

DIVISION TWO - GENERAL TECHNICAL REQUIREMENTS

SECTION 201 MOBILIZATION

Section 201.01 General - Mobilization shall include but not be limited to, all work necessary to move onto the job site all personnel, equipment, tools, and materials, establish all offices, buildings, and temporary site facilities, temporary sanitary facilities, prepare and maintain record drawings, provide emergency response, and generally prepare for construction.

Section 201.02 Project Office - The Contractor shall establish and maintain for the duration of the project, a project office located within an approximate one-hour drive of the project site. For the purpose of these Standard Specifications, the following areas will be considered within a one-hour drive of the work site:

1. All of Santa Cruz County;
2. All of Santa Clara County west of State Highway 101 and State Highway 680;
3. All of Alameda County south of State Highway 84;
4. All of Monterey County north of Soledad on State Highway 101;
5. All of San Benito County west of State Highways 156 and 152.

When provided for in the *Contract Documents*, a field construction office shall be installed on or adjacent to the site of the work. Such field office shall be equipped with electrical service, telephone service consisting of a minimum of one phone line, and a plan table. Additionally, the office shall have a bulletin board installed adjacent to the project office for the posting of such notices as may be required by regulatory agencies. Said bulletin board shall be a minimum of 2 feet by 4 feet in size, constructed of substantial material such as plywood, mounted on posts or the exterior office wall and protected against the weather and vandalism. The Engineer shall have access to this bulletin board at all times for the posting of notices at such times as work is not in progress on the site.

Section 201.03 Record Drawings - A current set of the *Contract Documents* shall be kept on the job site at all times and updated continuously. Record drawings shall be kept on file in the project office and shall be updated continuously throughout the course of the work. Upon completion of work the Contractor shall submit all copies of record drawings to the District.

Section 201.04 Emergency Response - The Contractor shall maintain an emergency telephone number and shall be able to have competent personnel to the project site within one hour from the time a call is placed to the emergency telephone number. Competent personnel shall mean the Contractor, his Superintendent, or a responsible person who shall have the authority to act for the Contractor in an emergency. The Contractor shall also provide such equipment as necessary to stabilize an emergency situation and the personnel assigned to provide the emergency response shall be trained in its operation and authorized to perform such work as is necessary to stabilize the emergency situation.

Section 201.05 Measurement and Payment - The contract lump sum price for Mobilization shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work necessary for the movement of personnel, equipment, supplies and incidentals to the project site, establishment and maintenance of the project office and record drawings and for all other work and operations which must be performed prior to beginning work on the various contract items on the project site and for providing emergency response as provided for herein, in the *Contract Documents* and as directed by the Engineer.

The contract lump sum price for Mobilization will be paid in accordance with Section 108.01, "Progress Payment" of these Standard Specifications.

SECTION 202 EXISTING FACILITIES

Section 202.01 General - The Contractor is hereby advised that certain facilities may exist within the limits of work. Such facilities include but are not limited to, existing waterworks, sanitary sewerage, storm drainage, traffic signals, natural gas, electric, telephone, cable television, highway structures, and buildings. The Contractor shall at all times protect those facilities not indicated to be removed and shall only remove those facilities so indicated in accordance with the *Contract Documents*, the directions of the Engineer, and the direction of the owner of the facilities. Where the existing facility interferes with the operations of the Contractor in his performance of the work under the contract, the Contractor shall bear full responsibility for the location, protection, and relocation or restoration of such facility, in accordance with the requirements of the owner of such facility.

The presence of such facilities shown on the plans and in the *Contract Documents* is for the convenience of the Contractor in planning his work and preparing his proposal and is prepared from the best information available at the time of preparation. The District makes no warranty, expressed or implied, as to the adequacy, completeness, and accuracy of such information. The Contractor shall satisfy himself with regards to the existence of such facilities and their impact on his operation.

Where such facilities are found to exist in locations other than those marked by the owner of such facilities, the Engineer may consider the Contractor's request for an extension in time or additional compensation in accordance with Section 105.06, "Changed Conditions" of these Standard Specifications. Such consideration shall be contingent upon the Contractor's conformance with the provisions of Section 102.01, "Examination of Plans, Specifications, and Site of Work" and Section 106.19, "Subsurface Exploration" of these Standard Specifications.

Section 202.02 Clearing and Grubbing

Section 202.02.01 Description - Clearing and Grubbing shall consist of removing all objectionable material from within the limits of work as defined by the *Contract Documents*. Objectionable material shall be that material which interferes with the prosecution of or would otherwise be detrimental to the work, including but not limited to, paving materials, trees, brush and vegetation, unsuitable soils, debris, trash, rubbish, minor structures such as sheds, shelters and fences, and all extraneous water within the work limits.

Section 202.02.02 Preservation of Property - The Contractor shall take precautions to protect all public and private improvements not indicated to be removed, including but not limited to utilities and structures, trees, landscaping, roadways, drainage courses, and buildings encountered within or adjacent to the limits of work. The Contractor shall also protect all existing facilities indicated to be removed until such time as the Engineer deems that the function of such facilities has passed to the improvements provided for under the Contract or that such function is no longer required.

Only those trees and plants designated for removal shall be removed.

Section 202.02.03 Construction - Except as provided for in the *Contract Documents*, the Contractor shall clear and grub the entire area within the limits of work. No compensation or extension of time will be allowed for work outside the limits of work unless provided for in the *Contract Documents* or directed by the Engineer.

The area at, above, or below the natural ground surface shall be cleared of all objectionable material including but not limited to the materials listed Section 202.02.01, "Description" of these Standard Specifications. This work shall include the removal of all materials under the final grading plane, to the depth approved by the Engineer.

The area to be excavated, whether for trenches or site grading, shall be grubbed to a depth necessary to clear the excavation of all objectionable material, including overexcavation below the grading plane. In the event of overexcavation, the excavation shall be restored to the plane provided for in the *Contract Documents* using the backfill or import material specified for the original excavation, as provided for in Section 309, "Bedding, Backfill, and Aggregate Bases" of these Standard Specifications, or as directed by the Engineer.

Trees to be removed shall be cut in a controlled manner such that no portion of the tree damages adjacent properties and utilities. If necessary, such trees shall be felled in sections to facilitate control of the removal. The Contractor shall be solely responsible for the safe removal of trees and for any damages that may result from such removal.

Trees overhanging the work areas, where the branches thereof impede the safe prosecution of the work, may be trimmed in accordance with the standards of the jurisdiction having authority over the work area. Such trimming shall be done in a neat, safe manner, cutting the limb flush with the bole of the tree. The tree shall be trimmed as necessary to maintain the symmetry and balance of the tree and to prevent weakening that could lead to failure of the tree. All scars shall be liberally painted with an approved tree paint. When directed by the Engineer, all tree trimming shall be performed by a licensed tree service and/or inspected by an arborist.

