 42”x18” (C14) rectangular orange-background signs stating “END ROAD WORK.”

The Contractor shall be responsible for furnishing, mounting, installing, and maintaining all signage during duration of the project. The District Inspector shall determine the exact sign locations in the field. The Contractor shall install signs prior to the start of construction, and ensure the signs remain posted during the entire duration of the project.

The Contractor shall inspect traffic control signs, barricades, and delineators and shall maintain them in accordance with the approved traffic control plan throughout each workday.

The Contractor shall post “No Parking” signs as required 72 hours prior to construction at 50’ maximum spacing. The Contractor shall check and maintain said signs on a daily basis. The Contractor shall ensure “No Parking” signs clearly state the enforced dates and shall update them as necessary.

### **Measurement and Payment**

The Contractor shall include all costs associated with “Traffic Control” in the contract unit or lump sum prices for other items of work. The District will not consider any additional compensation.

## ***SECTION 504.6 DUST SUPPRESSION***

The Contractor shall implement a dust suppression plan if requested by the District Engineer. If a mechanical broom sweeper is used, it shall be equipped with water nozzles to minimize dust. At the end of each workday, the Contractor shall clean construction debris from the roadway.

### **Measurement and Payment**

The Contractor shall include all costs associated with “Dust Suppression” in the contract unit or lump sum prices for other items of work. The District will not consider any additional compensation.

## ***SECTION 504.7 PROTECTION OF PROPERTY & MATERIAL***

### **Description**

The Contractor shall contact each property and business owner having access along project corridor with a District approved letter (submitted to and approved by the District) and shall keep area residents informed of the plan of operation throughout the course of this contract.

The Contractor shall protect the road surface and shall restore said surface to an equivalent or better condition upon completion of all work. The Contractor shall make any interim repairs or maintenance that may be requested by the District Engineer or Inspector during the course of work.

The Contractor shall replace traffic striping and pavement markings destroyed or damaged during construction with temporary striping or markings acceptable to the District. The Contractor shall install temporary striping prior to reopening streets to traffic.

The Contractor shall permanently restore all traffic striping and pavement markings within seven days of final paving at the District’s direction.

The Contractor shall protect in place or remove and replace all existing utilities and public or private improvements (whether they are specifically noted on the Contract Plans or not) including but not limited to all berms, curbs, gutters, walkways, sidewalks, driveways, trail-ways, storm drains, landscaping materials, landscape irrigation, landscape electrical systems, walls and fences in place. The Contractor shall correct or replace any damaged utilities or improvements as part of the contract work. No additional compensation will be considered.

The Contractor shall not disturb existing survey monuments or benchmarks. The Contractor shall contact a registered civil engineer or land

surveyor to remove or replace monuments. The Contractor shall ensure monument ties be established prior to removal.

The Contractor shall replace complete concrete panels or between existing concrete joints during replacement of any concrete work. The Contractor shall replace colored concrete with colored concrete to match when concrete is removed.

#### **Measurement and Payment**

The Contractor shall include all costs associated with "Protection of Property and Materials" in the contract unit or lump sum prices for other items of work. The District will not consider any additional compensation.

### ***SECTION 504.8 SAFETY PLAN***

#### **Description**

In carrying out the work, Contractor shall at all times exercise all necessary precautions for the safety of employees appropriate to the nature of the work and the conditions under which the work is to be performed, and be in compliance with all applicable federal, state and local statutory and regulatory requirements including California Department of Industrial Relations (Cal/OSHA) regulations; and the U.S. Department of Transportation Omnibus Transportation Employee Testing Act. The Contractor shall prepare a Safety Plan in accordance with the provisions of Section 202.03.02, "Safety Plan" of SCWD Standard Specifications. The Contractor shall include in the Safety Plan provisions for handling hazardous and toxic materials, and the protection of all persons having access, authorized or not, to the work site. Such plan shall be submitted to and accepted by SCWD prior to starting excavation.

#### **Measurement and Payment**

The Contractor shall include all costs associated with "Safety Plan" in the contract unit or lump sum prices for other items of work. The District will not consider any additional compensation.

### ***SECTION 504.9 UTILITIES***

#### **Description**

Existing utility locations shown on Contract Plans are based on field survey and records furnished by utility companies. Where underground main conductors or conduits such as water, gas, sewer, telephone, electric power, or cable television are shown on the Contract Plans, the Contractor shall assume that a service lateral from each conductor or conduit extends to every parcel or property whether or not a service lateral is shown.

The Contractor shall verify sewer invert elevations prior to the start of construction. In locations where the water main crosses over the existing sewer main, the Contractor shall ensure a minimum vertical clearance of one foot exists between pipes.

The Contractor shall contact Underground Service Alert and nonmember companies or utilities at least two (2) working days prior to excavating any segment of the work. The Contractor shall be prepared to produce USA ticket number at the request of the District.

The Contractor shall provide utility offsets after the first marking has occurred. The Contractor shall deliver one copy of offset markings to the District no later than seven days after first marking occurred.

The Contractor shall excavate, expose, and determine ("Pothole") the location and depth of each potential interference at least two (2) days in advance, or a minimum of 500 feet ahead of trenching. Changes or delays caused by the Contractor's failure to perform "Potholing" and interference location work shall not be eligible for extra work, compensation, or time extension.

The Contractor shall immediately notify the District Engineer in writing, upon learning of the existence or location of any utility facility omitted from or shown incorrectly on the Contract Plans, or improperly marked or otherwise indicated. The Contractor shall provide full details as to depth, location, size, and function of the utility.

The Contractor shall not interrupt or disturb any utility facility without authority from the utility or order from the District. The Contractor shall furnish and place the necessary protection around the utility when protection is called for on the Contract Plans, visible to the Contractor, or marked as such. The Contractor shall install the utility protection at no additional expense to the District.

The proposed pipeline will be constructed adjacent to existing utilities including gas lines, water lines, sewer lines, electrical conduit, telephone conduit, and TV cable. The District has no information about the depth or compaction of trench backfill for said utilities. The Contractor shall remove and replace the failing trench backfill, compact the new backfill to 95% Relative Compaction, remove and replace any asphalt concrete pavement and other existing improvements, as required at no additional expense to the District.

The Contractor shall construct pipelines to avoid existing utilities. The Contractor shall increase cover to a maximum of 60 inches for the distance required to eliminate high spots if the minimum pipeline cover

conflicts with an existing utility. The Contractor shall notify the District Engineer in writing within two (2) days to schedule a meeting and discuss the extra cost necessary to install an air relief valve when high spots are unavoidable.

#### **Measurement and Payment**

The Contractor shall include all costs associated with “Utilities” in the contract unit or lump sum prices for other items of work. The District will not consider any additional compensation.

## **SECTION 505. TRENCHING, BACKFILL & PAVING**

### ***SECTION 505.1 GENERAL***

The Contractor shall perform trenching, backfill & paving in compliance with the SCWD Standard Plans S-14, S-15, & S-22, the current edition of the County of Santa Cruz Standards and Specifications, and the project specific County of Santa Cruz Department of Public Works Encroachment Permit when work is performed within the county right-of-way.

Where extended trenching operations in excess of 5-feet in depth occur, the Contractor shall provide trench bracing as specified by the Contractor’s Safety Engineer’s Safety Plan.

In the event that archaeological remains are found during excavation, the Contractor shall stop excavation in that area and contact the District Inspector or the District Engineer immediately. In the event that human remains are discovered, the Contractor shall stop excavation at that location and mobilize to a different portion of the project. The District shall then notify the County Coroner at (831) 454-2520 and treat any remains according to applicable State Law, including California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097. If there is doubt as to whether the remains are human or not, the District should first contact the Sheriff Dispatch office at (831) 471-1121 and request a Patrol Deputy be dispatched to the site to assess the remains. If needed, the Patrol Deputy will contact the County Coroner.

