

The finish grade below adjacent paving, curbs or headers shall be one inch in lawn areas and three inches in shrub or groundcover areas.

308-4 PLANTING

308-4.1. General. Add the following:

Planting work shall not begin until the area's irrigation system has been installed, operational and passed inspection.

Inspection and approval of specimens shall be required before delivery to site; all others on delivery. Any plants rendered unsuitable for planting because of this inspection shall be considered as samples and shall not be paid for. In case the sample plants inspected are found to be defective, the Engineer reserves the right to reject the entire lot or lots of plants represented by the defective samples. Rejected plants shall be removed from the site immediately. Random samples will be inspected for root condition.

All plants shall be true to name, and one of each bundle or lot shall be tagged with the name and size of plants, in accordance with the standards of practice recommended by the American Association of Nurserymen. The root condition of plants furnished in containers shall be determined by removal of earth from the roots of not less than two (2) plants, nor more than 2 percent (2%) of the total number of plants of each species or variety, except when container-grown plants are from several different sources; in which case, the roots of not less than two (2) plants of each species or variety from each source shall be inspected by the Engineer at his option. The selection of plants to be inspected will be made by the Engineer.

All plants of the same species and container size (i.e., the same specification) shall be uniform in size and shape and at the same stage of growth to the satisfaction of the Engineer.

All plants shall be fully acclimated and in an active growing state.

The Contractor shall remove all lateral growth that is not acceptable and/or shape all plants to the satisfaction of the Engineer.

All plants shall be full-sized and shall have root systems at a fully developed state within the container.

Hair roots shall extend to the edge of the container. No plant shall be root-bound. Root balls may require scarification to the satisfaction of the Engineer.

No boxed, balled or canned plants shall be planted if the ball is broken or cracked, whether before or during the process of planting. Any plant transplanted by the Contractor that dies or has bark, branch or die-back injury shall be replaced at the Contractor's expense with an equal plant to the satisfaction of the Engineer.

Before plants are transported to the planting area, they shall be properly pruned or cut back to reduce damage by wind and to force lateral growth.

No plants shall be transported to the planting area that are not thoroughly wet throughout the ball of earth surrounding the roots. Plants shall not be allowed to dry out, nor shall any roots be exposed to the air except during the act of placement. Any plant that, in the opinion of the

Engineer, is dry or in a wilted condition when delivered or thereafter, whether in place or not, will not be accepted and shall be replaced at the Contractor's expense.

All inspections herein specified shall be made by the Engineer. The Contractor shall request inspection at least 48 hours in advance of the time inspection is required. Inspection shall be required on the following stages of the work:

- a) During preliminary grading, soil preparation, and initial weeding.
- b) When plants are spotted for planting, but before planting holes have been excavated.
- c) When finish grading has been completed.
- d) When all specified work, except the maintenance period has been completed.
- e) Final inspection at the completion of the maintenance period.

The Contractor's failure to obtain inspection will extend the start and/or finish of the maintenance period as applicable, unless otherwise agreed to in writing by the Engineer.

308-4.5 Tree and Shrub Planting. Replace the fourth paragraph with the following:

All planting holes shall be backfilled with a prepared soil mix conforming to the following requirements:

- 4 parts by volume nitrogen-stabilized organic amendment
- 6 parts by volume on-site soil*
- 1 lb. 12-12-12 commercial fertilizer per cubic yard of mix
- 2 lbs. iron sulfate per cubic yard of mix

* from area(s) approved by Engineer

The materials shall be thoroughly mixed to the bottom of the pit so that they are evenly distributed and without clods or lumps. Backfill shall be so placed in the pits that the plant will be at its natural growing height and the backfill material will be level one inch below surrounding soil after settlement.

Fertilizer planting tablets (twenty-one (21) gram size and shall be placed with each plant at the following rates:

- One (1) tablet per one (1) gallon container;
- Two (2) tablets per five (5) gallon container;
- Four (4) tablets per fifteen (15) gallon container;
- Eight (8) tablets per 24" box container
- One (1) tablet per each three inches (3") of box size greater than 24".

Center plant in pit or trench on slight pedestal. Face plants with fullest growth into prevailing wind. Set plant plumb and hold rigidly in position until soil has been tamped firmly around ball or roots. Position the plant in the hole and backfill no higher than halfway up the root ball. If required, place the recommended number of tablets evenly around the perimeter of, and immediately adjacent to, the root ball at a depth which is between the middle and the bottom of the root ball. Complete the backfilling, tamp (eliminating all air voids) and water. Do not pack.

Except for street trees, construct a berm 4" above finish grade, extending 4" to 6" beyond edge of root ball, forming a watering basin with a level bottom around each plant. After a minimum of 2 days soaking and the regular irrigation system is operating, the berm area shall be smoothed to finish grade.

308-4.8 Lawn Planting

308-4.8.2 Seed. Add the following to Method B.

Prior to the application of hydro-mulch, the fine grading of all lawn areas shall be inspected and approved by the Engineer. Seedbeds shall be treated with 5% Dieldrin in granular form at the rate of 3 1/2 pounds per 1000 square feet and lightly watered. After 24 hours (minimum) have elapsed, the seedbeds shall be prewetted prior to hydroseeding and shall be kept continually moist after hydroseeding.

All equipment used to apply hydromulch shall be subject to the approval of the Engineer. The equipment shall have a built-in agitation system and operating capacity sufficient to agitate, suspend and homogeneously mix a slurry containing not less than 40 lbs. of fiber mulch plus a combined total of 7 lbs. fertilizer solids for each 100 gallons of water.

Hydraulic spray nozzles shall provide a continuous non-fluctuating discharge. The slurry tank shall have a minimum capacity of 1,500 gallons and shall be mounted on a traveling unit, either self-propelled or drawn by a separate unit, which will place the slurry tank and spray nozzle within sufficient proximity to the areas to be seeded.

The slurry preparation shall take place at the site of Work and shall begin by adding water to the tank when the engine is at half throttle. When the water level has reached the height of the agitator shaft, good re-circulation shall be established and at this time the seed shall be added. Fertilizer shall then be added to the mixture after the seed and when the tank is at least one-third filled with water.

The engine throttle shall be opened to full speed when the tank is half filled with water. All the wood pulp mulch shall be added by the time the tank is two-thirds to three-fourths full. Spraying shall commence immediately when the tank is full.

Spray the area with a uniform visible coat using the dark color of the cellulose fiber or organic amendment as a visual guide. The slurry shall be applied in a downward drilling motion via a fan stream nozzle. It is important to ensure that all of the components enter and mix with the soil.

All slurry mixture which has not been applied within four (4) hours after mixing shall be rejected and removed from the Work at the Contractor's expense.

Special care shall be exercised by the Contractor to prevent any of the slurry from being spilled or sprayed anywhere except onto areas to be hydroseeded. Any spillage or overspray immediately shall be removed by and at the expense of the Contractor to the satisfaction of the Engineer.

Seed shall be applied at a minimum rate of five (5) pounds per 1000 square feet.

If complete and full germination is not obtained within 14 days, the Contractor shall hand seed with the same seed mixture and top dress with nitrohumous and redwood soil amendment all areas designated by the Engineer.

Add the following subsections:

308-4.10 Parkway Trees

308-4.10.1 General. The CITY maintains a tree conservation policy. The Contractor is required to assist the CITY in its efforts to conserve trees.

The Contractor shall be required to provide a Consulting Arborist (CA) to review and guide its operations that may impact trees to remain. The CA shall be required to have Certification as an Arborist by the International Society of Arboriculture (217-355-9411), unless otherwise approved by the Engineer.

The CA shall inspect all work locations and assess the impact of construction on existing trees to remain. If the CA determines that destructive impact is likely, Contractor is required to modify its operations to reduce the likelihood of damage to the fullest extent feasible. Contractor shall be responsible to schedule its operations in a manner that will permit the CA to view areas after removals and prior to construction, as necessary.

The CA shall spot-check representative operations and modifications employed to protect existing trees. A preliminary identification of trees that may potentially be impacted has been made by the Engineer. The CA shall check these and other locations to assure adequate protective measures are taken.

There shall be no separate payment for the services of the CA. All costs for the CA shall be included in the prices bid for appurtenant work.

308-4.10.2 Conservation Methods. Manual operations shall be employed for the removal of sod and soil to establish a finished grade within 4 feet of existing trees to remain.

Tree root systems must remain adequate to withstand heavy windstorms.

Construction equipment, materials, sand, soil, gravel, or other material shall not be placed, parked or stored on the surface of any unpaved areas within the driplines (outermost reach of branches) of street trees. No chemicals, rinstates, or petroleum products shall be deposited within the driplines of street trees.

308-4.10.3 Root Barrier and Pruning. Roots shall be pruned immediately adjacent to the edge of the sidewalk and the back of curb. Cuts shall be 7.5-inches adjacent to sidewalk and 18-inches deep adjacent to curb and gutter. The cuts shall extend 6 feet in each direction along the curb from the center of the tree trunk for a total length of 12 feet or as directed by the Engineer.

Root pruning equipment shall be specifically designed for this purpose, sharpened adequately to sever roots in a clean manner, and equipped with padded tracks or rubber tires to prevent scraping or marking of the roadway or curbs.

Areas root pruned shall be backfilled with Class "C" topsoil either immediately upon completion of root pruning or upon completion of the adjacent work provided that adequate safety and warning devices are placed and maintained at each location.

The Contractor shall repair or replace all utility service connections and sprinkler systems within the right-of-way which are damaged or removed as a result of the root pruning operation. Repairs shall be initiated immediately upon the occurrence of damage or removal and completed by the end of each working day. Repairs and replacements shall be the equivalent of, or better than, the existing improvements in material, dimension, and function. All repairs shall be at the

Contractor's expense and to the satisfaction of the Engineer.

Root sealer shall be approved by the Engineer a minimum of two (2) working days prior to the start of root pruning operations and shall be applied to all cut root areas which are larger than 50mm (2 inches) in diameter. The approved sealer shall be applied as soon as practical after the cuts have been made.

When constructing or replacing driveway approaches, roots shall not be cut by means of mechanical root cutting machines. If root removal is essential to driveway construction, roots shall be manually cut using hand implements with guidance from the CA.

Exposed tree roots shall be covered with mulch and watered from a period immediately following curb and gutter removal, until the area is backfilled following construction.

The root barrier shown in City of Torrance Standard Plan Nos. T401 and T402 is hereby deleted from this project.