Section 202.02.04 Disposal - The Contractor shall make his own arrangements for the disposal of objectionable materials from the limits of work. Such arrangements shall include but not be limited to haulage, fees, permits, permission from property owners, and the proper disposal of hazardous and/or toxic materials.

The Contractor shall make such independent investigations and examinations as he deems necessary to satisfy himself as to the quantity and types of materials to be disposed of and the rights, obligations, and duties acquired or undertaken under any disposal arrangement whether the disposal site is a sanitary landfill or private property.

If the Contractor chooses to use private property for the disposal of such material, he shall provide the District with written authorization or a certified copy thereof, from the property owner. Such authorization shall include a release from the property owner absolving the District from any and all responsibility in connection with the disposal of material on said property. This authorization shall be submitted within 2 working days of issuance of the *Notice to Proceed* as provided for in Section 107.09, "Submittals" of these Standard Specifications.

The District will assume no liability in connection with the disposal of materials from the work site and the Engineer will not make any inspections of the disposal site.

The Contractor shall promptly dispose of all objectionable material from the work area. Stockpiling will not be permitted except as provided for herein and in the *Contract Documents*. The Contractor may stockpile such material until such time as a sufficient quantity has accumulated to make haulage economically viable to dispose of it. The quantity of material allowed to be stockpiled shall be determined by the Engineer in accordance with the requirements of any permits issued by agencies having jurisdiction over the work.

Regardless of the accumulated quantities and the efficacy of disposal of that quantity, the Contractor may not stockpile material in such a manner as to pose a hazard to the public or the improvements under the contract and shall immediately dispose of such material upon receipt of written direction from the Engineer.

Section 202.02.05 Drainage - Throughout the prosecution of the work under the Contract, the Contractor shall keep the work areas free of all water including but not limited to, rainwater, groundwater, and leachate and shall take precautions to prevent runoff onto adjacent properties. These precautions shall include but not be limited to dikes, berms, channels, diversions, pumping equipment, and other facilities necessary to control runoff. All work areas shall be constructed or provided with proper and adequate drainage facilities to avoid trapped water that may cause failure of or damage to constructed improvements.

Section 202.02.06 Measurement and Payment - The contract unit or lump sum price for Clearing and Grubbing shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work in clearing the work areas, disposing of objectionable material and providing for drainage and no additional compensation will be allowed therefore.

Any change in the quantity or extent of work to be performed under clearing and grubbing caused by the issuance of a *Contract Change Order* will be paid in accordance with the provisions of Section 108.06, "Force Account Payment" of these Standard Specifications.

Section 202.03 Safety

Section 202.03.01 General - The Contractor shall bear full responsibility for compliance with all applicable safety and health standards, rules, regulations and orders established by the State of California Department of Occupational Safety and Health (Cal-OSHA) and the Federal Department of Occupational Safety and Health (OSHA).

In accordance with Section 105.07, "Emergency Conditions" of these Standard Specifications, the Engineer may direct the Contractor to use other equipment, personnel, or methods when, in the opinion of the Engineer, the use of improper or insufficient equipment, personnel, materials, or methods would present a hazard to the public or expose District facilities to a risk of damage. The Engineer's direction shall only be in the interest of stopping unsafe practices and shall not be construed as superintendence of the Contractor's forces.

Upon receipt of such direction, the Contractor shall immediately correct the deficiency noted before proceeding. The Contractor shall bear full responsibility for the safety of the public, his personnel, and all facilities existing and under construction, and shall select such alternate equipment, personnel, or methods as will enable the safe prosecution of the work. Directions from the Engineer shall not relieve the Contractor of this responsibility.

Section 202.03.02 Safety Plan - When provided for in the *Contract Documents* and whenever the *Contract Documents*

provide for extended trenching operations in excess of 5-feet in depth, the Contractor shall have prepared by an engineer registered in the State of California (hereinafter referred to as the *Safety Engineer*), a *Safety Plan* for safety measures on the project. This *Safety Plan* shall include but not be limited to, the following:

1. Traffic control requirements for the delivery of materials
2. Storage and handling of delivered material, including installation as required
3. Shoring plans for all excavations including underground tanks, tank ventilation, retaining walls, vaults, and piping
4. Provisions for compliance with the OSHA requirements for *Permit-Required Confined Spaces*
5. Any other plans required for compliance with those regulatory agencies having jurisdiction over the work

Section 202.03.03 Safety Inspections - The *Safety Engineer* for this *Safety Plan* shall make periodic inspections of the site and the work to ensure compliance with these requirements and to make any adjustment or revision to the original safety plan required by field conditions or the Contractor's work. A report of each inspection shall be submitted to the Engineer within one working day of the inspection. No work or element of work noted in the *Safety Plan* or this report shall be commenced without the approval of the *Safety Engineer*. Any work or condition not in compliance with these requirements shall be immediately corrected to the *Safety Engineer's* satisfaction or suspended until such time as compliance can be met. Suspended work shall not recommence until receipt of written notice from the *Safety Engineer* to the Engineer that corrective action has been taken to his satisfaction.

Section 202.03.04 Site Investigations - The Contractor and his *Safety Engineer* are encouraged to perform their own site investigations to satisfy themselves as to the conditions on-site including, if desired, additional subsurface investigation. No additional compensation will be considered for changed conditions that might reasonably have been foreseen by such investigation. Arrangements for site investigations may be arranged by contacting the Engineering Manager of the Soquel Creek Water District, (831)475-8500, 8:00 am to 4:00 PM Monday through Friday.

Section 202.03.05 Measurement and Payment - When the *Contract Documents* provide a proposal item for Safety Plan or Trench Safety, the contract lump sum price for Safety Plan or Trench Safety shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work in preparing the *Safety Plan*, implementing the *Safety Plan*, constructing embankment shoring and performing safety inspections and no additional compensation will be allowed therefore.

When the *Contract Documents* do not specifically provide a proposal item for Safety Plan or Trench Safety, compliance with applicable safety laws, regulations, and ordinances shall be considered as incidental to other items of work and included in the contract unit or lump sum price for such items of work and no additional compensation will be allowed therefore.

SECTION 203 TRAFFIC CONTROL

Section 203.01 Description - The Contractor shall provide a traffic control system commensurate with public safety and the requirements of agencies having jurisdiction over the work. All work shall be in accordance with the CalTrans Manual of Traffic Controls, these Standard Specifications, and the *Contract Documents*. All traffic control systems shall be installed and operated in accordance with these Standard Specifications and the requirements of agencies having jurisdiction over the work. The exact spacing of elements of the traffic control plan may be adjusted to account for the field conditions as found. No elements shall be installed without the prior written approval of the Engineer.

The Contractor shall perform all traffic control measures required by the *Contract Documents*, encroachment permits, and as directed by the Engineer as provided for elsewhere herein. When provided for in the *Contract Documents*, the Contractor shall prepare a *Traffic Control Plan* that delineates the traffic control measures anticipated by the Contractor, those required by agencies having jurisdiction over the work area, and any special provisions cited in the *Contract Documents*.