The Contractor shall remove unacceptable trench backfill material and discard it at a legal disposal site at no additional expense to the District.

### ***SECTION 505.2 TRENCHING***

The Contractor shall perform pipeline excavations using open-cut trenches, unless otherwise shown on the Contract Plans or directed by the

District. The Contractor shall install the minimum specified pipe cover and trench width as follows:

<b>PIPE SIZE</b>	<b>MINIMUM PIPE COVER</b>	<b>MINIMUM TRENCH WIDTH</b>
2" dia. pipe	36 inches	14 inches
6" dia. pipe	36 inches	18 inches
8" dia. pipe	42 inches	20 inches
12" dia pipe	42 inches	24 inches
14" dia pipe	42 inches	26 inches
16" dia. pipe	42 inches	28 inches

The Contractor shall saw-cut the pavement to produce a straight vertical face. Jackhammers or wheel cutters will not be allowed. The Contractor shall cut concrete to the nearest score mark or expansion joint if trenching and/or installation of piping and appurtenances require removal of existing concrete.

The Contractor shall backfill trenches at the end of each day. The Contractor may use heavy steel plates to cover trenches if the District Inspector has granted prior approval. The Contractor shall adequately brace the steel plates and apply cold mix at plate joints and edges (SCWD Section 309.05.05). The Contractor shall shim plate edges, if necessary, to prevent plates from rocking and shifting with vehicular traffic. The Contractor shall be responsible for providing plates capable of supporting vehicular traffic and with dimensions conforming to OSHA requirements. The minimum plate thickness is 1-inch.

***SECTION 505.3 BACKFILL***

The Contractor is advised that rock or unacceptable backfill material may be encountered during trenching operations. The Contractor shall furnish and install suitable bedding and backfill material in accordance with these contract documents when such material is encountered. The Contractor shall furnish and install bedding and backfill material at no additional expense to the District.

**Sand Envelope**

The Contractor shall install a sand envelope around the pipe per SCWD Standard Plans S-14 and S-15. The envelope shall include a minimum 4-inches of sand bedding with 12-inches of sand cover compacted to 95% RC. The Contractor shall install bedding as stated in Section 309.05.03 "Bedding" of SCWD Standard Specifications. The Contractor shall compact backfill material to not less than 90% RC when the trench is located outside a paved area or a road right-of-way.

### **Cross Trench Backfill**

The Contractor shall install 1-sack sand/cement slurry over the 12-inch sand envelope while performing work on all lateral trenches or when specified on the Contract Plans. The Contractor shall install backfill material in accordance with the current version of the County of Santa Cruz Department of Public Works Cross Trench Detail, Figure EP-2.

### **Longitudinal Trench Backfill**

The Contractor shall install sand or crushed aggregate compacted to 95% RC, or 1-sack sand/cement slurry over the 12-inch sand envelope while performing work on longitudinal trenches. The Contractor shall install backfill material in accordance with the current version of the County of Santa Cruz Department of Public Works Longitudinal Trench Detail, Figure EP-1 and SCWD Section 309.05.03, "Sand and Crushed Aggregate Backfill."

### **Compaction Testing**

The District shall administer all compaction testing. The Contractor shall assist the District during compaction testing at no additional expense to the District.

If additional compaction testing is required due to failing tests, the additional testing expense will be charged to the Contractor. If the Contractor requests testing of native material, additional testing expenses will be charged to the Contractor. A soils engineer shall prepare the compaction report.

## ***SECTION 505.4 PAVING***

### **Paving**

The Contractor shall refer to Section 310, "Paving" of SCWD Specifications and shall also comply with the County of Santa Cruz Department of Public Works Encroachment Permit. Pavement replacement shall be a minimum of 3" Type B asphalt concrete over 9" Class II aggregate backfill in longitudinal trenches and over sand/cement slurry backfill in cross trenches when work is performed within the county maintained right-of-way.

Longitudinal trench hot mix patch overlap shall be 12-inch minimum as indicated by the County of Santa Cruz Longitudinal Trench Backfill Detail, Figure EP-1 (Rev 12/05) included in the appendix of these special provisions. Cross trench hot mix patch overlap shall be 36-inch minimum as indicated by the County of Santa Cruz Cross trench Backfill Detail, Figure EP-2 (Rev 4/02) included in the appendix of these special provisions. Pavement replacement outside the county maintained right-of way shall be in accordance with Standard Plan S-15 or as stated in Section 505.2.

The Contractor shall restore cross trenches and longitudinal trenches in accordance with the County of Santa Cruz Department of Public Works Figures EP-1 and EP-2, attached herein and made part of these Special Provisions, when construction occurs on county maintained road right-of-ways.

The Contractor should refer to Figures EP-1 and EP-2 of the County of Santa Cruz Specifications for minimum pavement T-Section distances for paving within the county maintained right-of-way.

### **Fog Seal**

The Contractor shall apply a fog seal in accordance with Section 311, “Fog Seal” of the Soquel Creek Water District Standard Specifications to all new paving outside the county maintained right-of-way. The Contractor shall apply fog seal SS-1 oil at the rate of 0.05 gallons per square yard. The extents of the fog seal shall be from outer most edges of repaved area.

### **Road Striping**

The Contractor shall permanently restore all traffic striping and pavement markings destroyed or damaged during construction at the direction of the District. The Contractor should refer to Section 504, “Protection of Property and Material” of these Special Provisions.

### **Measurement and Payment**

The Contractor shall include all costs associated with “Trenching, Backfill and Paving” in the contract unit or lump sum prices for other items of work. The District will not consider any additional compensation.

## **SECTION 506. SLURRY SEAL**

### **General**

The Contractor shall apply a Type II Slurry Seal per Section 37-2, “Slurry Seal” of the Cal-Trans Standard Specifications. Slurry seal shall cover the repaved trench section and the adjacent street pavement resulting in an entire road width slurry seal along county maintained roads, or as otherwise indicated on the plans.

Where existing traffic striping is painted, the Contractor shall clean and tack coat all surfaces prior to applying the slurry seal. Where traffic striping is thermo-plastic, all thermo-plastic surfaces shall be ground off prior to applying the slurry seal. The Contractor shall restore all existing traffic striping damaged or removed during construction.

### **Measurement and Payment**

The Contractor shall include all costs associated with the application of Cal Trans Type II Slurry Seal in the contract unit price for “Type II Slurry Seal per Cal-Trans Standard Specifications, Section 37-2.” Payment for slurry seal application shall include all costs required in restoring roadway to existing condition. The District will not consider any additional compensation.

## **SECTION 507. CONCRETE WORK**

### **Description**

The Contractor shall refer to Section 308, “Concrete Structures” of SCWD Specifications for direction of repaving trench areas within existing concrete surfaces.

### **Measurement and Payment**

The Contractor shall include all costs associated with “Concrete Work” in the contract unit or lump sum prices for other items of work. The District will not consider any additional compensation.

## **SECTION 508. RAILROAD UNDERCROSSING**

### ***GENERAL***

This special provision shall be used in accordance with Section 306, “Casing and Duct Installations” of the SCWD Specifications and SCWD Standard Detail S-13. The District is currently applying for the permit to install the water line under the railroad. The Contractor shall be required to comply with Union Pacific Railroad’s representative in all manners regarding working within the Railroads property.

The railroad will be in operation during construction. A distance of 20 feet from sides of the track shall be maintained as free from staging equipment, materials, tools and vehicles unless the Contractor secures authorization from the Union Pacific Railroad’s representative.

The Contractor shall be required to meet the tolerance requirements for jacked casing as per Section 306 and shall use a survey grid to show the ground above the casing remains undisturbed.

Contractor shall install the 16-inch PVC water main (carrier pipe) through a steel casing (minimum 22-inch diameter) by method of bore and jack. 22-inch steel casing shall have minimum 3/8” thickness. 24-inch steel casing shall have minimum 7/16” thickness. Inside diameter of casing pipe

shall be no less than 2-inches greater than outside diameter of the carrier pipe. Minimum yield strength of the casing shall be 35,000 psi.