308-4.11. Payment. Payment for providing prepared topsoil, furnishing and planting trees, shrubs, and plants shall be included in the lump sum Contract Unit Price for related pipeline work.

308-5 IRRIGATION SYSTEM INSTALLATION

308-5.1 General. Add to the last paragraph:

The record drawings of the irrigation system shall show locations and depths of the following items:

- a) Points of connection.
- b) Routing of sprinkler pressure lines (dimension at a maximum of 100 feet along routing).
- c) All gate valves.
- d) Quick coupling valves.
- e) Rerouting of control wires.
- f) Other related equipment (as directed by Engineer).

The Contractor shall verify the water pressure available at the site before installation of the irrigation system to make sure there is adequate pressure to properly operate the irrigation heads and valves. If the pressure provided at Work site or any other Work condition will create problems that will prevent proper operation of the irrigation system, the Engineer shall be notified before commencement of any work. Minor additions and adjustments of heads, piping, and circuits shall be made at no additional cost to the CITY where it is necessary to make the irrigation system operate properly.

308-5.2 Irrigation Pipeline Installation

308-5.2.1 General. Add the following:

Trenching machines or other mechanical means of excavation shall not be used for excavation of trenches where such use may damage existing improvements. However, in any case, the Contractor will be held responsible for any damage to existing improvements caused by their operations and any damage so occurring shall be repaired to the satisfaction of the Engineer by and at the expense of the Contractor.

Trench excavation for pipelines shall be made on the alignments shown on the Plans. Unless otherwise shown, lateral water lines shall have a minimum cover of twelve inches (12") of soil. Main water lines shall have a minimum cover of 36" of soil.

Irrigation pipe shall be installed in conformance with 308-5.2.3. Pipe flushing and pressure testing shall conform to 308-5.6.

At any location where irrigation pipe has less than 15" of cover due to interferences or other adjustments, the Contractor shall, at its own expense, provide a galvanized sleeve or other protection to the satisfaction of the Engineer. No extra costs shall be allowed for this protection.

Bedding material for irrigation piping shall be sand conforming to the requirements of 200-1.5.3 (minimum SE of 75) and 200-1.5.5.

Backfill material placed in the pipe trenches and immediately over electrical wiring shall be select material free from stones or other material that might damage the pipe or insulation on the conductors.

Backfill of irrigation pipe shall conform to 308-2.2.

Densification of bedding material shall be per 306-1.3.3.

All trenches shall be compacted to the same compaction as the adjoining area and finished flush with adjoining grades.

Unless otherwise directed by the Engineer, pressure piping shall be provided with PCC thrust blocks. Thrust blocks shall be constructed at the following places:

- a) Where pipe changes direction at fittings.
- b) Where pipe changes size.
- c) Where line terminates.
- d) Around gate valves (bottom half of valve in concrete; bolts exposed for change of top half).

308-5.3 Installation of Valves, Valve Boxes, and Special Equipment. Modify the second sentence of the fifth paragraph to read:

In lawn areas, such equipment shall be installed in valve boxes as described in 212-2.2.7 of these Special Provisions. Boxes shall be set level on 1 cubic foot (1'x1'x1') of gravel. The top of the box shall be set at grade where adjacent to pavement.

Add the following after the fifth paragraph:

Remote Control Valves shall be installed in accordance with APWA Standard Plans and manufacturer's specifications. Remote control valves shall be 6 inches to 8 inches below finished grade, measured to top of cross arm in "open" position, or as detailed on the Plans.

Master RCV shall be installed adjacent to and downstream of the cross connection preventer.

Pressure Relief Valves shall be installed as shown on the Plans in a locking valve box per 212-2.2.7 of these Special Provisions. Set for 125 lb. operation.

Add to the last paragraph.

Backflow devices shall be installed in accordance with the requirements set forth by the Uniform Plumbing Code, latest edition and latest supplements thereto, on GSP, wrapped and set in PCC per City of Torrance Standard Plan No. T711.

308-5.4 Sprinkler Head Installation and Adjustment

308-5.4.2 Location, Elevation, and Spacing. Add the following to the first paragraph:

Any deviation to spacing and location of sprinkler heads shall be reported to the Engineer and have his approval before installation.

Add the following:

The Contractor shall coordinate the installation of all sprinkler heads, including pipe, with the Plans to avoid interfering with trees or other planting and/or permanent pavement.

No spray from sprinkler heads will be permitted to throw into public streets or onto walks, driveways or parking areas.

308-5.5 Automatic Control System Installation. Replace the entire subsection with the following:

Automatic controllers shall be installed approximately where shown on the Plans after having verified exact positioning with the Engineer. Units shall be installed plumb and in a manner as recommended by the manufacturer in the enclosure specified in 212-3.4 of the Special Provisions.

For low voltage installations, a continuous wire shall be used between the controller and remote control valves. Under no circumstances shall splices exist without prior approval. All wire shall be installed in PVC casing (no direct burial) unless otherwise approved by the Engineer. Said PVC casing shall be in addition to the galvanized casing where applicable.

Sizing of wire shall be according to the controller manufacturer's recommendations and in no case less than #14 in size.

All control wires shall be black in color. All ground wires shall be white in color. An extra wire (neither white nor black) shall be installed extending to the furthest valve for possible future use.

Stamped brass identification tags shall be connected to each wire exposed in access boxes and at each remote control valve. Tag size shall be 1" long by 1/2" high, with 1/4" high numbers

deeply stamped thereon indicating valve sequence number. Tags shall be tied with bare copper tie wire. Sequence shall be approved by the Engineer. All splices shall be made in a valve box and inspected by the Engineer and all remote control valves shall be tested for operation prior to backfill.

Add the following subsections:

308-5.7 Controller Charts. Upon completion of the Work, the control system shall be in operating condition with an operational chart mounted in the controller cabinet.

The Contractor shall provide two controller charts for each controller supplied showing the area covered by the automatic controller on the maximum size sheet which the controller or controller cabinet door will allow. The chart may be a reduced drawing of the actual as-built system. However, in the event the controller sequence is not legible when the drawing is reduced, it shall be enlarged or redrawn to a size that will be readable.

The chart shall be a blackline print, and a different color shall be used to show area of coverage for each station.

When completed and approved, one of the charts shall be hermetically sealed between two pieces of plastic, each piece being a minimum 20 mils. thick. This chart shall be mounted using Velcro or approved equal type of tape. The other chart shall be given to the Engineer.

These charts shall be completed and approved prior to final inspection of the irrigation system.

308-5.8 Electrical Service and Meters. The electrical meter shall be installed in an enclosure conforming to 212-3.4 of these Special Provisions. The Contractor shall provide the enclosure and any necessary pull boxes. The enclosure location shall be established in the field by the Engineer. The service location is shown on the Plan.

Southern California Edison Company (SCE) will furnish the electrical meter and will install the wires and conduits from the electric line to the electrical meter. It is the Contractor's responsibility to coordinate its 120 VAC electrical connections with SCE and include any delay in obtaining installation of the meter in its schedule. Controllers shall be fully automated and tested prior to start of maintenance period. SCE will bill the CITY directly for this connection.

308-5.9 Payment. Payment for the installation of the irrigation system shall be included in the lump sum Contract Unit Price for related pipeline work. There shall be no separate payment for furnishing and installing pipe, fittings, valves, controllers, enclosures, special equipment, and electrical work.

308-6 MAINTENANCE AND PLANT ESTABLISHMENT. Replace the entire subsection with the following:

The Establishment and Maintenance Period shall begin on the first day after all planting in this Work is completed and accepted, and shall continue thereafter until 90 calendar days have passed. Notify the Engineer at least seven (7) days in advance of completion. Failure by the Contractor to notify the Engineer will delay the start of the Establishment and Maintenance Period.

Should the Establishment and Maintenance Period be extended beyond the prescribed 90 calendar days because of rejection by the Engineer for whatever reason, the entire installation shall remain the responsibility of the Contractor unless otherwise determined by the Engineer. Any

rejected material shall be replaced and the 90 calendar day Establishment and Maintenance Period shall be restarted from that time for the replaced material only.

All areas landscaped or restored under this Contract shall be maintained by the Contractor. The Contractor, without any expense to the CITY, shall weed the planted areas as needed and shall remove all accumulated debris from the landscaped areas as needed and/or as called for by the Engineer.

One month after planting, fertilize plants with 12-12-12 (N-P-K) commercial fertilizer at the rate of 3 level tablespoons per 5-gallon plant basin. The Engineer may require additional fertilization at each monthly interval.

Apply Iron Sequestrene as specified by the manufacturer immediately at the onset of any symptom of iron chlorosis. Repeat fertilization monthly for duration of maintenance period.

The above fertilization schedule may be revised by the Engineer if, in his/her opinion, optimal plant health and growth is not being obtained. The Contractor shall comply with all changes as directed.

The Contractor shall be responsible to provide adequate water to all plants without overwatering. Water conservation is mandated. The Contractor shall obtain approval from the Engineer for its proposed irrigation schedule and any changes thereto.

Mowing grass areas once every two weeks is required after one month.

Add the following subsection:

308-6.1. Payment. Payment for Plant Establishment and Maintenance Period shall be included in the Contract Unit Price for related pipeline work.

Add the following section:

308-8 GUARANTEE.

The Contractor, without expense to the CITY, shall adjust all irrigation heads to their appropriate operational heights, shall adjust and clean or replace, if necessary, all irrigation heads so that the planting areas are properly covered and they shall be adjusted so as to prevent excessive overflow into the adjacent street right-of-way.

The CITY reserves the right to make temporary repairs as necessary to keep the irrigation system equipment in operating condition. The exercise of this right by the CITY shall not relieve the Contractor of its responsibility under the terms of the Contract as herein specified.

Maintenance shall be done by qualified and experienced irrigation pipefitters.

All fifteen (15) gallon and larger trees installed under the contract shall be guaranteed to live and grow for one (1) year from the date of final acceptance of the contract work unless decline of the tree is specifically attributable to causes unrelated to installation, plant material quality, and the Contractor's maintenance practices.

All other plant material shall be guaranteed to live and grow for a period of ninety (90) calendar days from the date of final acceptance of the contract work unless decline of the plant material is

specifically attributable to causes unrelated to installation, plant material quality, and the Contractor's maintenance practices.

Any plant material found to be dead, missing, or in poor condition during the post-construction maintenance period, shall be replaced immediately at the Contractor's expense. The Engineer shall be the sole judge as to the condition of the material. Replacement shall be made to the same specifications required for the original plantings.