Section 203.02 Traffic Control System - In general, the traffic control system used shall be in general conformance with the provisions of Standard Plan No. T12, "TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS" and Standard Plan No. T13, "TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS" of the CalTrans Standard Plans. Specific placement of all signs,

barricades, cones, delineators, and flaggers shall be adjusted to reflect conditions found in the field while maintaining the intent of such standard plans.

When provided for in the *Contract Documents*, the Contractor shall have a *Traffic Safety Plan* prepared by an engineer registered in the State of California as a Traffic Engineer.

Throughout the term of the contract, the Contractor shall maintain all traffic control measures, including but not limited to, construction area signs, flaggers, cones and delineators, and other measures required by the *Contract Documents*, encroachment permits, the Traffic Engineer, and the Engineer as provided for elsewhere in these Standard Specifications.

The Contractor shall maintain all traffic control equipment and procedures in good working order throughout the life of the contract and shall promptly repair or replace any elements of the traffic control plan damaged or displaced during construction, due to any cause, at the direction of the Engineer.

Section 203.03 Encroachment Permit Requirements - All work on public right-of-ways within the District are subject to the Encroachment Permit conditions of the State of California, Santa Cruz County, and/or the City of Capitola. The Contractor shall make himself thoroughly familiar with such permit conditions in preparing his proposal. Throughout the Contract, the Contractor shall comply with all requirements and conditions of such permits regarding traffic control in and around the limits of work.

Section 203.03 Construction Area Signs

Section 203.03.01 Description - Construction area signs shall include all temporary signs necessary for the control of traffic through or around the work area, including both stationary mounted and portable signs as defined herein. The Engineer shall make the sole determination of what type of sign or signs may be used for construction traffic control.

Section 203.03.02 Stationary-Mounted Signs - Stationary-mounted signs shall be installed on wood posts in general conformance with Standard Plan No. T12, "TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS" and Standard Plan No. T13, "TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS" of the CalTrans Standard Plans. The exact spacing of stationary-mounted signs shall be adjusted as required by field conditions agencies having jurisdiction over the work areas. All elements of the traffic control system shall be shown on the traffic control plan.

All stationary-mounted signs shall be constructed of sheet aluminum base material not less than 0.063-inch thick. Reflective sheeting shall meet CalTrans Specifications for Reflective Sheeting Aluminum Signs. Used signs may be considered satisfactory if the sheeting has not deteriorated due to weathering, vandalism, or other causes that impair visibility or legibility. The colors of reflective sheeting shall be in accordance with the Manual of Traffic Controls, and shall not have faded to the point where there is a discernible difference between the daytime and nighttime when viewed under vehicle headlamps on low-beam.

Legends may be applied by the screening process or by the use of pressure sensitive cutout sheeting. Size and spacing of letters and symbols shall be in accordance with CalTrans sign specifications sheets available from the CalTrans Central Office of Business Management.

Section 203.03.03 Portable Signs - Portable signs shall be of 2 types, rigid and flexible.

Section 203.03.03(a) Rigid Portable Signs - Rigid portable signs shall be in accordance with Section 203.03.02, "Stationary-Mounted Signs" of these Standard Specifications and mounted on portable folding or non-folding barricades, Type I, II, or III in accordance with the "Manual of Traffic Controls published by the State Department of Transportation. Rigid portable signs may be permitted by the Engineer as a substitute for stationary-mounted signs where, in the opinion of the Engineer, use of stationary-mounted signs would be impracticable due to field conditions. When rigid portable signs are substituted for stationary-mounted signs, only Type III barricades shall be used and they shall be counterweighted with a sufficient number of sandbags to prevent their displacement. The Contractor may submit an alternative design for a substitute to the stationary-mounted sign but shall not install such substitute without the written approval of the Engineer. The Contractor shall not substitute portable, rigid signs for stationary-mounted signs without the express written direction of the Engineer unless such substitution is provided for in the *Contract*

Documents.

As required by field conditions, the rigid portable barricades shall be counterweighted with a sufficient number of sandbags or other weights to prevent displacement or overturning due to weather and traffic conditions found in the field.

Section 203.03.03(b) Flexible Portable Signs - Flexible portable signs shall be fabricated from cotton drill, flexible industrial nylon mesh fabric, or other fabric material approved by the Engineer. Size, legend, and color shall be in accordance with Section 203.03.02, "Stationary-Mounted Signs" of these Standard Specifications.

Flexible, portable signs shall be mounted on commercially fabricated stands approved by the Engineer. Such stands shall position the sign a minimum of 5 feet above the roadway surface and shall be so constructed as withstand displacement or upset due to wind or traffic activity. If necessary, the base of the stand shall be counterweighted by a sufficient number of sandbags or other weights to ensure stability in the weather and traffic conditions found in the field.

Flexible, portable signs shall only be used for daily operations and shall not be used to control traffic during periods when the Contractor has ceased operations for the day.

Section 203.03.03(c) Flashing Arrow and Message Boards - Flashing arrow and message boards shall be used to enhance the conveyance of traffic control information to drivers approaching the work areas. Each flashing arrow or message board shall be in accordance with the provisions of Section 12-3.03, "Flashing Arrow Signs" of the CalTrans Standard Specifications and Section 5-06, "Lighting Devices" of the Manual of Traffic Controls published by the State Department of Transportation.

Section 203.03.04 Traffic Cones, Portable Delineators, and Portable Barricades - Wherever required by the *Contract Documents*, the *Traffic Control Plan*, or the Engineer, the Contractor shall provide cones, delineators, or portable barricades to define the work areas.

Section 203.03.04(a) Traffic Cones and Delineators - Traffic cones and portable delineators shall be fabricated from highly pigmented fluorescent orange polyvinyl material.

The base of each traffic cone shall be integral to the top. The base may be orange or black in color and shall be of sufficient weight to minimize displacement or overturning due to weather or traffic conditions found on site. Additional weight may be added by the use of sand bags or other low profile, pliable material. The overall height of the cone shall be at least 28 inches with a minimum bottom inside diameter of 10.5 inches. Traffic cones shall be capable of direct or glancing impact from a vehicle without damage to either the vehicle or the traffic cone. The base shall be square or rectangular in shape to prevent rolling. Traffic cones shall be as manufactured by Services and Materials Company or approved substitute.

Portable delineators shall be fabricated of material of sufficient rigidity to remain upright when unattended and collapsible or flexible upon direct or glancing impact from a vehicle without damage to either the vehicle or the portable delineator. The base shall be square or rectangular in shape to prevent rolling.

The vertical portion of the portable delineator shall be not less than 3-inches in width or diameter. The minimum height shall be 37-inches above the pavement surface. A minimum of 2 reflective bands each not less than 3-inches wide shall be mounted a minimum of 1-½ inches apart such that at least one of the bands is between 30 and 36-inches above the road surface. Portable delineators shall be as manufactured by Services and Specialties Company or approved substitute.