The carrier pipe shall be 16" C905 PVC with fiber-wound restraining couplings and a minimum pressure class of 200 psi. The Contractor shall submit CertainTeed with the Certa-Loc PVC restrained joint system or District approved equal. The carrier pipe shall extend a minimum of 6-ft beyond the casing on both sides. The ends of carrier pipe shall be prepared to insert into PVC bells with bell restraints or ductile iron fittings with mechanical joint restraints.

The 16-inch PVC carrier pipe shall be supported inside steel casing with Calpico Model M-8-SS (centering style) insulators or approved substitute. Insulators shall be installed 1-ft from end of pipe and spaced a minimum of 6 feet apart (2 insulators for segments up to 6-ft, 3 insulators for segments 7-ft to 14-ft, and 4 insulators for segments 15-ft to 20-ft).

Both ends of the casing shall be sealed with Calpico Model-C End Seals or approved substitute. The number of links in the end seals shall be as per manufacturer's recommendation. All voids in the seal shall be filled with silicon caulk.

The boring and receiving pits shall be shored in accordance with Section 306. The Contractor shall restore the pipe trench according to Santa Cruz County Standard Detail Figure EP-1 and should bid according to the maximum trench width. Contractor shall backfill the remaining excavation with native soil as per SCWD Section 309.05.04, except to 95% relative density. Backfill lifts shall be place not to exceed 12-inches. The pits shall have 9-inches of compacted base rock as per Figure EP-1. AC pavement shall be restored to match the depth of the existing AC pavement with a minimum depth of 3-inches.

### ***UPRR SAFETY INSTRUCTIONS***

The following Safety Instructions are contained in all miscellaneous railroad work contracts, work or service contracts, and major construction project contracts and shall be applicable for this project.

Safety of personnel, property, rail operations, and the public is of paramount importance in the prosecution of the work pursuant to this agreement. As reinforcement and in furtherance of overall safety measures to be observed by the Contractor (and not by way of limitation), the following special safety rules shall be followed:

- A. The Contractor shall keep the job site free from safety and health hazards and ensure that its employees are competent and adequately

trained in all safety and health aspects of the job. The Contractor shall have proper first aid supplies available on the job site so that prompt first aid services can be provided to any person that may be injured on the job site. The Contractor shall promptly notify the railroad of any U.S. Occupational Safety and Health Administration reportable injuries occurring to any person that may arise during the work performed on the job site. The Contractor shall have a non-delegable duty to control its employees, while they are on the job site or any other property of the railroad, to be certain they do not use, be under the influence of, or have in their possession any alcoholic beverage or illegally obtained drug, narcotic or other substance.

- B. The employee of the Contractor shall be suitably dressed to perform their duties safety and in a manner that will not interfere with their vision, hearing, or free use of their hands or feet. Only waist length shirts with sleeves and trousers that cover the entire leg are to be worn. If flarelegged trousers are worn, the trouser bottoms must be tied to prevent catching. The employees should wear sturdy and protective footwear. Employees shall not wear boots (other than work boots), sandals, canvas type shoes, or other shoes that have thin soles or heels that are higher than normal. In addition, the Contractor shall require its employees to wear personal protective equipment as specified by railroad rules, regulations, or railroad officials overlooking the work at the job site. In particular, the protective equipment to be worn shall be:
1. Protective headgear that meets American National Standard Z89.1 – latest revision. It is suggested that all hard hats be affixed with Contractor's or Subcontractor's company logo or name.
  2. Eye protection that meets American National Standard for occupational and educational eye and face protection, Z87.1 – latest revision. Additional eye protection must be provided to meet specific job situations such as welding, grinding, burning, etc.
  3. Hearing protection which affords enough attenuation to give protection from noise levels that will be occurring on the job site.
- C. All heavy equipment provided or leased by the Contractor shall be equipped with audible backup warning devices.
- D. If in the opinion of the railroad representative any of Contractor's or any of its Subcontractor's equipment is unsafe for use on the railroad's right of way, the Contractor, at the request of the railroad representative, shall remove such equipment from the railroad's right of way.

- E. If the railroad representative has given the Contractor permission to use certain equipment on any trackage at the job site, Contractor shall ensure that each and all of its employees responsible for operating any motive power including, without limitation, any tryrail equipment (such equipment hereafter being referred to as "motive power") on any trackage of railroad will be trained to know and understand, and will comply with railroad's operating rules applicable to the operation and use of such motive power.

In the event Contractor's employees use any such motive power to move any rail cars or other railbound equipment equipped with air brakes, Contractor shall further ensure that the employees are trained to know and understand and will comply with railroad's rules for handling such motive power, cars and equipment, and that Contractor's employees perform all required tests of the operating systems of any motive power, cars and other equipment before and after movement. Contractor acknowledges receipt of railroad's applicable rules governing:

1. operation and use of motive power, cars and other equipment, and
2. the movement of such motive power, cars and equipment by rail.

- F. In live track operations, a distance of 20 feet from track must be maintained unless the contract necessitates working in close proximity to the track. When doing so, the Contractor's employees and equipment must first have authorization of Union Pacific Railroad. When so authorized where work is in close proximity to tracks, a Union Pacific Railroad flagman must be present.

The Contractor's employees must be familiar with procedures to clear men and equipment from track area for approaching trains. In addition, the following safety procedures shall be adhered to by all employees:

1. Always be on the alert for moving equipment while working near any railroad tracks or facilities.
2. Do not step or walk on the top of the rail, frog, switches, guard rails or other track components.
3. In passing around ends of standing cars, engines, railroad machinery, and other ontrack equipment, leave at least one rail car length (50 feet) between yourself and the end of the equipment.
4. Avoid walking or standing on track at any time.
5. When it is necessary to walk or work on track, always keep a sharp lookout in both directions for approaching trains.

6. Before stepping or crossing tracks, look in both directions first. The same is true when walking around machinery and equipment on and about the tracks.
7. Do not sit on, lie under, or cross between cars except as required in performance of your duty, and only when track and equipment are under proper protection.
8. In multiple track territory, do not stand on one track while a train is passing on another.

### ***RAILROAD INSURANCE***

The Contractor shall be responsible for obtaining "Railroad Protective Liability Insurance" as required by the Union Pacific Railroad. Instructions for obtaining this insurance are included in the appendices. The Contractor shall submit proof of insurance with the submittal package. This insurance is in addition to the project insurance as required in the General Provisions herein.

### ***RESTORATION OF RAILROAD PROPERTY***

Upon completion of the pipeline installation work all rubbish, excess materials, temporary structures and equipment shall be removed and the railroad's right of way cleaned and restored to the satisfaction of the railroad's chief engineer or his authorized representative. Disturbed areas shall be seeded or otherwise protected to control erosion as specified by the chief engineer of the railroad.

### ***MEASUREMENT AND PAYMENT***

Measurement and payment for "Railroad Undercrossing" shall be considered as included in the contract unit or lump sum prices for:

- "Installation of Steel Casing Pipe at Railroad Undercrossing"
- "Installation of 16" Carrier Pipe at Railroad Undercrossing"
- "Boring and Receiving Pits for Railroad Undercrossing"

The bid prices shall include all labor, materials, tools, equipment and other incidentals required to install the casing and carrier pipe as shown on the plans and to restore State Park Drive and railroad property. No additional compensation will be considered.

## **SECTION 509. DISTRIBUTION PIPING AND APPURTENANCES**

### ***SECTION 509.1 GENERAL***

The Contractor shall supply materials in accordance with the published Standard Specifications and Standard Plans of the Soquel Creek Water District and the American Water Works Association (AWWA).