During the guarantee period, should the Contractor fail to expeditiously replace dead plant material upon written notification by the Engineer, the City shall cause the work to be corrected and bill the actual costs incurred to the Contractor.

SECTION 310 - PAINTING

310-5 PAINTING VARIOUS SURFACES.

Use Sections 84-1 and 84-2 of the Caltrans Standard Specifications:

SECTION 84: TRAFFIC STRIPES AND PAVEMENT MARKINGS

84-1 GENERAL Add the following:

The Contractor shall paint red curb markings as shown on the signing and striping plans. When street addresses painted on curb faces have been eliminated due to work associated with this contract, each street address shall be restored by painting on the face of new curb. Background shall be white in color and address numbers shall be black in color and 4 inches in height. Existing paint markings on curbs shall be removed prior to applying the new paint markings.

84-1.01 Description. Replace the first two paragraphs with the following:

This work shall consist of applying thermoplastic traffic stripes (traffic lines) and pavement markings at the locations and in accordance with the details shown on the Plans or designated by the Engineer, and as specified in these Specifications and Special Provisions.

The thermoplastic material shall conform to the provisions of 84-2.02 of the Caltrans Standard Specifications.

84-2.06 Payment. Replace the entire subsection with the following:

Payment for traffic striping, pavement marking, and curb markings shall be on a lump sum basis per the Contract Unit Price and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, necessary to complete the Work.

All costs for establishing alignment of traffic stripes, pavement markings, layout, temporary pavement painting, and sandblasting of existing lines and markings shall be included and no extra costs will be allowed.

Add the following subsections:

310-5.6 Exterior Coatings for Exposed Water Pipes and Appurtenances

310-5.6.1 General. The exterior surfaces of water pipes and appurtenances that will be exposed to the atmosphere inside structure or above ground shall be thoroughly cleaned and then given a shop coat of rust-inhibitive primer conforming to 210-1.8 of these Special Provisions.

Where practicable, each succeeding coat of paint shall be of a different color. Colors as specified shall be maintained unless found to be no longer available from the manufacturer. If an alternative paint system is selected and approved by the Engineer, the Engineer will select the colors to be utilized from the color samples presented.

Each coat shall produce a minimum film thickness as specified herein. In areas where this thickness is not developed, sufficient additional coats shall be applied to produce it. All coating thicknesses specified herein refer to minimum dry film thickness.

Manufacturer's instructions shall be strictly followed in the application of proprietary coatings and materials.

310-5.6.2 Ungalvanized Ferrous Metals. Prior to coating, surfaces shall be sandblasted in accordance with SSPC-SP-6 (Commercial Blast Cleaning), except that where, in the Engineer's opinion, sandblasting is inappropriate because of the size, location or nature of the surface, or because of the difficulty in protecting adjacent work, such surfaces shall be either power tool cleaned in accordance with SSPC-SP-3 (Power Tool Cleaning) or hand tool cleaned in accordance with SSPC-SP-2 (Hand Tool Cleaning).

All paint shall be brush applied unless an alternate method is approved in advance by the Engineer. Surfaces shall be primed or spot primed as required. Prime coat shall be 2 mils. followed by two succeeding coats of 2 mils. each. Total thickness of the completed coating system shall be 6 mils.

310-5.6.3 Galvanized Ferrous Metals. Prior to coating, surfaces shall be cleaned in accordance with SSPC-SP-7 (brush-off blast cleaning).

All paint shall be brush applied unless an alternate method is approved in advance by the Engineer. Surfaces shall be primed or spot primed as required. Prime coat shall be 2 mils. followed by two succeeding coats of 2 mils. each. Total thickness of the completed coating system shall be 6 mils.

310-5.6.4 Payment. There shall be no separate payment for painting and coating. This cost shall be included in the work to which it is appurtenant.

310-5.7 Waterproofing (Concrete)

310-5.7.1 General. The Contractor shall furnish all material, labor and equipment necessary to waterproof the interior and exterior of all manholes and vaults.

310-5.7.2 Surface Preparation

- 1) Do not treat concrete surfaces with chemical hardeners or curing agents prior to the application of waterproofing.

- 2) Examine surfaces to be waterproofed for form tie holes and structural defects, such as honeycombing, rock pockets, faulty construction joints, cracks, etc. Repair these areas in accordance with Section 303.
- 3) Concrete surfaces shall have an open capillary system to provide tooth and suction and shall be clean, free from scale, form oil, latency, curing compounds, and any other foreign matter. Lightly sandblast, water blast, or acid etch with muriatic acid (15% to 20%) to provide a clean absorbent surface. Saturate surfaces to be acid etched with water prior to application of acid. Vertical surfaces may have a sacked finish. Do not apply a slurry coat of water materials to horizontal concrete deck surfaces that are less than 20 hours old.
- 4) Use light sandblasting or etching to remove the surface glaze of dense or steel troweled concrete.
- 5) Abrasive clean and wash construction joints.

310-5.7.3 Application

- 1) After completing repairs, apply a top-coat system to the concrete surfaces to be treated, apply after curing and finishes are complete. Application of waterproofing and any point top coatings shall conform to the manufacturers recommended application procedures.
- 2) The Contractor shall have the manufacturer's representative advise and/or supervise the waterproofing application in person.
- 3) Apply crystalline waterproofing material to concrete, which has been thoroughly saturated with clean water. Moisten surfaces to be treated prior to application. Remove free water prior to application of waterproofing material.
- 4) Apply crystalline waterproofing to:
 - (a) Interior walls and roof of concrete vaults and manholes. Exterior walls of concrete vaults and manholes.
 - (b) Joints of precast concrete manholes as shown on the Plans.
 - (c) The interior surfaces shall have a white color and the exterior a gray color.
- 5) Apply second coat when the first coat has reached an initial set. Use light water spray on surfaces to be coated if rapid drying occurs.

310-5.7.4 Payment. There shall be no separate payment for waterproofing. This cost shall be included in the work to which it is appurtenant.

SECTION 314 – TRAFFIC STRIPING, CURB AND PAVEMENT MARKINGS, AND PAVEMENT MARKERS

Delete the entire Section 314 and replace with Sections 85-1.06, 85-1.07 and 85-1.09 of the Caltrans Standard Specifications.

85-1.06 Placement. Add the following:

The solid 4" white lines at intersections shall have a marker installed at each end. These markers shall be placed on the line.

Markers shall not be installed on bike lane striping.

85-1.09 Payment. Add the following:

There shall be no separate payment for pavement markers. Full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in furnishing and placing pavement markings, complete in place, including adhesives and establishing alignment for pavement markers, as shown on the Plans, and specified in these Special Provisions shall be included in the Contract Unit Price for traffic striping and pavement markers as described in Section 84-2.06 of these Special Provisions.

Add the following section:

SECTION 315 – INSTALLATION OF MISCELLANEOUS POTABLE WATER DISTRIBUTION SYSTEM MATERIALS

315-1 CONNECTIONS TO EXISTING POTABLE WATER MAINS. Connections to the existing water mains shall be made within ten (10) working days of passing disinfection test and shall be as shown on the Plans and in accordance with City of Torrance Standard Plan No. T-723. If the Contractor fails to complete the connections within this time period, the Contractor shall be required to flush the new line weekly through a construction meter per the direction of the Engineer and pay all additional costs of water required for flushing.

In the event that a planned shut down of an existing water main is found necessary, the Contractor shall request approval four (4) days in advance from the Engineer for the time, date, duration and location of proposed shut down. Preparation and distribution of shut down notices shall be the responsibility of the Contractor. Shut down notices shall be reviewed by the Engineer and shall be in the form of a door hanger. These shut down notices shall indicate the time/date/duration/reasons for the shut down. Distribution of shut down notices shall be accomplished by placing said shut down notice on the main entry door of each dwelling unit, businesses, etc. effected by the shut down. All shut down notices shall be distributed (48 hours) 2 days in advance of the shut down.

The limits of this area for distribution of the shut down notice shall be approved by the Engineer prior to beginning the distribution process. Sample of the approved shut down notice will be available at the pre-construction meeting.

Shut down of any existing water mains may have to be performed during off-hours when the water demand is low. The Engineer shall determine the time of day when the shutdown is to be performed.

315-1.1 Payment. There shall be no separate payment for connection to the existing water main. Full compensation for furnishing labor, materials and equipment necessary to complete the connection shall be included in the Contract Unit Price per linear foot of pipe installed.

315-2 INSTALLATION OF VALVES. The size of valves to be installed shall be as shown on the Plans. All buried valves shall have the operating nuts in a vertical position except as otherwise noted. Valve boxes where called for, shall be centered over the operation nuts and shall be set plumb and conform to City of Torrance Standard Plan No. T712.

315-2.1 Payment. Payment for valves shall be per the Contract Unit Price and shall include valve boxes and related appurtenant work.

315-3 INSTALLATION OF AIR AND VACUUM RELEASE VALVES. Air and vacuum release valves shall be installed where shown on the Plans and in accordance with City of Torrance Standard Plan No. T708.

315-3.1 Payment. Payment for air and vacuum release valves shall be per the Contract Unit Price and shall include the service line, ball valve, valve box assembly, air release valve cover, concrete pad and related appurtenant work.

315-4 BLOW-OFF ASSEMBLIES. The Contractor shall install the blow-off assembly, including the 2-inch service line, 2-inch ball valve, and other appurtenances at the locations shown on the Plans and in accordance with City of Torrance Standard Plan No. T707.

315-4.1 Payment. Payment for blow-off assemblies shall be per the Contract Unit Price and shall include blow-off hydrants, service lines, fittings, valve box assemblies, thrust blocks and related appurtenant work.

315-5 PRECAST CONCRETE MANHOLES. Installation of precast concrete manholes shall be in accordance with the manufacturer's recommendations and shall comply with all safety requirements set by state and local agencies.

315-5.1 Payment. Permit for installation of precast concrete manholes shall be per the Contract Unit Price and shall include all related appurtenant work.

315-6 THRUST BLOCKS, ANCHORS AND PIPE CRADLES.