Section 203.03.04(b) Reflective Bands - Reflective bands shall be silver-white in color and fabricated from flexible sheeting having not less than the following dry reflectance values at a 0.2 and 0.5 degree divergence angle, expressed in units of candlepower per footcandle per square foot as determined by California Test 642. The wet reflectance values shall be not less than 90 percent of the dry values when tested in accordance with the Federal Highway Administration Specification FP-79, Section 718.01(c).

Reflectance Values of Reflective Band Sheeting

Divergence Angle (degree)	Incidence Angle (degrees)	Dry Reflectance Value
0.2	-4	250
0.2	30	95
0.5	-4	200
0.5	30	60

Only one type of portable delineator shall be used on the project.

Section 203.03.04(c) Barricades - Barricades fabricated in accordance with Table 5-1, "Barricade Characteristics" and Figure 5-3, "Typical Barricades" of the CalTrans Manual of Traffic Controls shall be placed adjacent to all open excavations, stockpiled material, or equipment left unattended with the permission of the Engineer. Barricades left in-place during periods of darkness shall be equipped with battery-operated flashing amber lights in accordance with Section 203.03.04(d) of these Standard Specifications. Each lit barricade shall be inspected and tested for flasher operation daily and repaired or maintained as necessary. Illuminated and/or reflectorized cones and delineators shall not be used in lieu of portable barricades for night traffic control.

Section 203.03.04(d) Portable Flashing Beacons - Portable flashing beacons shall consist of a lighting unit, a flasher unit, a standard, a battery power source, and a base. The units shall be assembled to form a complete, self-contained flashing unit that can be delivered to the job site and placed in immediate operation.

The lens shall have a visible diameter of 6-inches of plastic or glass conforming to ANSI Standard D-10.1 for yellow traffic signal lens.

The flasher shall be capable of a sustained 50 to 60 flashes per minute.

The battery power source shall be mounted in the base and the base shall be capable of attachment to a Type I, Type II, or Type III portable barricade.

The portable flashing beacons shall be Flex-O-Lite, as manufactured by Flex-O-Lite, Incorporated or approved substitute.

Section 203.04 Flaggers - The Contractor shall provide flaggers to direct traffic through the work area in addition to the construction area signs wherever necessitated by the field conditions, the *Traffic Plan*, or directed by the Engineer. Flaggers shall be equipped with all safety clothing and communication equipment required by the Industrial Safety Orders of the State of California and the current edition of the CalTrans publication "Instructions to Flaggers". Flaggers shall be dedicated to traffic control and shall not be assigned any other duties while acting as flaggers.

Paddle signs used by flaggers shall be in accordance with Section 203.02.01, "Stationary-Mounted Signs" of these Standard Specifications. The sign shall be handholdable for extended periods of time at a height of 5 feet above the pavement surface. A rod-mounted flagger sign may be used instead of the paddle-type at any time and shall always be used where prolonged queuing is anticipated.

When flaggers are out of sight of each other, both shall be equipped with two-way radio equipment with channels dedicated solely to the flagging operation. Additionally, in areas where full road closure controlled by flaggers is necessary, an additional person shall be stationed at the actual site of work equipped with a radio on the same channel or frequency as the flaggers. This person shall act as the liaison between the flaggers and the construction operation and shall keep the flaggers informed of the status of the operation at all times. This person shall also be dedicated to the flagging operation. As necessary, flaggers may direct the foreman or superintendent to temporarily suspend operations to permit passage of traffic.

Queue times shall be kept as short as possible and in no case longer than 15 minutes. Emergency vehicles, school buses, and other vehicles that demonstrate an emergency need shall be passed through immediately.

Section 203.05 One-Way Traffic, Lane Closures, and Detours - The Contractor shall maintain at least one lane open to traffic at all times while construction activities are in progress. The Contractor shall provide all flaggers necessary to control vehicles through the work area. Flaggers shall be located at each end of the work area and shall be able to maintain communications via visual signal or two-way radio communication at all times. The *Superintendent* or his appointee shall oversee the construction activities to ensure that the flaggers are fully informed of all traffic conditions at all times.

Except as provided for in the *Contract Documents*, no streets may be closed or detours made without the express written approval of the Engineer and the agency having jurisdiction over the work areas. If the Contractor proposes to close lanes on multi-lane streets or detour public traffic around the work areas, he shall submit a plan for such detour at least 4 working days or that period provided for in the *Contract Documents* prior to his proposed schedule to commence detours or lane closures. This plan shall include but not be limited to, the following information:

1. Limits of detour or lane closures;
2. Reason for detour or lane closure;
3. Duration of detour or lane closure;
4. Signing and controls for detour and lane closure;
5. Additional information that will assist the review of the plan.

No lane closure or detour shall be effectuated without the express written permission of the Engineer and the agency of jurisdiction. When a *Traffic Control Plan* is provided for by the *Contract Documents*, the plan for detours and lane closures shall be included in such *Traffic Control Plan*.

Section 203.06 Pedestrian Access - The Contractor shall provide pedestrian access through the work areas at all times. This access may move from one side of the street to the other as construction activities require. The Contractor shall be responsible for the safety of all pedestrians transiting the work areas at all times.

Section 203.08 Access to Adjacent Properties - The Contractor shall maintain access to adjacent properties at all times during construction. When construction activities require that such access be interrupted, the Contractor shall first notify all property owners and/or tenants that their access will be interrupted, the commencement and duration of the interruption, and request that the property owners and/or tenants provide the Contractor with any special access requirements such as but not limited to, those of the elderly or the disabled. The access to all adjacent properties shall be restored whenever construction activities are not in progress, at the end of each work day, and over all weekends or holidays. The access shall be restored by the closure of the excavation, removal of materials and equipment, or the installation of steel plates to transition over construction activities.

The Contractor shall notify the property owner and/or tenant at least 24-hours in advance of interrupting access by personally contacting the property owner and/or tenant. Door hangers may be used to provide this notification. The Contractor shall notify the Engineer of all instances where disruption of access will be required and of the notification of the property owners and/or tenants.

The requirement for notification 24-hours in advance may be waived when the following conditions are met:

1. The duration of interruption is less than 2-hours;
2. The property owners have been notified immediately prior to commencing the interruption;
3. The Contractor assists the property owner and/or tenant to leave the property prior to commencing the interruption;
4. The Contractor accommodates any request for assistance by the property owner and/or tenant in accessing the property;
5. The property owner and/or tenant is unavailable at the time of commencing the interruption and during the interruption.

Section 203.09 Open Trenches - No trenches shall be left open overnight or when construction activities are not in progress. Each trench shall be backfilled to the surface or covered with steel plates if backfilling is impracticable. The Contractor shall not open more trench than can be successfully completed and backfilled in one day. Where this requirement may be impracticable, the Contractor shall request permission from the Engineer to extend the trench to its practical limit and to cover it with steel plates.