### ***SECTION 509.2 PIPING***

The Contractor shall install 6-inch & 8-inch diameter Pressure Class 200 C900 Poly Vinyl Chloride (PVC) pipe, 12-inch, 14-inch & 16-inch diameter Pressure Class 200 C905 Poly Vinyl Chloride (PVC) pipe and Pressure Class 350 C151 Ductile Iron pipe, and 200 psi SDR-9 2-inch (CTS) diameter Polyethylene tubing as distribution pipeline material. The Contractor shall provide material conforming to the requirements of AWWA C900, C905 and C151, or substitute approved by the District Engineer in writing.

### ***SECTION 509.3 FITTINGS***

The Contractor shall furnish ductile iron fittings in accordance with AWWA C110 and C153.

### ***SECTION 509.4 GATE VALVES***

The Contractor shall furnish gate valves in accordance with AWWA C509 and Section 307.02, "Gate Valves" of SCWD Standard Specifications for District approved materials and installation requirements. The Contractor shall refer to SCWD Standard Plan S-6, "Buried Valve Assembly" for graphical illustrations.

### ***SECTION 509.5 BUTTERFLY VALVES***

The Contractor shall furnish gate valves in accordance with AWWA C504 and Section 307.03, "Butterfly Valves" of SCWD Standard Specifications for District approved materials and installation requirements. The Contractor shall refer to SCWD Standard Plan S-6, "Buried Valve Assembly" for graphical illustrations.

### ***SECTION 509.6 THRUST RESTRAINTS***

#### **Pipe Restraints**

The Contractor shall install restraint harnesses bridging the push-on bell as the thrust restraint for PVC pipe. The Contractor shall use EBAA

Iron Megalug<sup>®</sup> Series 1500 or approved substitute subject to prior written approval by the District Engineer.

The Contractor shall install restraining gaskets in place of the standard push-on gasket as the thrust restraint for DI pipe. The Contractor shall use FIELD LOK<sup>®</sup> locking gaskets or approved substitute subject to prior written approval by the District Engineer.

### **Fittings**

The Contractor shall install Mechanical Joint (MJ) fittings and replace the follower gland with a thrust restraining follower gland assembly. The Contractor shall refer to Section 304, "Thrust Restraint" of SCWD Standard Specifications for District approved materials and installation requirements.

### **PCC Thrust Blocks**

The Contractor shall install Portland Concrete Cement (PCC) thrust blocks only to restrain fittings on existing pipelines. The Contractor shall refer to SCWD Standard Plan S-7, "Thrust Block Details" for graphical illustrations.

## ***SECTION 509.7 INSTALLATION***

### **General**

The Contractor shall inspect pipe and accessories, prior to installation, for damage and defects in materials. The Contractor shall reject damaged and defective materials, mark as such, and remove items from the job site at no additional expense to the District.

The Contractor shall perform subsurface exploration regarding existing utility locations/depths and soil conditions. The Contractor shall expose all utilities at locations where proposed improvements are shown to cross, at all proposed connections, and at intervals not to exceed 250 LF along parallel utilities. The Contractor shall perform exploration in advance of construction operations such that the final location of the proposed improvements may be adjusted prior to construction.

The Contractor shall not be eligible for extra work, compensation, or time extensions caused by the Contractor's failure to perform "Potholing" and interference location work.

The Contractor shall use appropriate fittings to adjust for depth conflicts between the proposed main with other existing utilities. In locations where the water main crosses over the existing sewer main, the Contractor shall ensure a minimum vertical clearance of one foot exists between pipes.

The Contractor shall construct pipelines to have a continuous upgrade or downgrade in order to minimize high spots. The Contractor shall install air and vacuum release valves when specified on the Contract Plans.

The Contractor shall perform main line pressure testing prior to connecting to any existing District main unless noted on Contract Plans. The District will not allow water use of any kind until mains, services, and fire hydrants have passed pressure testing, and have been chlorinated, flushed, and a bacteriological report has been approved in writing by the District Engineer.

The District shall operate existing valves for the Contractor. Under no circumstances shall the Contractor operate existing system valves.

The Contractor shall raise valve boxes, install extensions, and remove disinfection points to allow the District to activate the system.

#### **Locator Wire**

The Contractor shall install a minimum of 12-gauge THW or THWN solid copper locating wire, continuous for the entire length of pipe laid. The Contractor shall secure the wire to the pipe by tape at intervals not greater than 12 feet. The Contractor shall install the locator wire in accordance with Section 301.05.06, "Locator Wire" of SCWD Standard Specifications.

#### **Bitumastic Coating**

The Contractor shall field coat all buried nuts, bolts, flanges, and other exposed ferrous metal with a liberal coat of Christy's™ HD-50 Bituminous Coal Tar Coating or approved substitute subject to prior written approval by the District Engineer.

#### **Restrained Pipe Minimum**

The Contractor shall install, as a minimum, 40 LF of restrained pipe on each side of a restrained fitting or joint. Areas that require additional restrained piping will be shown on the Contract Documents or referenced in other sections of these Special Provisions.

### ***SECTION 509.8 AS-BUILT DRAWINGS***

#### **General**

The Contractor shall provide a complete set of As-Built drawings at project completion. As-Built drawings shall include vertical and horizontal location to the nearest foot. As-Built drawings shall show locations of all valves, reductions, and any deviation from design plans.

## **Measurement and Payment**

The Contractor shall include all costs associated with “As-Built Drawings” in the contract unit or lump sum prices for other items of work. The District will not consider any additional compensation.

## ***SECTION 509.9 TESTING AND DISINFECTION***

### **Hydrostatic Pressure & Leakage Testing**

The Contractor shall refer to Section, 301.05.07, “Hydrostatic Testing” of SCWD Standard Specifications, except that the allowable leakage will be calculated by the following formula:

$$L_a = \{LD\sqrt{P}\}/148,000$$

where:  $L_a$  = Allowable leakage

L = Length of the pipe run

D = Nominal diameter of the pipe in inches

P = Test pressure

The Contractor shall perform pressure testing in compliance with District requirements. The District Inspector shall be present during pressure testing. The Contractor shall notify the District two (2) days in advance of any pressure tests. Test pressure shall be a minimum of 150 psi or 150% of the service pressure for the pipeline, whichever is greater.

The Contractor shall perform all work necessary to locate and repair leaks to allowable levels as stated in Section 301.05.01(a), “Allowable Leakage” of SCWD Standard Specifications. Contractor shall perform repair work at no additional expense to the District. The Contractor shall also correct other defects discovered during such work. Thereafter, the Contractor shall repeat the pressure test until the pipelines meet specified requirements.

### **Chlorination and Bacteriological Testing**

This special provision takes precedence over Section 301.05.08, “Disinfection” of the SCWD Specifications. The Contractor shall perform all disinfection procedures in accordance with AWWA C600, C605, C651, and as specified herein.

All new facilities shall be chlorinated before being placed in service or connected to existing facilities. Chlorine may be applied by either calcium hypochlorite tablets, or direct chlorine solution feed, or in the case of cutting or tapping into existing mains, swabbed with a 1% chlorine solution. All other procedures require approval from the District Engineer.

The Contractor shall submit a Disinfection Plan per Section 107.10, "Submittals" of the SCWD Specifications. The Disinfection Plan shall address trench treatment, flushing, chlorination, sampling and bacteriological testing procedures, and dechlorination procedures per these special provisions and AWWA C651. The Contractor shall acknowledge that the Disinfection Plan will be subject to the availability of water. The project plans indicate recommended flushing locations selected to break up the flushing process into sections the District can accommodate under typical conditions. The Contractor shall submit this plan not less than five (5) working days prior to beginning this work.

The Contractor shall schedule all disinfections of water mains with the District not less than two (2) working days so the District may schedule handling of system valves. The Contractor shall not operate existing valves.