Thrust blocks, anchors and pipe cradles shall conform to the following requirements:

- 1) Concrete thrust blocks, anchors, or pipe cradles shall be poured at the locations and with the dimensions shown on City of Torrance Standard Plan No. T713.
- 2) Concrete shall be placed such that bell ends of fittings shall be available for repairs. Concrete placed over joints shall be removed.
- 3) Reinforcing steel exposed directly to the soil shall be coated with Kopcote Bitumastic No. 50, or approved equal.
- 4) The design for thrust blocks on HDPE restrained pipe shall not exceed the design for 12-inch pipe.
- 5) When pipe size exceeds 12-inch inside diameter, Contractor shall use a combination of thrust blocks and restrained joints to meet design thrust.

315-6.1 Payment. There shall be no separate payment for concrete thrust blocks, anchors, and pipe cradles. Full compensation for providing materials, labor and equipment for the installation of these items shall be included in the prices bid for the various items of work.

Add the following section:

SECTION 316 - SIGNAGE

316.1 ROADSIDE SIGNS. All signs shall be installed in accordance with the requirements of Section 56-4 of the Caltrans Standard Specifications, Caltrans Standard Plans and these Special Provisions. Roadside signs shall be installed at the locations shown on the Plans or where directed by the Engineer.

All signs shown on the signing and striping plans shall be new signs provided and installed by the contractor, except for existing signs specifically indicated to be relocated or to remain.

All signs shall be of 3M Diamond Grade Cubed, with 1160 protective anti-graffiti overlay film and matched components system warranty (12 years) on 0.080 Aluminum with "Torrance" and year on border.

56-4.03 CONSTRUCTION. Delete the third paragraph and last sentence of the eleventh paragraph.

Delete the entire subsection 56-2.05.

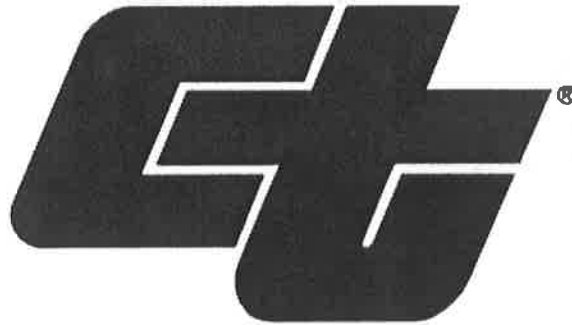
56-4.04 PAYMENT. Replace the entire subsection with the following:

Payment for roadside signs shall be included in the work it is appurtenant to and shall include all labor, materials, tools, equipment, and individuals, and for doing all the work involved in furnishing and installing roadside signs, complete in place, as shown on the Plans and these Special Provisions, and as directed by the Engineer.

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**SECTION F
SUPPLEMENTAL SPECIAL PROVISIONS
FOR WORK WITHIN CALTRANS RIGHT OF WAY**

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Caltrans®

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DISTRICT 7 DIVISION OF OPERATIONS
OFFICE OF PERMITS

**ENCROACHMENT PERMITS SPECIAL PROVISIONS
FOR PERMIT PROJECTS WITHIN STATE RIGHT-OF-WAY**

ATTACHED TO AND MADE PART OF ALL ENCROACHMENT PERMITS

The attached District's Special Provisions are generalizations of the Department's policies, procedures, standards, and specifications. They are included only as a convenience to the permittee. It is permittee's responsibility to verify all requirements in the appropriate publications.

EFFECTIVE February 24, 2020
(Rev. 03202020)

GODSON K. OKEREKE, CHIEF, DISTRICT PERMIT ENGINEER

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DISTRICT 7 SPECIAL PROVISIONS

COMMON PROVISIONS

1. If at any time, the permit is assigned by the permittee, assignee (typically, the Prime contractor) is required to obtain a valid Double Permit per procedures below.
Double Permit (DP) Procedures:
 - A. Assignee furnishes Caltrans with
 - a. a completed Standard Encroachment Permit Application,
 - b. a copy of this permit cover,
 - c. the indicated fees (inspection deposit + State furnished materials if required) as noted on this permit cover, and
 - d. a list of sub-contractors containing Company Names, Specialty, Name of Foreman or Superintendent, and Contact Phone Number.
 - B. A no-fee permit application for a Rider will be required to add additional sub-contractors not listed.
2. It is permittee's responsibility to furnish assignee(s) with a copy of the permit and all attachments; it is assignees responsibility to have a copy of all associated permits at the jobsite and to present the permits upon requests from governing entities.
3. If a time extension is required, request is required 30-days in advance of the expiration date. Expired permits cannot be reactivated under any circumstance and the Department will not furnish advance warnings.
4. Caltrans is not a member of DigAlert and Caltrans underground facilities are not located by DigAlert. It is solely the permittee's responsibility to locate Caltrans facilities prior to commencing work. Existing underground installations (shown on contract plans or not) damaged by the permittee or assignee shall be replaced, restored in kind, or better at the permittee's expense.
5. When permittee's work falls within one of the provisions of Section 6500 of the Labor Code, the permittee must have a Cal-OSHA permit prior to starting permitted work.
6. American National Standards Institute (ANSI) compliant Class II vests and hard hats shall be worn while working within State's right of way. Workers working at night will be required to wear ANSI Class III warning garments. Class III compliance can be achieved by combining ANSI Class E pants worn with an ANSI Class II vest.
7. The State inspector has full authority to modify permit requirements as necessary to ensure public safety and to suspend permit due to poor workmanship, safeguarding the integrity of the highway facility.

ANNUAL MAINTENANCE PERMIT REQUIREMENT

1. Due to the encroachment installed within State right of way, the permittee is obligated to apply for a maintenance permit annually. The permittee can apply any time after construction is deemed complete.

ELECTRICAL SYSTEMS – LIGHTING, SIGNAL, AND OTHER FACILITIES

In addition to General Provisions, TR-0045, #7, your attention is directed towards the current Construction Manual Section 87 Electrical Systems.

1. All existing electrical systems shall always be protected.
2. All work involving installation or revision to the state's lighting, signal or electrical facilities, permittee shall notify the State Electrical Inspector, 7-day notice to schedule work.
3. Existing traffic signal systems shall be kept fully operational, minimizing inconvenience to the travelling public during construction. If traffic signal system shutdown is necessary, provide the State Electrical Inspector 10-day notice. There shall be no shutdowns or turn-ons on Fridays or any day before a holiday.
4. Permittee shall provide, any temporary wiring, signal equipment, or service connections required at their own expense, to keep the existing traffic signal system in effective operation duration modifications.
5. All equipment shall be new. Poles, signal heads, and safety lighting shall have Manufacturer's Certificate of compliance conforming to State Standard Specification.
6. A completed form DC-CEM-3101 "Notice of Materials to be Used" shall be provided to the State Electrical Inspector for all signal poles, sign poles, light poles, mast arms, BBS, LED's, overhead signs, and other items as directed.
7. Welding operations for overhead sign and pole structures requires satisfactory completion of the Department's "Manufacturing Qualification Audit for Overhead Sign and Pole Structures," and must be listed as having a current audit. Audits are available at:

<https://mets.dot.ca.gov/afl/AuditedFacilitiesList.php>

8. The face of any pole shall not be placed closer than 2-feet from any curb face. Final location of any pole shall be approved by the State Electrical Inspector in the filed prior to installation.
9. All standards (Poles, Mast Arms, Luminaries and Signal Heads) in or near the proximity of any high voltage lines shall meet current CAL/OSHA Electrical Safety Orders.
10. There shall be no official turn-on of any traffic signal until all appurtenances/equipment are properly installed, tested, and approved by the State Electrical Inspector. All associated pavement delineations/markings shall be placed, temporary traffic controls removed, mechanical fittings completed, and all holes filled prior to a signal turn-on.
11. Signal and/or street lighting facilities shall be relocated prior to starting road work in the area.
12. Accidental damages, repairs shall be made within 10-days from the date of incident. If it deemed a threat to public health and safety, repairs shall commence immediately. All repairs are the responsibility of the permittee at no cost to the State.
13. When applicable, the permittee shall furnish the power company's approved construction plan for the power source to the electrical meter cabinet. Construction cannot commence without the approved plan.

ELECTRICAL – DETECTOR LOOPS

1. Prior to commencement of work, if loop detectors are to be damaged, a 7-day notice shall be provided to the State Electrical Inspector to arrange modifications to traffic signal operations. Work shall not commence without State Electrical Inspector approval.
2. Permittee shall provide, any temporary wiring, signal equipment, or service connections required at their own expense, to keep the existing traffic signal system in effective operation duration modifications.
3. All traffic loop detector installations shall have a minimum depth of 3.5-inches for existing pavement and 5-inches for new pavement. Type II wire with hot-melt rubber sealant shall be used. Type E, 6-Inch diameter loops shall be used.
4. Accidental damages, repairs shall be made within 10-days from the date of incident. If it deemed a threat to public health and safety, repairs shall commence immediately. All repairs are the responsibility of the permittee at no cost to the State.
5. Interconnect cables cannot be spliced; new continuous cable of the same type shall be installed between controllers, when damaged.
6. There shall be no official turn-on of any traffic signal until all appurtenances/equipment are properly installed, tested, and approved by the State Electrical Inspector. All associated pavement delineations/markings shall be placed, temporary traffic controls removed, mechanical fittings completed, and all holes filled prior to a signal turn-on.

EXCAVATION – NON-UTILITY

1. If, at the end of the working day, backfilling operations have not been properly completed, steel plate bridging must be required to make the entire highway facility available to the traveling public in accordance with the "Steel Plate Bridging Special Provisions" (TR-0157).
2. PCC pavement to be removed must be saw cut at a minimum depth of 4-inches to provide a neat and straight pavement break along all sides of the excavation. AC pavement must be saw cut to the full depth.
3. Where the edge of the excavation is within 2-foot of existing curb and gutter or pavement edge, the asphalt concrete pavement between the excavation and the curb or pavement edge must be removed.
4. When the permit authorizes excavation, surfacing and base materials and thickness thereof must be as specified in the permit.
5. Sides of excavations in paved areas must be kept as nearly vertical as possible. Excavation widths shall be limited to what is required and shall be of sufficient width to accommodate shoring, if needed.
6. Where it is necessary to excavate under existing curb and gutter, or underground facilities, the void must be backfilled with 2-sack cement-sand slurry.
7. All backfilling must conform to the applicable sections of the Department's Standard Specifications. Ponding or jetting methods of backfilling are prohibited.
8. Any required compaction tests must be performed by a certified laboratory at no cost to the Department and the laboratory report furnished to the Department's representative.
9. No excavation shall be left open after daylight hours unless specifically authorized and adequate protection for traffic is provided in accordance with General Provisions, TR-0045, #14.