Open trenches parallel to traveled lanes shall be marked with cones, delineators, or portable folding barricades during active construction operations. There shall be a sign at each end of the trench warning of an open trench. The Contractor shall be responsible for the safety of all persons having access to an open trench including but not limited to the general public, the Contractor's personnel, and employees and agents of agencies having jurisdiction over the work areas.

Section 203.10 Measurement and Payment

Section 203.10.01 Lump Sum Basis - When traffic control is provided for in the *Contract Documents* to be paid for as a lump sum item, the contract lump sum price shall include full compensation for all labor, materials, equipment, and tools and for doing all work in establishing traffic control through and around the work areas. It shall include but not be limited to, the *Traffic Control Plan*, all construction area signs, cones, delineators, portable barricades, flashing lights, and flaggers and the notification, installation, maintenance, and equipage necessary for the control of traffic through and around the work site.

Section 203.10.02 Force Account Basis - When traffic control is provided for in the *Contract Documents* to be paid as force account item, the Contractor shall maintain all records and receive all approvals from the Engineer for the establishment and maintenance of traffic control through and around the work areas. The Contractor shall submit records in accordance with Section 108.07, "Force Account Work" of these Standard Specifications for all labor, materials, equipment, and tools and for doing all work in establishing and maintaining the traffic control system through and around the work areas. Such records shall include but not be limited to, the *Traffic Control Plan*, all construction area signs, cones, delineators, portable barricades, flashing lights, and flaggers and the notification, installation, maintenance, and equipage necessary for the control of traffic through and around the work site.

Section 203.10.03 Incidental Basis - When a pay item for traffic control is not included in the *Contract Documents*, all costs for such traffic control shall be considered as incidental to other items of work and all costs associated with traffic control shall be included in the contract unit or lump sum prices for other items of work and no additional compensation will be allowed therefore.

SECTION 204 MAINTENANCE OF SERVICE

Section 204.01 Description - The Contractor shall maintain all existing water supply, storage, transmission, distribution, and service systems in full operation throughout the term of the Contract, except as provided for in the *Contract Documents*. No interruption of service will be permitted without the express written direction of the Engineer. System shutdowns for the purposes of performing work under the Contract shall be performed in accordance with this Section 204, "Maintenance of Service", the *Contract Documents*, and the direction of the Engineer as provided for elsewhere herein or in the *Contract Documents*.

In accordance with Section 102.01, "Examination of Plans, Specifications, and Site of Work" of these Standard Specifications, the District may provide information relevant to the existence and location of existing facilities as a convenience to the bidder. It shall remain the Contractor's responsibility to locate and protect all existing facilities found during construction. If an existing facility is found in a location other than that indicated on the plans and/or marked in the field by the District and in excess of the tolerances specified by the one-call locating service provided for in Section 106.07, "Obstructions" of these Standard Specifications and if no other provision is made in the *Contract Documents*, the Contractor will not be charged by the District for repairs to existing facilities damaged by his operations. If, in the opinion of the Engineer, the number of interruptions to the operation of existing facilities becomes excessive, the Engineer may issue a *Contract Change Order* in accordance with Section 105.06, "Changed Conditions" of these Standard Specifications to perform additional subsurface explorations of the work areas. If such a *Contract Change Order* is issued, the Contractor will be assumed to have adequate knowledge of the existing facilities and may be subject to charges for repairs to existing facilities due to his operations.

Section 204.02 Maintenance of Private Services - The Contractor shall take precautions to protect any existing services to District customers while performing his work under the Contract. No service shall be connected to a new main until the Engineer has given his express written approval of the construction of such new main including but not limited to, pressure testing and disinfection. The Contractor shall immediately notify the Engineer of any break found in a service connection, whether or not caused by the Contractor's operations. All breaks in customer services will be

repaired by District forces.

Section 204.03 Planned Interruption of Service - All planned interruptions to service shall be scheduled with the Engineer in advance of the proposed schedule for shutdowns. In residential areas, the Contractor shall provide the Engineer with a written intent to shutdown existing facilities a minimum of 3 working days prior to the scheduled interruption in service. The Engineer will then notify all affected customers of the shutdown. In all other areas, the Contractor shall notify the Engineer a minimum of 5 working days prior to the scheduled shutdown. The Contractor shall take no action to shutdown any portion of the existing system.

System shutdowns shall be kept to the minimum time possible. The Contractor shall so schedule his work as to have all related work completed prior to the shutdown and shall have on hand at the job site all labor, materials, equipment, and tools to complete the work requiring the shutdown in the minimum amount of time possible without comprising safety or quality of workmanship.

Section 204.04 Operation of Valves - All valves shall be operated by District forces only. Except in emergencies or as provided for in the *Contract Documents* or directed by the Engineer, the Contractor shall not operate any part of the existing water supply, transmission, storage, distribution, or service system. The Contractor shall request the Engineer to operate valves for the performance of his work a minimum of one working day in advance of his scheduled operations necessitating valve operation.

Section 204.05 Contractor Cross-Connection Control - The Contractor shall maintain the integrity of the existing District facilities throughout the term of the Contract. All work shall be performed in such a manner as to prevent the introduction of any contaminant into the water supply system. The Contractor shall not tap any existing water mains or services without the express written approval of the Engineer. All connections for the purposes of obtaining water for construction operations shall be made through an air-gap or an approved reduced pressure assembly at locations approved by the Engineer.

The Contractor shall keep the work areas clean and free of all contamination including but not limited to that from his operations, surface runoff, leachate, broken or damaged utilities, whether such damage was caused by the Contractor's operations or not.

The Contractor shall not make any connection of any kind between existing non-District facilities and any other system or source of supply without the express written permission of the Engineer and then only in accordance with the directions of the Engineer.

All costs associated with cross-connection control shall be considered as incidental to and included in the price bid for other items of work and no additional compensation will be allowed therefore.

Section 204.06 Sequencing of Operations - The Contractor shall schedule his operations logically and systematically in such a manner as to conduct his operations with a minimum of interruption to service, including the number of system shutdowns required to transfer service from existing facilities to new improvements.

The Contractor shall complete identifiable units of the work prior to commencing work on other units of work under the Contract. Insofar as possible, the Contractor shall schedule his work using the following guidelines. The schedule derived therefrom shall be submitted in accordance with Section 106.06, "Schedule" of these Standard Specifications.

1. The mains in one street shall be completed prior to commencing work on mains on other streets.
2. Each day's services on one main shall be completed prior to commencing work on services on other mains.

The Contractor shall not initiate work on mains and services throughout the project unless he can demonstrate to the Engineer's satisfaction that he can prosecute each element of work to a conclusion uninterrupted.

Completion of main construction shall include but not be limited to, trench excavation, installation of the main and service corporation stops, backfilling of the trench, disinfection, and pressure testing.

When the number of services on one main exceeds one week's work, the Contractor shall identify the number of services he can complete to the meter stop in the week, less the final meter connection. He shall then complete all services less the meter connection prior to advancing to other mains. In making the meter connection, the Contractor

shall notify each property owner and/or tenant immediately prior to making the meter connection.