Locations of chlorine taps and blow-offs for flushing are shown on the project plans. If the Contractor selects or is required to feed a chlorine solution by the continuous feed method, the Contractor shall provide an allowance in his proposal for the cost of all chlorine taps shown plus at least two (2) additional taps that may be required by field conditions. Chlorination taps shall be installed as per Section 206.06, "Temporary Blow-Offs and Chlorination Taps" of the SCWD Specifications, and per SCWD Standard plan S-23.

#### Tablet Method

The tablet method cannot be used unless the pipes and appurtenances are kept clean and dry during construction and the pipe size does not exceed 16-inches. The use of the tablet method precludes preliminary flushing. If the trench and pipe are flooded by a storm or other conditions, or the materials are not kept clean, the Contractor shall use the Continuous Feed Method as directed by the District Inspector.

Calcium hypochlorite shall conform to AWWA B300 and be in the form of 5-gram tablets having not less than 65% of available chlorine. Use of calcium hypochlorite tablets intended for swimming pool disinfection is prohibited.

The Contractor shall provide and place tablets per AWWA C651. The District will slowly fill the water mains. The Contractor shall assist the District in purging air and monitoring all open hydrants and blow-offs. At least one hydrant or blow-off shall remain open until the District has closed the system valve.

The minimum initial chlorine concentration shall be 25 mg/L and the minimum contact time shall be 24-hours. The required chlorine residual

after 24-hours shall be “detectable” in all portions of the main. The District shall measure the chlorine residual. If a chlorine residual is not detected after 24-hours, the Contractor shall disinfect the main using the Continuous feed Method.

Hydrostatic testing may run concurrently within the first 4-hours after the water main is filled, but in the event there is leakage and repairs are necessary, additional disinfection shall be made by injection of chlorine solution into the line as provided hereinafter.

#### Continuous Feed Method

The continuous feed method consists of preliminary flushing of mains to remove particulates and filling to eliminate air pockets. The District will operate the existing valves. The Contractor shall assist the District in purging air and monitoring all open hydrants and blow-offs and provide necessary hoses, water trucks and other equipment to direct the discharge to a safe disposal point.

A 1% chlorine solution shall be prepared with sodium hypochlorite or calcium hypochlorite conforming to AWWA B300. The Contractor shall provide a chemical feed pump designed for injecting the chlorine solution and a chlorination tap at a point not more than 10-feet downstream from the beginning of the new main. The chlorine solution shall be injected to provide an initial concentration of 25 mg/L at the end of the water main and the minimum contact time shall be 24-hours. The required chlorine residual after 24-hours shall not be less than 10 mg/L of free chlorine in all portions of the main. The District shall measure the chlorine residual.

Upon completion of chlorination and a satisfactory test, the Contractor shall remove the service pipe, meter stop, and the meter box for the chlorination tap and restore the surface to its final condition as described elsewhere herein.

#### Final Flushing and Bacteriologic Sampling

The Contractor shall flush the water mains using the blow-off points indicated on the plans until the chlorine residual is less than 1.5 mg/L, as measured by the District. The District shall operate all existing valves. The Contractor shall neutralize the chlorinated water with a solution of sodium thiosulfate or a pre-approved substitute prior to disposing of disinfection water and direct the discharge to a safe disposal point. The Contractor shall furnish all water trucks, hoses, valves, neutralizing chemicals, and equipment to execute this work.

Upon completion of disinfection and flushing, the District Inspector or appointed Staff shall take a water sample from the new pipeline for bacteriological analysis. The Contractor shall allow a period of 2 working

days from the time the sample is taken until the results are available. Results for bacteriological samples taken for analysis after the noon on Thursdays will not be available until the beginning of the following week.

In lieu of availing himself of the District laboratory for bacteriological analysis, the Contractor shall have the option of hiring his own laboratory to perform the analysis. If the Contractor elects to use an independent laboratory, such laboratory shall have the prior approval of the Engineer. The District Inspector shall take the sample and deliver the sample to the Contractor in a sealed bottle with a District transmittal form. The Contractor shall then deliver the sample to the laboratory and return the transmittal form, chain-of-custody form, and a minimum of three (3) copies of the test results to the Engineer. The sample shall not be considered acceptable until the Contractor receives written approval from the Engineer.

#### Retesting

The Contractor shall perform the work necessary to clean the line of any debris or foreign material if the water sample fails the bacteriological test at no additional expense to the District. Thereafter, the Contractor shall provide assistance required for repeated disinfecting and testing, until the pipelines meet specified requirements.

#### Cutting into Existing Mains

Following the opening of an existing domestic water main, the interior of all accessible new and existing pipes and fittings shall be swabbed with a 1% hypochlorite solution. The District shall flush the section from two directions toward the cut-in, if possible.

#### Safety and Traffic Control

The Contractor shall be responsible for providing required safety equipment, clothing, and eye protection for handling of disinfection chemicals and chlorinated water, and shall be responsible for responding to chemical spills on personnel and property.

The Contractor shall provide traffic control during disinfection procedures as specified elsewhere herein and shall extend this service for District Staff assisting in the procedure without any additional compensation.

#### **Measurement and Payment**

The Contractor shall include all costs associated with "Distribution Piping and Appurtenances" in the contract unit or lump sum prices for:

- Installation of 16" Class 200 PVC and Class 350 Ductile Iron Water Main with 16" Valves and Fittings on Searidge Dr., State Park Dr., and Center Ave.

- Installation of 16” Carrier Pipe at Railroad Undercrossing
- Installation of 12” Class 200 PVC water main with 12” Valves and Fittings on Center Ave.
- Installation of 14” Class 200 PVC water main with 14” Valves and Fittings on Seacliff Dr.
- Installation of 12” Class 200 PVC Water Main with 12” Valves and Fittings on Spreckles Dr. with 12” Water Main Extension
- Installation of 6” Class 200 PVC Water Main with 6” Valves and Fittings on East St. between Center Ave. and North Ave., with Main Extension at Center Ave. and East St.
- Installation of 8” Class 200 PVC Water Main Extension on Hillcrest Ave. and 335 Spreckles Dr.
- Installation of 6” Class 200 PVC Water Main Extensions on East St. and Sea Terrace Way
- Installation of 6” In-line Gate Valve on Searidge Dr.
- Installation of 8” In-line Gate Valve on North Ave.
- Installation of 8” In-line Gate Valve on Spreckles Dr.
- Installation of 1” SCWD Air Release Valve assembly

Payment for pipeline installation shall include all related gate valves, fittings, and appurtenances as shown on the Contract Plans and as directed in these special provisions. The District will not consider any additional compensation.

## **SECTION 510. WATER SERVICES PIPING AND APPURTENANCES**

### ***SECTION 510.1 GENERAL***

For purposes of this section and those of SCWD Standard Specifications, the following terms shall be defined:

#### **Replacement**

REPLACEMENT OF EXISTING DOMESTIC SERVICES shall include but not be limited to, tapping the new water main, installation of new polyethylene (PE) service line, reconnection of meters to the new service line, reconnection of customer plumbing to meter, installation of new meter boxes, and restoration of the area surrounding the meter box to a condition equal to or better than that prior to start of construction.

The Contractor shall relocate meters located outside the Right-of-Way to the Right-of-Way in accordance with the SCWD Standard Specifications and Standard Plans.

Services replaced shall include bringing the meter to the proper elevation and alignment in the meter box and making the necessary adjustments to reconnect the customer's plumbing to the meter.

### **Reconnection**

RECONNECTION OF EXISTING DOMESTIC SERVICES shall include but not be limited to, tapping the new main and connecting the existing service line to the new service line. The Contractor shall install a new 2-inch tapping saddle and 2-inch AWWA Gate Valve when a 2-inch Combination Domestic and Fire Service reconnection is specified.

The Contractor should refer to Section 206.03, "Replace Existing Service" and Section 206.04, "Reconnect Existing Service," and Standard Plans S-3, S-4, S-18, and S-20 of SCWD Standard Specifications and Standard Plans for additional guidelines and materials.