10. Repairs to PCC pavement must be made of Portland Cement Concrete containing a minimum of 658 lbs. or 7-sack of cement per cubic yard. Replaced PCC pavement must equal existing pavement thickness. The concrete must be satisfactorily cured and protected from disturbance for not less than 48-hours. Where necessary to open the area to traffic, no more than 2% by weight of calcium chloride may be added to the mix and the road opened to traffic after 6-hours.
11. Temporary repairs to pavements must be made and maintained upon completion of backfill until permanent repairs are made. Permanent repairs to pavements must be made within 30-days of completion of backfill unless otherwise specified by the Department. Temporary pavement patches must be placed and maintained in a smooth riding plane free of humps and/or depressions.
12. Tree roots 3-inches or larger in diameter will not be cut within the tree drip line when excavating adjacent to roadside trees. If such roots are encountered, they must be tunneled under, wrapped in burlap and kept moist until the trench is backfilled. Trenching machines may not be used under trees if the trunk or limbs will be damaged by their use.
13. No earth or construction materials are to be dragged or scraped across the highway pavement, and no excavated earth placed or allowed to remain at a location where it may be tracked onto the highway traveled way, or any public or private approach by the permittee's construction equipment, or by traffic entering or leaving the highway traveled way. Any excavated earth or mud so tracked onto the highway pavement or public or private approach must be immediately removed by the permittee.

FIBER OPTIC CABLE (FOC)

1. Pothole and positively identify the fiber optics cable (FOC) before any excavation work to ensure that the excavation area is clear of any FOC.
2. In the event the fiber optics cable (FOC) is damaged, temporary fusion splicing will be required within 24-hours to restore the damaged cable, and the permittee shall replace the FOC from vault to vault at the permittee's expense within 14-days.
3. Permittee shall pay for any temporary wiring or service connections required to keep the existing traffic signal system in effective operation during modifications.

FULL-TIME INSPECTOR

1. If a full-time Civil Inspector is required; the permittee is required to provide a full-time inspector who has a minimum of 5-years field experience to oversee the entire works under this permit. A minimum of 2-weeks prior to the start of work, permittee's Civil Inspector shall submit his/her resume for review and arrange an interview with State Inspector(s). Please note that Caltrans reserves the right to reject or disqualify the appointed inspector if he/she shows low performance on the job or fails to comply with State requirements.

MONITORING WELLS

1. Access to temporary well(s) shall be from a local road or private property. The intent of this requirement is for service vehicles to park outside the State right-of-way.
2. Permittee shall not discharge treated groundwater or effluent into the State drainage systems without prior written authorization documenting the exception.
3. Temporary conduits or pipelines through culverts is prohibited, a separate permit is required to install an independent conduit or pipeline.
4. If the governing water quality control board requires monitoring beyond the initial 5-year permit duration, the permittee shall apply for a new well permit every 5-years, as needed.
5. A performance bond shall be kept active throughout the life of the well, a new bond will be required with each 5-year re-application.
6. When the governing water quality control board allows well termination, the permittee shall apply for a well abandonment permit with abandonment plans and a copy of the well status determination from the governing water quality control board.

SPECIAL EVENTS

1. If rain, fog, or other elements significantly affect safety for event participants or vehicular traffic, Caltrans may take whatever action is necessary to protect the public. Also, if for some unforeseen reason the traffic demand for the State facility significantly exceeds the anticipated demand, it may be necessary to terminate the event.

SURVEY MONUMENTS

- 1 Your attention is directed to Standard Specification, Section 5-1.36 Property and Facility Preservation, and Business and Professions Code, Section 8771. Permittee must physically inspect the work site and locate survey monuments before work commencement. Monuments that might be disturbed must be referenced or reset in accordance with Business and Professions Code.
- 2 If feasible, monuments should not be set within the traveled way. All monuments that must be set or perpetuated in paved surfaces, must be constructed in accordance with Caltrans Standard Specification Section 78-2 'Survey Monuments' and Standard Plan A74, Type D, or equal with prior approval of the District Surveys Engineer.
- 3 Copies of Corner Records or Record of Surveys recorded in compliance with the Business and Professions Code must be forwarded to the District Surveys Engineer.

TRAFFIC CONTROLS

- 1 All traffic control devices shall be compliant with the current California Manual on Uniform Traffic Control Devices (CAMUTCD).
- 2 A Class C-31 (Construction Zone Traffic Control Contractor) license, as defined by the California Business and Professions Code and the California code of Regulations, is required to perform lane and ramp closures on State highways and freeways. Other Classes are restricted to sidewalk and shoulder closures only.
- 3 Except for installing, maintaining, and removing traffic control devices, whenever work is performed, or equipment is operated in the following work areas, the permittee shall close the adjacent traffic lane unless otherwise provided in the permit:

Approach speed (posted limit)

Over 45 mph

45 mph and Under

Work Areas

Within 6-feet of a traffic lane

Within 3-feet of a traffic lane

- 4 No traffic controls shall be allowed during rainy, foggy or inclement weather.
- 5 Unless noted in the permit or otherwise authorized by the State Inspector, the normal working hours of permitted traffic control shall be limited between 9:00 a.m. and 3:00 p.m., Monday through Friday.
- 6 No traffic controls shall be allowed on designated legal holidays. Designated legal holidays are typically as follows: January 1, the third Monday in January, the third Monday in February, the last Monday in May, July 4, the first Monday in September, November 11, the fourth Thursday in November and December 25.
- 7 Traffic controls shall be maintained in good standing continually throughout each work day.
- 8 Ramp closure requires 7-day advance public notification notice prior to actual closure date or as directed by the State Inspector. Message shall be approved by the State Inspector.
- 9 Permittee shall obtain a Closure ID and Log number from the State Inspector. Permittee shall notify the State Inspector and the Traffic Management Center (TMC) by telephone at (323) 259-2352 immediately prior to a lane/ramp closure. Inform Caltrans' dispatcher the "10-97" closure number before closure installation, and the "10- 98" closure number after closure and all signs have been removed with lane/ramp opened to traffic. Permittee should also provide the Caltrans' dispatcher with an on-site phone number where information regarding this permit may be readily obtained during the closure period.
- 10 Existing traffic signals and highway lighting shall be kept in operation during progress of the work.
- 11 If a transit stop is located within the construction work area, the permittee is responsible for contacting the Transit Agency to arrange a temporary stop elsewhere.

TRAFFIC CONTROLS (UTILITY AERIALS)

1. Wires, cables, or conductors may not be pulled over moving traffic at any time unless a suitable safety net has been installed, refer to TR-0108.
2. The permittee will pay all costs incurred by the District for scheduled work unless the State inspector receives a cancellation notice 24-hours in advance of the scheduled date.
3. **FREEWAY**
 - a. Installation or removal shall be on Sunday mornings between day break and 8:00 a.m., unless otherwise authorized by the State inspector.
 - b. Aerial crossings made with traffic breaks, breaks shall be performed by the California Highway Patrol (CHP) with a minimum of two CHP vehicles or as otherwise directed by CHP and/or the State inspector.

- c. Traffic break durations shall not exceed 5-minutes at any one time, thereafter, a minimum period of 10-minutes shall be provided to minimize queuing.
 - d. If the permit is accompanied with an approved temporary traffic control plan, there shall be no deviations unless authorized by the State inspector in writing.
4. **CONVENTIONAL HIGHWAY**
- a. Installation or removal shall be made on weekdays between 9:00 a.m. and 11:00 a.m., unless otherwise authorized by the State inspector.
 - b. Traffic may be stopped by competent flagmen with the installation of traffic control signs and devices compliant with the current California Manual of Uniform Traffic Control Devices (CAMUTCD) and/or Standard Plan.
 - c. Traffic shall not be delayed for periods greater than 5-minutes at any one time, thereafter, a minimum period of ten-minutes shall be provided to minimize queuing.

UTILITY RELOCATION CLAUSE

1. PERMITS FOR LOCAL AGENCY PROJECTS CONSTRUCTED BY ENCROACHMENT PERMIT WITHOUT A COOPERATIVE AGREEMENT: If existing public or private utilities conflict with the construction project, Permittee will make necessary arrangements with the owners of such utilities for their protection, relocation, or removal. Permittee must inspect the protection, relocation, or removal of such facilities. Total costs of such protection, relocation, or removal that must be legally paid, will be borne by Permittee. If any protection, relocation, or removal of utilities is required, including determination of liability for cost, such work must be performed in accordance with State policy and procedure. Permittee must require any utility company performing relocation work within the State right-of-way to obtain a State Encroachment Permit before the performance of said relocation work. Any relocated utilities must be correctly located and identified on as-built plans.
2. PERMITS FOR DEVELOPER PROJECTS BEING CONSTRUCTED WITHOUT A HIGHWAY IMPROVEMENT AGREEMENT: If existing public or private utilities conflict with the construction project, Permittee will make necessary arrangements with the owners of such utilities for their protection, relocation, or removal. Permittee must inspect the protection, relocation, or removal of such facilities. Total costs of such protection, relocation, or removal must be borne by Permittee in compliance with the terms of the Highway Encroachment Permits, Case Law, Public Utility Regulations, and Property Rights. Permittee must require any utility company performing relocation work within the State right-of-way to obtain a State Encroachment Permit before the performance of said relocation work.

HEADQUARTERS SPECIAL PROVISIONS

ACCESS CONTROL AND TEMPORARY SAFETY BARRIER RETAINING WALLS AND SOUNDWALLS:

1. A temporary 6-foot high access control fence shall be provided before removing the existing fence. Existing fence fabric shall be salvaged and delivered to the nearest State facility as directed by the State's representative at no cost to the State. The remaining access control fence shall be tied to the wall.
2. Fence posts are to be removed completely and the holes backfilled with compacted earthen material.
3. Access to the worksite from the freeway is prohibited.
4. Any material stored at the worksite within 30-feet of the traveled way when work is not in progress shall be protected by Type K barrier railing placed at a 20:1 taper or as otherwise directed by the State's representative.
5. Any Type K barrier placed within 10-feet of the traveled way shall have one appropriate reflective marker affixed to the top of each section. A Type "P" object marker shall be installed in front of the approach end section. The end section shall also be protected by a temporary crash cushion array.