The Contractor shall make the meter connection as expeditiously as possible and shall complete each meter connection prior to advancing to another service. Completion shall include but not be limited to, setting the meter box to final grade, restoring all landscaping to the customer's satisfaction, connecting the meter to the customer plumbing, flushing the customer plumbing, and backfilling all excavations. All service and meter connections must be completed in the day commenced.

The Engineer may permit the Contractor to conduct work on more than one main at a time if the Contractor can demonstrate to the Engineer's satisfaction that the Contractor has sufficient labor, materials, tools, and equipment assigned to the project to conduct simultaneous operations. The Engineer's decision shall be considered final and the Contractor shall conduct his operations in accordance with the Engineer's decision.

Section 204.07 Measurement and Payment - All expenses associated with the maintenance of service shall be considered as incidental to other items of work and no additional compensation will be allowed therefore.

SECTION 205 EROSION CONTROL

Section 205.01 General - At all times during the prosecution of the work on a project, the Contractor shall take all measures necessary to prevent damage to the work areas or adjacent properties due to the erosion of materials caused by the effects of weather. Such measures shall include but not be limited to, channelization, berms, dikes, catchment structures, sedimentation basins, silt fences, and seeding in accordance with these Standard Specifications, the Contract Documents, and agencies having jurisdiction over the site of the work.

Section 205.02 Erosion Control Plan - The Contractor shall have an erosion control plan for the management of storm runoff within the work areas. Such plan for work involving the mass grading of soils shall include drawings that show the overall site of work, the routing and control of runoff through the work areas, sedimentation basins, and other pertinent details.

The Contractor shall have the erosion control plan for mass grading areas prepared by a Registered Civil Engineer.

An erosion control plan will not be required for the construction of pipelines, however the Contractor shall take such measures as are necessary to prevent the erosion of the trenchline or adjacent property. Such measures shall be approved by the Engineer prior to commencing construction.

Section 205.03 Maintenance - The Contractor shall be responsible for the inspection and maintenance of all erosion control facilities constructed as part of the project. In anticipation of any forecast storm, the Contractor shall inspect and, as appropriate, restore all erosion control facilities to ensure that optimum protection is provided. During any storm or storms that continue more than one day, the Contractor shall inspect and restore all erosion control measures on a daily basis, including weekends and holidays as necessary. The Contractor shall provide all materials, equipment, and personnel necessary to accomplish erosion control.

Upon completion of all work on the project and, as appropriate, successful germination of erosion control seeding, the Contractor shall remove all erosion control measures and structures and restore the site to its original condition, insofar as practicable.

If the Engineer determines that the implementation of erosion control measures constitutes an emergency in accordance with Section 105.07, "Emergency Conditions" of these Standard Specifications, the Contractor shall have responsible personnel on the site within one hour of verbal notification by the Engineer and shall immediately commence work on such erosion control measures as are required by current conditions.

If the Engineer determines that forces other than the Contractor's must be mobilized due to a condition posing imminent hazard to life or property, he will authorize the mobilization of such forces as are necessary for the protection of life and property.

In determining unavoidable delays in accordance with Section 107.05.03, "Unavoidable Delays" of these Standard Specifications, erosion control work will not be considered constructive work on the project in the calculation of the number of hours worked to make that determination.

Section 205.04 Seeding - Areas including but not limited to, cut slopes, fill slopes, building pads, and mass grading that are to be left in an exposed condition upon completion of all work shall be seeded by the hydromulch process with a mixture of grasses and seed conforming with the requirements of the Santa Cruz County Erosion Control Mix in the proportions as follows:

<u>SEED</u>	<u>Percentage by Weight</u>
(Total 35 lbs. per Acre)	
Blando Brome Grass	42.5
Hycon Rose Clover	34.18
Zorro Fescue	8.21
Creeping Red Fescue	14.01
Various	1.10

Inert Fiber: 2,000 lbs. per Acre
 Fertilizer: 350 lbs. per Acre

The seed shall be thoroughly mixed with inert fiber material, fertilizer (16-20-0), and water and applied under pressure with a nozzle. The selection of agitator, air pressure, and nozzle size shall be the responsibility of the Contractor. Except as provided for in the *Contract Documents*, the Contractor shall be responsible for providing adequate watering of the seed mix until such time as the site evidences adequate germination. Such evidence shall be the presence of healthy, vigorous plants over the entire site. Areas in excess of 100-square feet evidencing poor or non-existent germination shall be reseeded where directed by the Engineer.

Section 205.05 Measurement - Except where provided in the *Contract Documents* to be paid on a unit price or lump sum price basis, erosion control measures shall be considered as incidental to other items of work and no measurement will be made thereof.

Where provided in the *Contract Documents* to be paid for on a unit price basis by area, the quantities of erosion control will be determined by measurement of the area to be treated for erosion control to the nearest 10 square feet or 1 square yard.

Section 205.06 Payment - Where provided for in the *Contract Documents* to be paid for as a unit price or lump sum price item, the contract unit price therefore shall include full compensation for providing all materials and equipment and for performing all work involved in Erosion Control including but not limited to, erosion control plans, grading, channelization, sedimentation basins, seeding, maintenance and inspection, and emergency response as provided for in these Standard Specifications, the *Contract Documents*, and as directed by the Engineer.

SECTION 206 MAIN REPLACEMENT

Section 206.01 General - Main replacement work shall include but not be limited to, construction of new water mains, replacement of existing services, reconnection of existing services, the construction and installation of appurtenances such as valves and fire hydrants, and connection of the new main to the existing distribution system. All work shall be in accordance with the relevant provisions of these Standard Specifications and the *Contract Documents*.

The Contractor shall take all measures necessary to maintain the existing main and services in operation until completion of main replacement construction and shall prevent the contamination of the existing system and services by his operations. Each service line shall be flushed through the customer's plumbing for a minimum of 5-minutes at the hose bib or other outlet nearest to the house shutoff valve.

All meters located outside the Right-of-Way shall be relocated to the Right-of-Way. All existing meter boxes found to be Christy B9 or B16 may be reinstalled after replacing the service if found to be in good condition. The Engineer shall make the determination as to the acceptability of the box and, if found to be deficient, will provide a replacement at no charge to the Contractor.

Section 206.02 Main Replacement

Section 206.02.01 General - Main replacement shall include the construction of new water mains including but not limited to, excavation, bedding, backfill, pressure testing, disinfection, and trench repair paving.

Section 206.02.01 Measurement and Payment - Except as provided for in the *Contract Documents*, main replacement pipelines will be paid for at the contract unit price per linear foot for pipelines in accordance with Section 301.06, "Measurement" and Section 301.07, "Payment" of these Standard Specifications.

Section 206.03 Replace Existing Service

Section 206.03.01 General - The contract item to replace existing services shall include but not be limited to, tapping the new water main, installing a new service line, reconnecting the meter to the new service line, reconnecting the customer plumbing to the meter, installing a new meter box, and restoring the area surrounding the meter to a condition equal to or better than that prior to start of construction. Each service line shall be flushed through the customer's plumbing for a minimum of 5-minutes at the hose bib or other outlet nearest to the house shutoff valve.