## ***SECTION 510.2 MATERIALS***

### **Service Tubing**

The Contractor shall install 1-inch diameter (Copper Tubing Size) PE tubing conforming to AWWA C901 for Pressure Class 200 and Dimension Ratio of 9 as the service pipe from the new main to the customer's water meter when replacing a 1" domestic service with a 5/8" x 3/4" meter or a 1" meter. The Contractor should refer to SCWD Standard Plan S-3 for graphical specifications.

The Contractor shall install 2-inch diameter (Copper Tubing Size) PE tubing conforming to AWWA C901 for Pressure Class 200 and Dimension Ratio of 9 as the service pipe from the new main to the customer's water meter when replacing a 2" fire and domestic combined service with two 5/8" x 3/4" meter. The Contractor should refer to SCWD Standard Plan S-20 for graphical specifications.

### **Service Piping**

The Contractor shall install 2-inch diameter (Copper Tubing Size) PE tubing conforming to AWWA C901 for Pressure Class 200 and Dimension Ratio of 9 as the service pipe from the new main to the customer's water meter when replacing a 2" domestic service. Services larger than 2" in diameter, shall require Ductile Iron or PVC, Class 200 piping. The Contractor should refer to SCWD Standard Plan S-18 and S-20 for graphical specifications.

### **Customer Piping**

The Contractor shall install 3/4" minimum diameter Schedule 40 PVC pipe as the service line between the meter and the reconnection point to the

existing customer service line, where required. Where customer service line size exceeds ¾", the Contractor shall match existing size. The Contractor shall maintain a minimum of 18-inches of cover over the customer service piping.

### **Fittings**

The Contractor shall install a Mueller H-10889 Meter Bushing when a 5/8" x 3/4" meter is installed.

The Contractor shall use fittings that comply with those listed in Section 302, "Service Pipe Materials" of SCWD Standard Specifications.

### **Meters, Boxes, and Lids**

The District shall supply service meters and the Contractor shall install meters. The Contractor shall supply and install high density reinforced concrete Christy B-9 Utility Boxes (or approved equal) with fibrelite FL9D lids (or approved equal) on services with 5/8" x 3/4" meters. Contractor shall supply and install Christy B-16 Utility Boxes (or approved equal) with fibrelite FL16D lids (or approved equal) on services with 1" meters. For services with meters larger than 1", the Contractor shall supply and install Christy B-30 Utility Boxes (or approved equal) with fibrelite FL30D lids (or approved equal), or as directed by the District Engineer.

The Contractor shall install a 6-inch crushed rock base and cast iron covers for meter boxes located in shoulder or driveway.

### ***SECTION 510.3 INSTALLATION GUIDELINES***

The Contractor shall relocate meters located outside the Right-of Way to within the Right-of-Way or as directed by the District Inspector.

The Contractor shall install a new meter box for each service unless the District Inspector specifies otherwise. The Contractor shall remove and discard existing meter boxes.

The Contractor shall perform Service Installations in accordance with Section 302, "Service Pipe Materials," Section 206.03, "Replace Existing Service" and Section 206.04, "Reconnect Existing Service" of SCWD Standard Specifications.

The Contractor should refer to the schematic requirements of service installations illustrated on SCWD Standard Plans S-3 and S-4. The Contractor shall be responsible for verifying all meter box service dimensions in the field. The Contractor shall install meter boxes in the sidewalk and replace the concrete sidewalk square from joint-to-joint on streets with a sidewalk.

### **Measurement and Payment**

The Contractor shall include all costs associated for “Water Services-Piping and Appurtenances” in the contract unit prices for:

- Replacement of Single Domestic Water Service
- Relocation of Single Domestic Water Service to Existing Water Main at 163 and 165 East Street.
- Tie-over Reconnection of Single Domestic Water Service at Spreckles Dr.
- Reconnection of 2” Domestic and Fire Service with 2” Gate Valve
- Reconnection of 4” Fire Service

The District will not consider any additional compensation.

## **SECTION 511. FIRE HYDRANT INSTALLATIONS**

### ***SECTION 511.1 GENERAL***

The Contractor shall install 6-inch Steamer fire hydrants as shown on the Contract Plans. The Contractor shall install fire hydrants in conformance with installation requirements listed in Section 307.05, “Fire Hydrants” of SCWD Standard Specifications. Hydrostatic testing and disinfection shall be in accordance with Section 509.9 of these specifications.

The Contractor shall supply James Jones model J-3740, wet barrel design fire hydrants, in accordance with AWWA C503. The Contractor shall provide bronze protector with a pentagonal nut. Plastic Caps will not be accepted.

The Contractor should refer to Section 307.05, “Fire Hydrants” of SCWD Standard Specifications and Standards S-9 and S-10 for additional installation specifications.

The Contractor shall install traffic barriers made of 4-inch diameter galvanized iron pipe to protect against traffic and break-off conditions when shown on the Contract Plans. Traffic barriers shall be 36 inches in height.

The District Inspector shall field locate fire hydrants and traffic barriers with the Contractor prior to installation.

### **Measurement and Payment**

The Contractor shall include all costs associated with “Fire Hydrant Installations” in the contract unit prices for:

- Installation of James Jones J-3740 6-inch Steamer Fire Hydrant with Lateral and all Appurtenances, and Removal of Existing Wharfhead Hydrants and Appurtenances
- Reconnection of 6-inch Steamer Fire Hydrant with Lateral and all Appurtenances

Payment for fire hydrant installation shall include all related gate valves, fittings, pipe, traffic bollards, concrete pads and appurtenances as shown on the Contract Plans and SCWD Standards S-9 & S-10. Payment shall also include costs associated with the removal and relocation of any mailboxes, vegetation, or other obstacles where hydrants are placed. The District will not consider any additional compensation.

## **SECTION 512. CONNECTIONS TO EXISTING MAINS**

### ***SECTION 512.1 GENERAL***

The Contractor shall notify the District at least five (5) working days in advance of shutdowns that affect commercial areas. Non-Commercial and Residential areas require three (3) working days notice.

The District shall notify surrounding customers affected by the shutdown and operate all valves.

The Contractor shall perform connections per SCWD Standard Specifications and Standard Plans, these Special Provisions, and Contract Plans. Disinfection shall be in accordance with Section 509.9 of these specifications.

The Contractor shall also refer to Section 206.05, “Tie-Ins” of SCWD Standard Specifications and the Contract Documents for additional guidelines.

### **Measurement and Payment**

The Contractor shall include all costs associated with “Connections to Existing Mains” in the contract unit or lump sum prices for:

- Tie-in to Existing 6" and 12" Water Main at McGregor Dr. and Searidge Dr.
- Tie-in to Existing 8" Water Main at Hillcrest Dr
- Tie-in to Existing 8" Water Main at Seaclyff Dr. and State Park Dr.
- Tie-in to Existing 16" Water Main at Butterfly Valve on Center Ave.

- Tie-in to Existing 12" Water Main at Butterfly Valve on Center Ave. at Broadway and El Camino Del Mar
- Tie-in to Existing 6" Water Main at Center Ave. and East St.
- Tie-in to Existing 8" Water Main at North Ave. and East St.
- Tie-in to Existing 6" Water Main at Center Ave. and Santa Clara Ave.
- 8" Hot Tap to Existing 8" Water Main at North Ave. and Seacliff Dr.
- Tie-in to Existing 4" Water Main at Sea Terrace Way and Seacliff Dr.
- 8" Hot Tap to Existing 8" Water Main at Spreckles Dr. near Seacliff Dr.
- Tie-in to Existing 12" Tee at Spreckles Dr. near Soquel Dr.

The District will not consider any additional compensation.

## **SECTION 513. ABANDONMENTS**

### ***SECTION 513.1 GENERAL***

The Contractor shall notify the District at least five (5) working days in advance of shutdowns that affect commercial areas. Non-Commercial and Residential areas require three (3) working days notice.