ADVERTISING DISPLAYS:

1. **GENERAL**
 - a. Signs, Marquees and Awnings overhanging State highway right of way (R/W) shall comply with the requirements of the applicable local agency, the latest edition of the Uniform Building Code (UBC) or these special provisions, whichever is the higher standard.
2. **SIGNS**
 - a. Vertical Clearance: The minimum clearance of signs from the sidewalk shall be 12-feet.

- b. Codes: Must be structurally adequate and conform to applicable building code and Caltrans' Outdoor Advertising Regulations.
 - c. Location: Support shall be off the right of way. The overhang shall be at least 2-feet behind the curb line. If no curbs are in place, the signs should be placed so that some physical barrier prevents them from being struck.
 - d. Advertising: The wording on the sign may only identify either the owner, the goods sold or manufactured on the premises or the services rendered.
 - e. Lights: No flashing, rotating or intermittent lights shall be allowed except approved public service information. Signs that contain red, yellow, or green lights shall not be permitted where they could interfere with the driver's perception of traffic signals.
 - f. No displays shall interfere with or hide traffic signals or traffic signs.
 - g. Any future change of copy or location must be covered by a separate permit.
3. MARQUEES
- a. The horizontal clearance between a marquee and the curb line shall not be less than 2-feet.
 - b. The minimum vertical clearance from the sidewalk shall be 12-feet.
 - c. A marquee shall be supported entirely by the building.
 - d. Any drainage from the marquee shall not fall on or drain across the sidewalk.
4. AWNINGS
- a. An awning is a temporary shelter supported entirely from the exterior wall of a building.
 - b. Awnings may identify the owner or place of business.

AIR SPACE DEVELOPMENT:

1. Column Protection: shall be lumber at least 2-inches nominal thickness and at least 4-inches nominal width with 2-inches maximum clear space between pieces. The lumber shall be strapped to columns with a minimum of 3-galvanized steel bands. The bottoms of the pieces of lumber shall be 2-feet or less above the ground and tops 8-feet minimum above the ground.
2. Fencing: a standard 6-foot high chain link fence may be installed around the perimeter of the leasing area with gate(s) as designated. Security may be enhanced by the installation of vertical brackets on the fence posts and attaching 3-strands of barbed wire to the brackets. THE USE OF RAZOR RIBBON COILS ATOP THE FENCE IS PROHIBITED.
3. The improvements shall not be occupied by the leasee until all work is completed to the satisfaction of the State and a notice of completion has been issued to the permittee.
4. Upon completion of the work, the permittee shall submit one set of film positive reproducible, either matte or clear, "As-Built" plans to the District Permit Engineer.

ART PROGRAM:

1. Artwork located within State right of way will be considered a gift to the people of California.
2. Caltrans reserves the right to reproduce the artwork for publicity type purposes.
3. No commercial advertising on State right of way is allowed. Any identification of the donor or sponsor must have prior approval by Caltrans.
4. The permittee must maintain the integrity of the artwork until further notice. The permittee agrees to remove the artwork if so ordered by Caltrans.
5. The permittee shall abide by Caltrans' safety rules and regulations, including traffic control.

BANNERS AND DECORATIONS:

1. BANNERS
 - a. The banners shall not contain private advertising nor be of a political nature.
 - b. The lower edge of the banners shall be at least 18-feet above the highway pavement at its closest point.
 - c. Suspension or installation on State owned traffic signal poles or other State-owned facilities is prohibited.
 - d. Local police shall provide traffic control while banner is being installed or removed.
 - e. The display may not be in place more than two weeks prior to the event and shall be immediately removed after the, event.
2. HOLIDAY DECORATIONS

- a. Installation of Holiday decorations shall not begin prior to the day after Thanksgiving Day.
- b. Decorations attached to vertical structures such as power, telephone, or light poles, are not to project beyond the curb line and shall not hang below a height of 14-feet. Decorations which project beyond the curb line or cross the highway shall have a minimum vertical clearance of 18-feet.
- c. Decorations shall not be attached to State owned poles.
- d. Decorative lighting displaying red, yellow, or green lights shall not be placed where they could interfere with the driver's perception of traffic signals.

BUS PASSENGER SHELTERS, BENCHES, AND PULLOUTS – ADVERTISING AND LOCATION:

1. Advertising displays on bus passenger shelters or benches may not be within 660' of and visible from any Federal Aid Interstate or Primary highway. Advertising displays shall only be placed at approved passenger loading areas. The advertising displays must not extend beyond the exterior limits of the shelter or bench. Advertising shall not exceed 2-display panels per shelter or bench.
2. Bus passenger shelters and benches shall be located a minimum of 2-feet behind the face of curb, with a minimum of 4-feet width of walkway available.
3. All pavement shall be saw cut prior to removal.
4. Pavement markings obliterated shall be replaced in kind by permittee.
5. No telephone installations are authorized by this permit.

CABLES/GEOPHYSICAL TESTING:

1. The shear wave method of geo-physical testing is prohibited.
2. Cables shall not be left on the roadbed overnight.
3. Personnel working within the right of way shall wear orange colored outer garments and hard-hats.
4. No equipment shall be parked on or operated on the traveled way except for normal legal travel.
5. No holes shall be drilled, and no blasting shall be conducted on State right of way.
6. On overcrossing structures, cables shall be placed within 6-inches of curb face.
7. No equipment, work, or personnel shall be allowed within access-controlled rights of way except for personnel and cable necessary to place cable crossings required for continuity. Cable shall cross access-controlled rights of way in culverts or at crossing structures if available within 500-feet of proposed crossing. Any drainage channel shall not be disturbed.
8. Cables shall be placed as close to the right of way line as practical.
9. Cable shall be securely attached to the traveled way by taping. No nails, spikes or other material shall be driven into the pavement.
10. No paint shall be placed upon highway pavements, signs or markers. If pavement markings are necessary, traffic tape, chalk or crayon shall be used. All tape, stakes and other obvious markers shall be removed upon completion of permitted work.
11. All mud, dirt or gravel tracked onto the highway pavement shall be immediately and completely removed.
12. Any ruts or other damage to unpaved shoulder areas caused by driving or operating equipment on soft shoulders shall be repaired immediately.
13. Should any deviation from these procedures be observed, all work shall be suspended until satisfactory steps have been taken to insure compliance.
14. Except as specifically provided herein, all requirements of the vehicle code and other applicable laws must be complied with in all particulars.
15. Work shall be limited to normal working hours unless otherwise specifically authorized on the permit. Permittee will be required to deposit an amount equal to four-hours minimum of overtime per day for inspection charges, if work is permitted beyond normal working hours, weekends or holidays.

DRAINAGE – ROOF AND SURFACE:

1. Drains must be restricted to the exclusive purpose of draining rain water from the roof of permittee's building and/or paved parking lot. Drains if used for any other purpose, such as draining waste water or domestic supply water into the highway, will not be authorized. Drains shall be installed at right angles to the curb line unless otherwise authorized.

2. Removal of PCC Sidewalks or Curbs: Concrete sidewalks or curbs shall be saw cut to the nearest score marks and replaced equal in dimension to that removed with score marks matching existing adjacent sidewalk or curb.
3. After pipe drains are installed, curb and sidewalk shall be replaced with Portland Cement Concrete in accordance with State Standard Specifications.

DRIVEWAY – COMMERCIAL:

1. Asphalt Concrete or PCC pavement shall be saw-cut at conform location.
2. Excavations made within the limits of the right of way shall be backfilled before leaving the work for the night unless otherwise authorized by State's representative. After backfilling, temporary surfacing shall be placed if required by State's representative.
3. The permittee shall contact State's representative before placing structural section materials for the roadway pavement.
4. The approach fill area shall slope away from the highway pavement or improved shoulder and shall be so constructed as to avoid any flowing water reaching the traveled way and to avoid pocketing or ponding of water.
5. If not shown on project plans, the road approach or driveway shall conform to the "Design Guidelines for Typical Rural Driveways in State Right of Way".

DRIVEWAY RECONSTRUCTION:

1. Where reconstruction requires removal of existing asphalt concrete pavement, it shall be either saw-cut before removal or removed by grinding.
2. Existing drainage shall not be impaired.

DRIVEWAYS – SINGLE FAMILY:

1. RURAL LOCATIONS
 - a. The driveway shall be surfaced with a minimum of 3-inches of asphalt concrete placed on 6" of well graded and compacted aggregate base and shall conform to the existing pavement.
 - b. Existing drainage shall not be impaired. Either a valley gutter or a culvert shall be provided.
 - c. Where a culvert is installed, it shall be installed in the flowline of the existing drainage ditch at a slope to provide maximum drainage.
 - d. A standard tapered end section shall be installed at the inlet and outlet of the culvert.
 - e. Any change in the existing drainage pattern, whether occasioned by increase or diversion, and the cost of any damage, repair or restoration of the State highway right of way shall be the responsibility of the permittee.
 - f. Driveway installation shall conform to the attached plan, "Design Guidelines for Typical Rural Driveways in State Right of Way".
2. URBAN LOCATIONS
 - a. Where curbs exist, the driveway structural section shall be a minimum of 4-inches of Portland Cement Concrete (PCC) over 6-inches of aggregate base.
 - b. Driveway details shall comply with State standards unless local standards exceed the State's.
 - c. Any existing utility boxes must be either relocated or adjusted to grade at the permittee's expense.
 - d. Removal of PCC Sidewalks or Curbs: sidewalks or curbs shall be saw cut to the nearest score marks and replaced equal in dimension to that removed with score marks matching existing adjacent sidewalk or curb.

MAIL BOX:

1. LOCATION
 - a. Whenever possible, mailboxes shall be located outside State highway right of way (R/W).
 - b. Mailboxes may be located inside State Highway right of way in compliance with AASHTO's "Roadside Design Guide", 3rd Edition, Chapter 11 "Erecting Mailboxes on Streets and Highways". (A copy can be found in Appendix H of the Encroachment Permits Manual)
 - c. Coordination with the local postmaster is required to determine the exact site.

- d. In areas where curbs or dikes exist, mailboxes shall be located no closer than 1' behind the face of curb or dike to face of box.

2. INSTALLATION

- a. Installation shall be as shown in the "Roadside Design Guide".
- b. Mailboxes supported by structures such as masonry columns, railroad rails and ties, tractor wheels, plow blades, concrete filled barrels are strictly prohibited.
- c. Postmaster approved, neighborhood delivery and collection box units (NDCBU) shall be installed in a location where they will not pose a hazard to errant vehicles.
- d. Request for exceptions must follow the exception process described in Chapter 300 of the Encroachment Permits Manual.