All meters located outside the Right-of-Way shall be relocated to the Right-of-Way in accordance with these Standard Specifications and Plans.

All services replaced shall be constructed in accordance with the provisions of these Standard Specifications and Plans including bringing the meter to the proper elevation in the meter box and making the necessary adjustments to reconnect the customer's plumbing to the meter.

Section 206.03.02 Multiple Services - Multiple existing meters supplied by a single service line ("bullhead services") shall be replaced with individual services lines for each meter in accordance with these Standard Specifications and Plans.

Section 206.03.03 Measurement and Payment - The contract unit price per each for Replace Existing Service shall include full compensation for providing all labor, materials, equipment, and tools and for doing all work required in replacing existing services including but not limited to, excavation, tapping the new water main, relocating the meter as required, reconnecting the meter to the customer plumbing, and restoring the work area as provided for in the *Contract Documents*, these Standard Specifications, and as directed by the Engineer.

Section 206.04 Reconnect Existing Service

Section 206.04.01 General - Reconnect existing service shall include but not be limited to, tapping the new main and connecting the existing service line to the new service line.

Where existing meter boxes are found not to be Christy B9 or B16 or where the existing box is damaged, the Contractor shall install a new meter box in accordance with these Standard Specifications.

The Contractor shall reconnect the customer plumbing to the meter whenever any work on reconnecting the service necessitates disconnection of the meter or there is evidence that the connection is leaking or in some other manner deficient. This shall include adjusting the vertical position of the meter within the meter box and reconnecting the customer's plumbing in accordance with these Standard Specifications and Plans.

All meters located outside the Right-of-Way shall be relocated to the Right-of-Way. All existing meter boxes found to be Christy B9 or B16 may be reinstalled after replacing the service. The Engineer shall make the determination as to the acceptability of the box and, if found to be deficient, will provide a replacement at no charge to the Contractor.

Section 206.04.02 Measurement and Payment - The contract unit price per each for Reconnect Existing Service shall include full compensation for providing all labor, materials, equipment, and tools and for doing all work required in reconnecting existing services including but not limited to, excavation, tapping the new water main, relocating the meter as required, reconnecting the meter to the customer plumbing as required, and restoring the work area as provided for in the *Contract Documents*, these Standard Specifications, and as directed by the Engineer.

Section 206.05 Tie-Ins

Section 206.05.01 General - Where an order of work is provided for in the *Contract Documents* that provides for an order of tie-ins, the order given will be provided as a convenience to the Contractor unless otherwise provided for in the *Contract Documents*. The purpose of such an order of work is to enable the filling, flushing, and testing of the new main with a minimum of interruption of service to the existing customers affected. The Contractor shall make his own determination with regard to the order in which tie-ins shall be made and shall obtain the Engineer's approval prior to proceeding with such tie-ins. The Contractor's order of making tie-ins shall reflect the intent stated herein.

Where a list of fittings and materials is provided for tie-ins, such lists will be provided as a convenience to the Contractor and to indicate the intent of the work to be performed. The Contractor shall make his own determination as to the fittings and materials to be used, in accordance with these Standard Specifications and the *Contract Documents*. All fittings and materials to be used in making tie-ins to the existing system shall be approved by the Engineer prior to commencing work.

Section 206.05.02 Measurement and Payment - The contract unit price per each for Tie-Ins shall include full compensation for providing all labor, materials, equipment, and tools and for doing all work required in making tie-ins including but not limited to, excavation, cutting into the existing water main, all pipe and fittings, and restoring the work area as provided for in the *Contract Documents*, these Standard Specifications, and as directed by the Engineer.

Section 206.06 Temporary Blow-Offs and Chlorination Taps

Section 206.06.01 General - Where provided for in these Standard Specifications and the *Contract Documents*, the Contractor shall construct temporary blow-offs and chlorination taps for the purpose of flushing and disinfecting the new water main. Such temporary blow-offs and chlorination taps shall be removed upon completion of the work and the surface restored in accordance with the provisions of these Standard Specifications and the *Contract Documents*.

Section 206.06.02 Measurement and Payment

Section 206.06.02(a) Unit Basis - When Temporary Blow-Offs and Chlorination Taps are provided for in the *Contract Documents* to be paid for as a unit, the contract unit price per each shall include full compensation for all labor, materials, equipment, and tools and for doing all work required in installing and removing temporary blow-offs and chlorination taps including but not limited to, excavation, bedding, supports, providing valves, connection to the pipeline or fitting, tapping the main, valve box, backfill, and pavement repair, complete in place as provided for in the *Contract Documents*, as provided for in these Standard Specifications, and as directed by the Engineer and no additional compensation will be allowed therefore.

Section 206.06.02(b) Incidental Basis - When a pay item for temporary blow-offs and chlorination taps is not included in the *Contract Documents*, all costs for such temporary blow-offs and chlorination taps as are provided for in the *Contract Documents* and these Standard Specifications shall be considered as incidental to other items of work and all costs associated with such temporary blow-offs and chlorination taps shall be included in the contract unit or lump sum prices for other items of work and no additional compensation will be allowed therefore.

Section 206.07 Special Items

Section 206.07.01 General - Where provided for in the *Contract Documents*, the Contractor shall construct special items including but not limited to, reconnecting fire services, rerouting and reconnecting customer plumbing to the meter, relocating meters and services, reconnecting fire hydrants, and similar items of work. All such work shall be performed in accordance with the *Contract Documents* and these Standard Specifications.

Section 206.07.02 Measurement and Payment - Where special items are provided for in the *Contract Documents* to be paid for as a unit, the contract unit price per each shall include full compensation for all labor, materials, equipment, and tools and for doing all work required in constructing and installing such special items including but not limited to, excavation, bedding, supports, providing valves, connection to the pipeline or fitting, tapping the main, valve boxes, backfill, pavement repair, and reconnection of customer plumbing complete in place as provided for in the *Contract Documents*, as provided for in these Standard Specifications, and as directed by the Engineer and no additional compensation will be allowed therefore.

Section 206.08 Abandonment

Section 206.08.01 General - Where provided for in the *Contract Documents* and following the construction of replacement facilities, the Contractor shall abandon existing facilities in accordance with these Standard Specifications and the *Contract Documents*. Such facilities shall include but not be limited to, water mains, services, valves, fire hydrants, and fittings.

Section 206.08.02 Pipeline Abandonment - Upon completion of construction of new pipelines and the approval of the Engineer, the Contractor shall abandon the existing pipeline. Such abandonment shall include but not be limited to, plugging the cut end of the pipe with sand/cement slurry or, in the case of an aggregate backfill, concrete.

If the abandoned pipeline is connected to a line scheduled to remain in service, the Contractor shall excavate and remove the fittings and valves where the line to be abandoned is connected to the main and shall install a repair section of PVC pipe with bolted couplings in accordance with these Standard Specifications. The excavation shall be backfilled with sand/cement slurry following pressure testing and approval of the Engineer.