The District shall notify surrounding customers affected by the shutdown and operate all valves.

The Contractor shall perform abandonments as shown on the Contract Plans following the installation of all replacement piping.

Abandonments shall include, and not be limited to, water mains, services, valves, and fittings. Work includes, but is not limited to, cutting and capping of abandoned mains.

The Contractor shall perform abandonments in accordance with Section 206.08, "Abandonment" of SCWD Standard Specifications and as directed on plans.

The Contractor shall restore pavement to pre-existing condition or better when abandoned main is in existing AC paved area. The Contractor shall remove and replace existing concrete from joint to joint when abandoned main is in PCC area. The Contractor shall provide dowels between new concrete and existing concrete area.

### **Measurement and Payment**

The Contractor shall include all costs associated with “Abandonments” in the contract unit or lump sum prices for:

- Abandonment of Existing Water Mains and Valves.

The District will not consider any additional compensation.

## **SECTION 514. APPENDIX**

County of Santa Cruz Department of Public Works “Longitudinal Trench Detail”, Figure EP-1, REV. 12/05.

County of Santa Cruz Department of Public Works “Cross Trench Detail”, Figure EP-2, REV. 4/02.

County of Santa Cruz Department of Public Works Encroachment Permit “General Provisions.”

Union Pacific Railroad Insurance Information.

MARSH Application Form for Railroad Protective Liability Insurance.

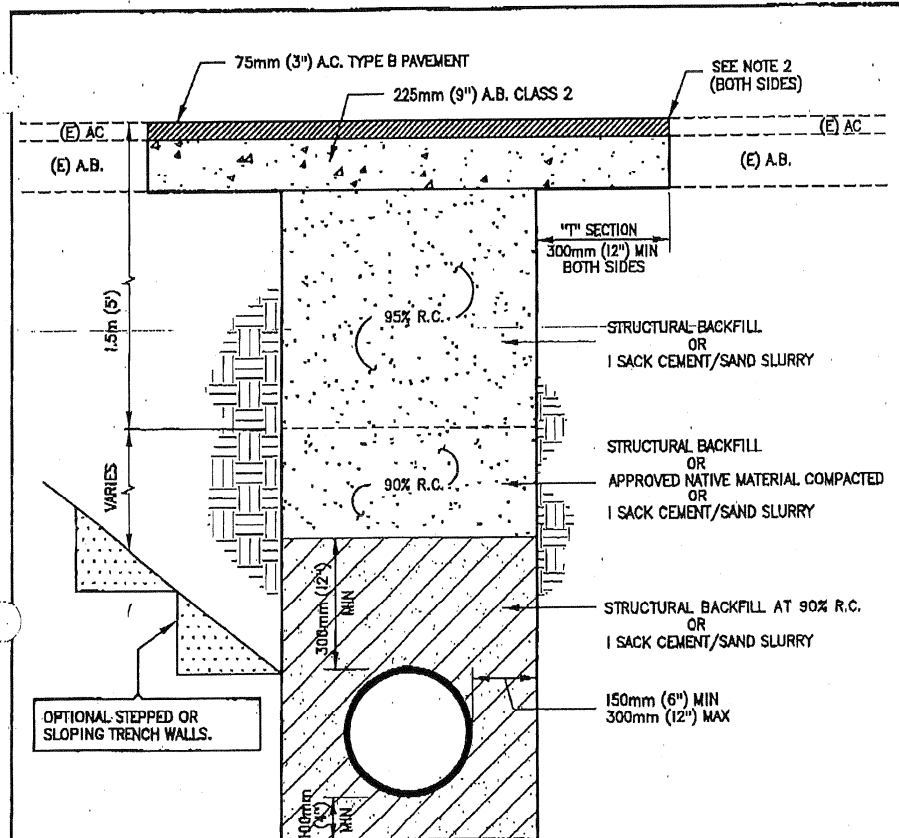
**SECTION 514.1 COUNTY OF SANTA CRUZ DEPARTMENT OF PUBLIC WORKS "LONGITUDINAL TRENCH DETAIL", FIGURE EP-1, REV. 12/05**

AUG. -09' 06 (WED) 15:40

S. G. CO. PUBLIC WORKS

TEL: 831 434 2363

P. 002



OPTIONAL STEPPED OR SLOPING TRENCH WALLS.

1. PAVEMENT SHALL BE REPLACED IN KIND. HOWEVER, MINIMUM STANDARDS ARE AS FOLLOWS:
  - A. PAVED ROADS - 75mm (3") A.C. TYPE B OVER 225mm (9") PRIME COATED A.B. CLASS 2.
  - B. NON-PAVED ROADS - SINGLE SEAL COAT OVER 150mm (6") A.B. CLASS 2 IN TRENCH AREA, THEN SINGLE SEAL COAT ENTIRE ROAD SECTION.
2. CUT EXISTING PAVEMENT TO PRODUCE A STRAIGHT VERTICAL FACE AGAINST WHICH TO BUTT THE TRENCH PAVEMENT.
3. LONGITUDINAL TRENCHES WITHIN A PAVED AREA OR A ROAD RIGHT-OF-WAY SHALL BE BACKFILLED AS SHOWN ABOVE.
4. TRENCHES OUTSIDE A PAVED AREA OR A ROAD RIGHT-OF-WAY SHALL HAVE BACKFILL COMPACTED TO NOT LESS THAN 90% RELATIVE COMPACTION.
5. AN INSPECTOR, APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE ON SITE DURING ALL COMPACTION WORK TO OBSERVE UNIFORM COMPACTION METHODS AND MATERIALS.
6. IF THE EDGE OF THE ASPHALT TRENCH CAP IS WITHIN 600mm (2 FEET) OF THE EXISTING EDGE OF PAVEMENT OR LIP OF GUTTER, THE REMAINING PAVEMENT SHALL BE REMOVED AND THE TRENCH PAVING SHALL BE EXTENDED TO THE EDGE OF PAVEMENT OR LIP OF GUTTER.