NOTIFICATION OF ENCROACHMENT:

When highway or ramp closures, detours, and work with significant traffic impacts occur, use paragraphs 1, 2, and 3.

Media Notification for Special Events (SE):

1. Permittee shall verify to State's representative that local or regional media, including radio, television or newspapers serving the area affected by the special event, have been notified by letter or press release format. Media contact must allow sufficient time for print or broadcast two days prior to the permitted activity. Letter or press release shall include date, time, location, duration, permitted activity, and identify detours for impacted State highways and local roads.

Highway Signing for Special Events (SE):

Public Notification Signs

2. Permittee shall place public notification signs at locations designated on the approved signing plan a minimum of 7-calendar days before the activity begins. Signs shall be constructed and installed to Caltrans specifications and standards.

Detour Signs

3. Permittee shall place detour signs prior to the permitted activity in accordance with State Standard Specifications.

**When encroachment activities create significant traffic impacts use paragraph 4 for local agency notification.*

Local Agency Notification

4. Permittee shall make written notice to, and coordinate with, local emergency services, law enforcement agencies and public road departments 7-calendar days prior to the scheduled permitted activity. Letter copies shall be provided to the State's representative to evidence contacts.

**When special event (SE) encroachments create significant traffic impacts use paragraph 5 for CHP notification.*

CHP Notification

5. Permittee shall make written notice to, and coordinate with, CHP 7-calendar days before encroachment activities are scheduled. Letter copies shall be provided to the State's representative to evidence contacts.

PEDESTRIAN SAFETY:

1. When the work area encroaches upon a sidewalk, walkway, or crosswalk area, special consideration must be given to pedestrian safety. Protective barricades, fencing, handrails and bridges, together with warning and guidance devices and signs must be utilized so that the passageway for pedestrians, especially blind and other physically handicapped, is safe and well defined and shown on the approved permit plan.
2. Pedestrian walkways and canopies within State Right of Way shall comply with the requirements of the applicable local agency or of the latest edition of the Uniform Building Code whichever contains the higher standards

RAILROAD GRADE CROSSING – MAINTENANCE:

1. This permit does not authorize work on freeways, expressways or other activities not specifically provided for in this permit.

2. Work that reduces the vertical clearance over highways or changes the load carrying capacity of structures is not authorized by this permit.
3. Railroad work shall conform to Railroad, and applicable California Public Utilities Commission standards. Work affecting State highway facilities shall conform to current Caltrans standards.
4. Permittee may control or alter the flow of highway traffic only if absolutely necessary for public safety or to prevent a serious interruption of railroad service. Traffic control shall conform to Caltrans Traffic Control Systems published in the current State Standard Plans.
5. No excavation within 30-feet of the traveled way shall be left open after daylight hours, unless specifically authorized and adequate protection of traffic is provided in accordance with the General Provisions "Protection of Traffic." Backfill and highway paving shall conform to Standard Specifications and the General Provisions.
6. Routine maintenance taking place from the State highway shall be conducted between 9 a.m. and 3 p.m. or as directed by the State representative.
7. Methods of installation and time of work for replacing aerial lines for railroad communication shall be approved by the State representative.

SIDEWALKS:

1. A State issued permit is required for any landscaping or tree installation, including installation of tree wells.
2. A separate permit must be obtained from Caltrans for any driveway, handicap-ramp installations or any sidewalks that are other than Portland Cement Concrete constructed in compliance with Caltrans Standard Specifications.
3. Traffic control is authorized only between 9 a.m. and 3 p.m., Monday through Friday, holidays excluded. Any traffic control that requires lane closure shall be in compliance with the appropriate traffic control plan. Where required by the plan, the use of a flashing arrow board is MANDATORY.
4. New curb and gutter installations shall be State Standard Type A2-6, unless necessary to conform to existing adjacent curb and gutter installations.
5. The minimum width of a sidewalk should be 8-feet between a curb and a building when in urban and rural main street place types. For all other locations the minimum width of sidewalk should be 6-feet when contiguous to a curb or 5-feet when separated by a planting strip.
6. Alignment and grade of gutter and sidewalk shall match the existing.
7. Existing concrete curb and paved shoulder shall be saw cut to a neat line prior to excavating and forming. Existing concrete sidewalk shall be saw cut at the score line. Paved shoulder shall be replaced with asphalt concrete paving material equal "in kind" and thickness to existing shoulder and shall conform to lip of new curb and gutter.
8. Permittee shall be responsible for the relocation or adjustment of any utility required as the result of work authorized by this permit, and utility relocation shall be completed prior to the installation of any new curb, gutter or sidewalk.
9. A monolithic pour of sidewalk and curb and gutter shall not be permitted.

SPECIAL EVENTS:

1. In accordance with subdivision (a) of Streets and Highways Code section 682.5, the Department is not responsible for the conduct or operation of the permitted activity, and the applicant agrees to defend, indemnify, and hold harmless the State, the Department, and the Directors, officers, employees, agents, and contractors of the State and/or of the Department, including but not limited to the Director of Transportation and the Deputy Directors, from any and all claims, demands, damages, costs, liability, suits, or actions of every name, kind and description arising out of any activity for which this encroachment permit is issued.
2. The permittee understands and agrees to comply with the obligations of Titles II and III of the Americans with Disabilities Act in the conduct of the event, and further agrees to defend, indemnify, and save harmless the State and the Department, and the Directors, officers, and employees of the State and/or Department, including but not limited to the Director of the Department and the Deputy Directors, from any and all claims, demands, damages, costs, liability, suits, or actions of every name, kind and description arising out of or by virtue of the Americans with Disabilities Act.

TEMPORARY STRUCTURAL SUPPORTS – TIEBACKS:

1. Permanent tiebacks are prohibited. Tiebacks shall not be used to support the completed structure.

2. The tieback wall shall be monitored during construction to determine any lateral movement.
3. Soldier beams may remain in place providing they are cut off 3' below ground surface and the holes backfilled as directed.

TRAFFIC COUNTERS:

1. Personnel installing or removing traffic counters shall wear an orange colored outer garment and a hard hat.
2. Traffic counters installed on freeway ramps shall be located at the curb return as near as possible to the local street intersection.
3. Counter tubes shall be securely attached to the pavement by taping. No nails, spikes or other material shall be driven into the pavement except to secure the tube at the outside edge of shoulder, at the lip of a gutter, or in the center line stripe.
4. A copy of the collected data shall be sent to the Caltrans District Permit Engineer via the State Inspector.

TRAFFIC STRIPING, MARKINGS, AND SIGNS:

1. Traffic striping, pavement markings and signs shall be furnished and placed by the permittee and the cost shall be borne by the permittee. Where new asphalt concrete has been placed, painted striping and pavement markings shall be installed within 24-hours. Where shown on the plans, after 30-days curing time, thermoplastic materials shall be applied in compliance with Section 84 of the Standard Specifications.
2. Roadside signs shall be placed at locations shown on the permit plans and shall be installed in compliance with the latest edition of Caltrans Standard Plans.
3. Permittee shall furnish to State's representative a completed Form CEM-3101 "Notice of Materials to be Used," and approval of the material used shall be obtained prior to its installation.

UTILITY LEASING:

1. Leasing all or part of the longitudinal utility encroachment is prohibited. Encroachment includes but is not limited to: utilities, carrier pipes, casings, conduits, poles, etc.

VIBRIO GENERATING EQUIPMENT:

1. Equipment shall not be operated on any pavement or other paved surface.
2. Equipment shall not be operated within access-controlled rights of way.
3. Equipment shall be placed and operated as close to the right of way line as possible.
4. Equipment shall be operated so that no damage will occur to trees, plants, wells, culverts, headwalls, structures or other improvements.
5. This permit does not authorize the shear wave method.
6. Equipment shall not be parked on or operated on the traveled way except for normal legal travel.
7. Personnel working within the State right of way shall wear hard hats and orange jackets, shirts or vests.
8. All mud, dirt or gravel tracked onto the highway pavement shall be immediately and completely removed.
9. Dirt areas within the State right of way disturbed by Geophysical testing operations shall be graded back to its original shape and grade

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1. **AUTHORITY:** The California Department of Transportation ("Department") has authority to issue encroachment permits under Division 1, Chapter 3, Article 1, Sections 660 through 734 of the Streets and Highways Code.
2. **REVOCACTION:** Encroachment permits are revocable on five (5) business days' notice unless otherwise stated on the permit and except as provided by law for public corporations, franchise holders, and utilities. Notwithstanding the foregoing, in an emergency situation as determined by the Department, an encroachment permit may be revoked immediately. These General Provisions and any applicable Special Provisions are subject to modification or abrogation by the Department at any time. Permittees' joint use agreements, franchise rights, reserved rights or any other agreements for operating purposes in State of California ("State") highway right-of-way may be exceptions to this revocation.
3. **DENIAL FOR NONPAYMENT OF FEES:** Failure to pay encroachment permit fees when due may result in rejection of future applications and denial of encroachment permits.
4. **ASSIGNMENT:** This encroachment permit allows only the Permittee or Permittee's authorized agent to work within or encroach upon the State Highway System, and the Permittee may not assign this permit.
5. **ACCEPTANCE OF PROVISIONS:** Permittee understands and agrees to accept and comply with these General Provisions, the Special Provisions, any and all terms and/or conditions contained in or incorporated into the encroachment permit, and all attachments to the encroachment permit (collectively "the Permit Conditions"), for any encroachment, work, and/or activity to be performed under this encroachment permit and/or under color of authority of this encroachment permit. Permittee understands and agrees the Permit Conditions are applicable to and enforceable against Permittee as long as the encroachment remains in, under, or over any part of the State Highway System.
6. **BEGINNING OF WORK:** When traffic is not impacted (see General Provision Number 35), the Permittee must notify the Department's representative two (2) business days before starting permitted work. Permittee must notify the Department's representative if the work is to be interrupted for a period of five (5) business days or more, unless otherwise agreed upon. All work must be performed on weekdays during regular work hours, excluding holidays, unless otherwise specified in this encroachment permit.
7. **STANDARDS OF CONSTRUCTION:** All work performed within State highway right-of-way must conform to all applicable Departmental construction standards including but not limited to: Standard Specifications, Standard Plans, Project Development Procedures Manual, Highway Design Manual and Special Provisions. Other than as expressly provided by these General Provisions, the Special Provisions, the Standard Specifications, Standard Plans, and other applicable Departmental standards, nothing in these General Provisions is intended to give any third party any legal or equitable right, remedy, or claim with respect to these General Provisions or any provision herein. These General Provisions are for the sole and exclusive benefit of the Permittee and the Department. Where reference is made in such standards to "Contractor" and "Engineer," these are amended to be read as "Permittee" and "Department's representative," respectively, for purposes of this encroachment permit.
8. **PLAN CHANGES:** Deviations from plans, specifications, and/or the Permit Conditions as defined in General Provision Number 5 are not allowed without prior approval from the Department's representative.
9. **INSPECTION AND APPROVAL:** All work is subject to monitoring and inspection. Upon completion of work, Permittee must request a final inspection for acceptance and approval by the Department. The local public agency Permittee must not give final construction approval to its contractor until final acceptance and approval by the Department is obtained.
10. **PERMIT AT WORKSITE:** Permittee must keep the permit package or a copy thereof at the work site at all times and must show it upon request to any Department representative or law enforcement officer. If the permit package, or a copy thereof, is not kept and made available at the work site at all times, the work must be suspended.
11. **CONFLICTING ENCROACHMENTS:** Permittee must yield start of work to ongoing, prior authorized work adjacent to or within the limits of the Permittee's project site. When existing encroachments conflict with Permittee's work, the Permittee must bear all cost for rearrangements (e.g., relocation, alteration, removal, etc.).
12. **PERMITS FROM OTHER AGENCIES:** This encroachment permit is invalidated if the Permittee has not obtained all permits necessary and required by law, including but not limited to permits from the California Public Utilities Commission (CPUC), California Occupational Safety and Health Administration (Cal-OSHA), or any other public agency having jurisdiction. Permittee warrants all such permits have been obtained before beginning work under this encroachment permit.
13. **PEDESTRIAN AND BICYCLIST SAFETY:** A safe minimum continuous passageway of four (4) feet must be maintained through the work area at existing pedestrian or bicycle facilities. At no time must pedestrians be