Asbestos cement pipe shall be abandoned in place wherever practicable. Where the Contractor is required to remove a section of asbestos cement pipe in order to construct improvements provided for in the *Contract Documents*, the pipe shall be cut by the use of a chin cutter such that no dust is created. The removed pipe shall then be disposed of in the same excavation, taking care to fill the pipe with sand/cement slurry during backfill.

Section 206.08.03 Service Line Abandonment - When an existing service line is to be abandoned as part of a replacement or reconnection of the service, all existing service line materials shall be removed from the meter box to a depth of at least 6-inches below the earth surface within the meter box.

If the abandoned service line is connected to a pipeline also scheduled for abandonment, no further work will be required.

If the abandoned service line is connected to a pipeline scheduled to remain in service, the Contractor shall excavate the corporation stop at the pipeline and abandon the service as follows:

CASE 1: Asbestos Cement, PVC, Cast Iron, or Ductile Iron Pipeline with Copper or Polyethylene Service

Turn off corporation stop and install a cap on the service line.

CASE 2: Asbestos Cement, PVC, Cast Iron, or Ductile Iron Pipeline with Galvanized Iron Pipe Service

Remove tapping saddle and repair the pipeline with a full-circle repair clamp.

CASE 3: Steel Pipeline, all service materials

Remove and replace the pipeline a minimum of one foot on each side of the service fitting using PVC pipe or polyethylene service tubing and bolted couplings.

If there is any evidence of failure of the tapping saddle, fittings, or the corporation stop, regardless of the materials involved, the entire service assembly shall be removed and the pipeline repaired as required by the conditions found. Such evidence shall include but not be limited to, leaks from any portion of the corporation stop, leaks in any part of the tapping saddle seal, corrosion of the saddle or corporation stop materials in excess of 10-percent of the material thickness at any point, and any misalignment in the assembly.

Upon completion of the abandonment, all excavations shall be backfilled with sand/cement slurry.

Section 206.08.04 Fire Hydrant Abandonment - When an existing fire hydrant is to be abandoned as part of a replacement or reconnection of the fire hydrant, all existing hydrant materials shall be removed including but not limited to, the barrel assembly, break away spool, hydrant bury, and any traffic barriers.

If the abandoned fire hydrant is connected to a pipeline also scheduled for abandonment, no further work will be required.

If the abandoned fire hydrant is connected to a pipeline scheduled to remain in service, the Contractor shall excavate the hydrant supply valve at the pipeline and abandon the hydrant as follows:

CASE 1: Asbestos Cement, PVC, Cast Iron, or Ductile Iron Pipeline

Turn off the supply valve and install a blind flange, cap, or plug, as required by the type of valve end found.

CASE 2: Steel Pipeline

Remove and replace the pipeline a minimum of one foot on each side of the fitting serving the hydrant supply valve using PVC pipe or polyethylene service tubing and bolted couplings.

If there is any evidence of failure of the supply fittings, regardless of the materials involved, the entire fitting assembly shall be removed and the pipeline repaired as required by the conditions found. Such evidence shall include but not be limited to, leaks from any portion of the fittings, leaks from any part of the valve body other than the gate seal, corrosion of the fittings or valve materials in excess of 10-percent of the material thickness at any point, and any misalignment in the assembly.

Upon completion of the abandonment, all excavations shall be backfilled with sand/cement slurry.

Section 206.08.05 Valve Abandonment - All valves to be abandoned in place shall have the valve box removed and the excavation backfilled with sand/cement slurry prior to final pavement repair.

Section 206.08.06 Measurement and Payment - Except as provided for in the *Contract Documents*, all costs associated with the abandonment of existing facilities shall be considered as included in the contract unit or lump sum price for other items of work and no additional compensation will be allowed therefore.

SECTION 207 CONSTRUCTION PROJECT SIGN

Section 207.01 Description - Where provided for in the *Contract Documents*, the Contractor shall erect a sign describing the project in accordance with the provisions of Standard Plan No. S-24. Such sign shall be fabricated by a firm engaged in the preparation of signs for a minimum period of 5-years. Upon the request of the Engineer, the Contractor shall provide evidence of the signmaker's work for review.

The sign shall be erected at the approximate locations provided for in the *Contract Documents*. The Engineer shall direct the Contractor in actual location selected.

Section 207.02 Materials

Section 207.02.01 Sign Board - The signboard shall be nominal 3/4-inch MDO plywood as used in the industry for exterior wooden signs. The plywood shall be painted on both sides and all edges with a minimum of 2 coats of Product Sign Supply White paint.

Section 207.02.02 Lettering - All lettering shall be press-on vinyl cutout letters affixed to the signboard. Letters shall be dye cut rather than hand cut and rolled with a brayer or other device capable of applying sufficient pressure to bond the material to the board and remove any bubbles. The District will provide camera-ready art of the District logo.

Section 207.02.03 Posts - Supporting posts shall be nominal 4-inch by 6-inch pressure treated douglas fir set a minimum of 4-feet in the ground in drilled holes. Each posthole shall be backfilled with Class "B" portland cement concrete. The signboard shall be affixed to the posts using 1/2-inch by 3-inch galvanized lag screws with washers.

Section 207.02.04 Protective Coating - Upon completion of the sign, the Contractor shall coat both sides and all edges with a American Protective Coatings Type SK-1 Protective Coating. This coating shall be applied in full accordance with the manufacturer's recommendations and prior to erecting the sign in the field.

Section 207.03 Construction - Upon selecting the final location of the sign, the Contractor shall excavate the postholes using either an auger or similar tool. Excavation using a backhoe or similar equipment will not be permitted. Upon setting the posts, the Contractor shall allow a minimum of 2-days for the concrete to set before erecting the sign. The Contractor shall take all precautions necessary including but not limited to, coverings and fabric slings to protect the sign

during erection.

Section 207.04 Maintenance - Throughout the life of the Contract the Contractor shall inspect the sign or signs daily for evidence of damage or vandalism and make repairs within 1-working day of discovery. All graffiti shall be promptly removed in accordance with the manufacturer's recommendation and all damage to the sign repaired. If the sign is determined to be damaged beyond repair, the Contractor shall submit a request for additional compensation to the Engineer in accordance with the provisions of Section 105.06, "Changed Conditions" of these Standard Specifications. The opinion of the Engineer regarding the condition of the sign shall be final. The replacement of supporting posts shall be considered as routine maintenance and no additional compensation will be allowed therefore.

Section 207.05 Measurement and Payment - The contract unit price per each for Construction Project Sign shall include full compensation for furnishing all labor, tools, equipment, materials, and incidentals and for doing all work involved in erecting construction project signs including but not limited to, fabrication, erection, and maintenance complete in place as shown on the *Contract Documents*, as provided for in these Standard Specifications, and as directed by the Engineer and no additional compensation will be allowed therefore.