**LONGITUDINAL TRENCH DETAIL**

REV 12/05

FIG EP-1



## **SECTION 514.3 COUNTY OF SANTA CRUZ DEPARTMENT OF PUBLIC WORKS ENCROACHMENT PERMIT "GENERAL PROVISIONS"**

### **GENERAL PROVISIONS**

1. **Definition:** This permit is issued pursuant to Chapter 9.70 of the Santa Cruz County Streets and Roads Code. The term "encroachment" is used in this permit as defined in said chapter 9.70 of said Code, except as otherwise provided for public agencies and franchise holders. This permit is revokable on five days notice.
2. **Acceptance of Provisions:** It is understood and agreed by the permittee that the doing of any work under this permit shall constitute an acceptance of the provisions.
3. **No precedent established:** This permit is granted with the understanding that this action is not to be considered as establishing any precedent on the question of the expediency permitting certain kinds of encroachment to be reckoned within right of way of County highways.
4. **Notice prior to starting work:** Before starting work, the permittee shall notify the Director of Public Works or other designated employee. Such notice shall be given at least 48 hours in advance of the date work is to begin. Unless otherwise specified, all work shall be performed on weekdays and during normal working hours of the grantor's inspector.
5. **Keep permit on work:** The permit shall be kept at the site of the work and must be shown to any representative of the grantor or any law enforcement officer on demand.
6. **Permits from other agencies:** The party or parties to whom this permit is issued shall, whenever the same is required by law, secure the written order of consent of any work hereunder from the Public Utilities Commission of the State of California or any other public board having jurisdiction and this permit shall be suspended in operation until such order of consent is obtained.
7. **Protection of traffic:** Adequate provisions shall be made for the protection of the traveling public. Barricades shall be placed with amber lights at night; also, flagmen employed. All of this may be required by the grantor for the particular work in progress. Warning signs, lights, and devices shall be placed in conformance with the requirements of the State of California, Department of Public Works.
8. **Minimum interference with traffic:** All work shall be planned and carried out so that there will be the least possible inconvenience to the traveling public except for the specific work permitted. One lane shall remain open to the traveling public at all times. Road closures are not allowed, except with special permission from the Director of Public Works.
9. **Storage of material:** No material shall be stored within two feet of the edge of the pavement or traveled way or within the shoulder line where the shoulders are wider than five feet. No supplies or equipment shall be stored on the highway until permittee is ready to start work.
10. **Cleanup right of way:** Upon completion of the work, all brush, timber, scraps, and material shall be entirely removed and the right of way left in as presentable condition as before work started.
11. All construction shall conform with the current edition of the California Division of Highways standard plans and specifications, and the design criteria of the County of Santa Cruz. In case of conflict, the conditions of this permit will take precedence over the standard specifications.
12. Trench Safety has not been checked and is NOT IMPLIED with this permit. For current Codes and Regulations contact: CAL/Osha (408) 452-7288 and for utility locations contact: USA Underground Service Alert 1-800-227-2600.
13. **Future moving of installation:** It is understood by the permittee that whenever construction, reconstruction, or maintenance work on the highway may require, the installation provided herein shall, upon request of the grantor, be removed or revised at the sole expense of the permittee within five days of such notice.
14. **Liability for damages:** The permittee is responsible and liable for personal injury or property damage which may arise out of the work herein permitted or which may arise out of failure on permittee's part to perform his obligation under permit in respect to maintenance. If any claim for such injury or damage is made against the County of Santa Cruz or any department, officer, or employee thereof, permittee shall defend, indemnify, and hold them and each of them harmless from such claim.
15. **Care of drainage:** If the work herein contemplated shall interfere with established drainage, ample provision shall be made by the permittee to provide for it as may be directed by the grantor.
16. **Maintenance:** The permittee agrees by the acceptance of this permit to exercise reasonable care to maintain properly encroachments placed by it in the highway and to exercise reasonable care in inspecting for and immediately repairing making good any injury to any portion of the highway which occurs as a result of the maintenance of the encroachment in highway or as a result of the work done under this permit, including any and all injury to the highway which would not have occurred had such work not been done or such encroachment not placed therein.
17. **Test results:** Upon demand, the permittee shall provide Director of Public Works with the results of tests showing that the compaction requirements have been complied with. Compliance shall be certified by a materials testing laboratory with local experience and said laboratory shall be acceptable to the Director of Public Works.
18. **Pavement replacement:** Any paved portion of County highway which is removed or damaged shall be replaced with minimum replacement of 0.50 foot of Class II aggregate base and 0.17 foot of Type B asphalt concrete. Where the existing structural section is greater than the replacement requirement, the structural section removed shall be replaced in kind. Prior to repaving the existing pavement shall be cut on a straight line to give a vertical face to pave against.
19. **Damages to roads:** Permittee agrees to repair in a manner satisfactory to the County of Santa Cruz any damages to the roads in the project area resulting from this work.
20. **Trimming or removing trees:** Trimming of trees will be permitted only in the manner authorized by permit. Trimming of trees required for overhead utility clearance may be performed without a permit. Attention is directed to the Tree Policy approved by the Board of Supervisors.
21. If the provisions of this permit are not complied with the County reserves the right to do any and all work necessary to bring the road into a safe condition. The costs of this work shall be charged to the permittee. The County will give reasonable notice of its intentions to make such repairs.

**SECTION 514.4 UNION PACIFIC RAILROAD “INSURANCE INFORMATION”**

When working within Union Pacific Railroad’s right of way, your company will be required to obtain Railroad Protective Liability Insurance for the project.

For RPLI application requests, you may be asked by your insurance carrier to provide train movement information. Due to the circumstances of September 11, 2001, for security and safety reasons, Union Pacific Railroad employees no longer supply train information to parties outside the Railroad. The major insurance companies are aware of this situation.

Obtaining this insurance for smaller projects can be a time-consuming and costly purchase for the contractor. With the Railroad Protective Liability Program made available by Union Pacific through a national broker, your company may save both time and money. In as little time as it takes to complete a single-page application and send a check, the Railroad Protective Liability coverage is in place. We consider this program a time saver in obtaining Railroad Protective Liability insurance.

**\*PLEASE READ** - there have been some modifications/enhancements to this site and the Railroad Protective Liability Application.

- If you are utilizing an old application, please begin to use the most updated version to ensure your request is fulfilled accurately and promptly.
- The Railroad Protective Liability Program does NOT cover new bridge construction, structural repair to bridges, widening of bridges and bridge demolition. Coverage for bridge construction must be obtained from your insurance agent/broker.

Current Rate Schedule

Section A

Installation of overhead wire and underground wire or pipe.

Traverse Installations		
Overhead	Underground	Open Cut
\$1,600	\$1,800	\$1,480

Section B: Longitudinal (Parallel) Installation

Not Applicable

Section C: Construction not including wire and pipe installation

Not Applicable

If you elect to take advantage of the program, please **do not** send your application for this insurance coverage to the Union Pacific Railroad. Please make your premium check

payable to Marsh, USA and send with your application via US Mail (do not send via Express Mail to P.O. BOX) to:

Marsh, USA  
NW8622  
P.O. Box 1450  
Minneapolis, MN 55485-8622

**Contact Marsh, USA with any coverage or premium questions:**

**Please take our Customer Satisfaction Survey**

Phone: (800) 729-7001

Fax: (816) 556-4362

Attn: Bill Smith e-mail address: [william.j.smith@marsh.com](mailto:william.j.smith@marsh.com)

Cindy Long e-mail address: [cindy.long@marsh.com](mailto:cindy.long@marsh.com)

**SECTION 514.5 MARSH APPLICATION FORM FOR RAILROAD PROTECTIVE LIABILITY INSURANCE**

The attached form is a reduced sample. Application and instructions are available at the following website:

<http://www.uprr.com/reus/rrinsure/index.shtml>

**MARSH APPLICATION FORM  
RAILROAD PROTECTIVE LIABILITY INSURANCE**

**DO NOT submit unless all mandatory (\*) fields are complete.**

1. \*Name of Union Pacific Representative   
 Telephone Number  E-Mail Address

2. \*UPRR Contract Folder Number #####-##

**Note: Separate applications must be completed for each folder assigned**

3. Description of Project (example: horizontal bore / pipeline)

4. Please Complete Either Section A OR Section B OR Section C Below:

**Section A. Traverse Installation**

If Project is Traverse Installation

**Section B. Longitudinal (Parallel) Installation**

Overhead or Underground, use the drop down arrow to select the linear feet.

Overhead  Underground

**Section C. Other Construction Project - Total project cost cannot exceed \$10,000,000**

Please choose a project description from the drop down box before printing application.

Please Describe Project

Project Cost Within 50'RR Property  Total Project Value

5. \*Job Location (Nearest City, State)

6. Estimated Start and End Date of Work Within RR Right-of-Way Begin  End

7. Name on Certificate of Insurance (Contractor completing the project)

Mailing Address  City, State, ZIP

Phone #  Fax #  E-Mail

8. Name of Involved Governmental Authority or General Contractor

9. Cost of Railroad Protective Liability Coverage for this Project: **ONLY** enter amount from A **OR** B **OR** C above. **THIS IS YOUR TOTAL PREMIUM**

**\*THIS COVERAGE WILL NOT BEGIN UNTIL BOTH ITEMS BELOW ARE RECEIVED BY MARSH USA**

1. A Check Payable in the amount quoted in Item #9 above Payable to: MARSH, USA NW 8622, PO Box 1450 Minneapolis, MN 55485-8622  
 2. This completed and signed application

Applicant Signature \_\_\_\_\_ Applicant Phone \_\_\_\_\_ Date \_\_\_\_\_

Please Print Applicant's Name \_\_\_\_\_ UPPRPLI.v.07162007