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- diverted onto a portion of the street used for vehicular traffic. At locations where safe alternate passageways cannot be provided, appropriate signs and barricades must be installed at the limits of construction and in advance of the limits of construction at the nearest crosswalk or intersection to detour pedestrians to facilities across the street. Attention is directed to Section 7-1.04, Public Safety, of the Department's Standard Specifications.
14. **PUBLIC TRAFFIC CONTROL:** As required by law, the Permittee must provide traffic control protection, warning signs, lights, safety devices, etc., and take all other measures necessary for the traveling public's safety. While providing traffic control, the needs of all road users, including but not limited to motorists, bicyclists and pedestrians, including persons with disabilities in accordance with the Americans with Disabilities Act, must be an essential part of the work activity. Lane and/or shoulder closures must comply with the Department's Standard Specifications and Standard Plans for traffic control systems, and with the applicable Special Provisions. Where issues are not addressed in the Standard Specifications, Standard Plans, and/or Special Provisions, the California Manual on Uniform Traffic Control Devices (Part 6, Temporary Traffic Control) must be followed.
15. **MINIMUM INTERFERENCE WITH TRAFFIC:** Permittee must plan and conduct work so as to create the least possible inconvenience to the traveling public, such that traffic is not unreasonably delayed.
16. **STORAGE OF EQUIPMENT AND MATERIALS:** The storage of equipment or materials is not allowed within State highway right-of-way, unless specified within the Special Provisions of this encroachment permit. If encroachment permit Special Provisions allow for the storage of equipment or materials within the State highway right-of-way, the equipment and material storage must also comply with Section 7-1.04, Public Safety, of the Department's Standard Specifications.
17. **CARE OF DRAINAGE:** Permittee must provide alternate drainage for any work interfering with an existing drainage facility in compliance with the Department's Standard Specifications, Standard Plans, and/or as directed by the Department's representative.
18. **RESTORATION AND REPAIRS IN STATE HIGHWAY RIGHT-OF-WAY:** Permittee is responsible for restoration and repair of State highway right-of-way resulting from permitted work (Streets and Highways Code, section 670 et seq.).
19. **STATE HIGHWAY RIGHT-OF-WAY CLEAN UP:** Upon completion of work, Permittee must remove and dispose of all scraps, refuse, brush, timber, materials, etc. off the State highway right-of-way. The aesthetics of the highway must be as it was before work started or better.
20. **COST OF WORK:** Unless stated otherwise in the encroachment permit or a separate written agreement with the Department, the Permittee must bear all costs incurred for work within the State highway right-of-way and waives all claims for indemnification or contribution from the State, the Department, and from the Directors, officers, and employees of the State and/or the Department.
21. **ACTUAL COST BILLING:** When specified in the permit, the Department will bill the Permittee actual costs at the currently set Standard Hourly Rate for encroachment permits.
22. **AS-BUILT PLANS:** When required, Permittee must submit one (1) set of folded as-built plans within thirty (30) calendar days after completion and acceptance of work in compliance with requirements listed as follows:
- a) Upon completion of the work provided herein, the Permittee must submit a paper set of As-Built plans to the Department's representative.
 - b) All changes in the work will be shown on the plans, as issued with the permit, including changes approved by Encroachment Permit Rider.
 - c) The plans are to be prominently stamped or otherwise noted "AS-BUILT" by the Permittee's representative who was responsible for overseeing the work. Any original plan that was approved with a Department stamp, or by signature of the Department's representative, must be used for producing the As-Built plans.
 - d) If construction plans include signing or striping, the dates of signing or striping removal, relocation, or installation must be shown on the As-Built plans when required as a condition of the encroachment permit. When the construction plans show signing and striping for staged construction on separate sheets, the sheet for each stage must show the removal, relocation, and installation dates of the appropriate staged striping and signing.
 - e) As-Built plans must contain the Encroachment Permit Number, County, Route, and Post Mile on each sheet.
 - f) The As-Built Plans must not include a disclaimer statement of any kind that differs from the obligations and protections provided by sections 6735 through 6735.6 of the California Business and Professions Code. Such statements constitute non-compliance with Encroachment Permit requirements and may result in the Department retaining Performance Bonds or deposits until proper plans are submitted. Failure to comply may also result in denial of future encroachment permits or a provision requiring a public agency to supply additional bonding.
23. **PERMITS FOR RECORD PURPOSES ONLY:** When work in the State highway right-of-way is within an area under a Joint Use Agreement (JUA) or a Consent to Common Use Agreement (CCUA), a fee exempt encroachment permit is issued to the Permittee for the purpose of providing a notice and record of work. The Permittee's prior rights must be preserved without the intention of creating new or different rights or obligations. "Notice and Record Purposes Only" must be stamped across the face of the encroachment permit.

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24. **BONDING:** The Permittee must file bond(s), in advance, in the amount(s) set by the Department and using forms acceptable to the Department. The bonds must name the Department as obligee. Failure to maintain bond(s) in full force and effect will result in the Department stopping all work under this encroachment permit and possibly revoking other encroachment permit(s). Bonds are not required of public corporations or privately-owned utilities unless Permittee failed to comply with the provisions and/or conditions of a prior encroachment permit. The surety company is responsible for any latent defects as provided in California Code of Civil Procedure section 337.15. A local public agency Permittee also must comply with the following requirements:
- a) In recognition that project construction work done on State property will not be directly funded and paid by State, for the purpose of protecting stop notice claimants and the interests of State relative to successful project completion, the local public agency Permittee agrees to require the construction contractor to furnish both a payment and performance bond in the local public agency's name with both bonds complying with the requirements set forth in Section 3-1.05 Contract Bonds of the Department's Standard Specifications before performing any project construction work.
 - b) The local public agency Permittee must defend, indemnify, and hold harmless the State and the Department, and the Directors, officers, employees, agents and/or contractors of the State and/or of the Department, from all project construction related claims by contractors, subcontractors, and suppliers, and from all stop notice and/or mechanic's lien claimants. The local public agency also agrees to remedy, in a timely manner and to the Department's satisfaction, any latent defects occurring as a result of the project construction work.
25. **FUTURE MOVING OF INSTALLATIONS:** Permittee understands and agrees to relocate a permitted installation upon notice by the Department. Unless under prior property right or agreement, the Permittee must comply with said notice at the Permittee's sole expense.
26. **ENVIRONMENTAL:**
- a) **ARCHAEOLOGICAL/HISTORICAL:** If any archaeological or historical resources are identified or encountered in the work vicinity, the Permittee must immediately stop work, notify the Department's representative, retain a qualified archaeologist who must evaluate the site at Permittee's expense, and make recommendations to the Department's representative regarding the continuance of work.
 - b) **HAZARDOUS MATERIALS:** If any hazardous waste or materials (such as underground storage tanks, asbestos pipes, contaminated soil, etc.) are identified or encountered in the work vicinity, the Permittee must immediately stop work, notify the Department's representative, retain a qualified hazardous waste/material specialist who must evaluate the site at Permittee's expense, and make recommendations to the Department's representative regarding the continuance of work. Attention is directed to potential aerially deposited lead (ADL) presence in unpaved areas along highways. It is the Permittee's responsibility to take all appropriate measures to protect workers in conformance with California Code of Regulations Title 8, Section 1532.1, "Lead," and with Cal-OSHA Construction Safety Orders, and to ensure roadway soil management is in compliance with Department of Toxic Substances Control (DTSC) requirements.
27. **PREVAILING WAGES:** Work performed by or under an encroachment permit may require Permittee's contractors and subcontractors to pay appropriate prevailing wages as set by the California Department of Industrial Relations. Inquiries or requests for interpretations relative to enforcement of prevailing wage requirements must be directed to the California Department of Industrial Relations.
28. **LIABILITY, DEFENSE, AND INDEMNITY:** The Permittee agrees to indemnify and save harmless the State, the Department, and the Directors, officers, employees, agents and/or contractors of the State and/or of the Department, including but not limited to the Director of Transportation and the Deputy Directors, from any and all claims, demands, damages, costs, liability, suits, or actions of every name, kind, and description, including but not limited to those brought for or on account of property damage, invasion of privacy, violation or deprivation of a right under a state or federal law, environmental damage or penalty, or injury to or death of any person including but not limited to members of the public, the Permittee, persons employed by the Permittee, and/or persons acting on behalf of the Permittee, arising out of or in connection with: (a) the issuance and/or use of this encroachment permit; and/or (b) the encroachment, work, and/or activity conducted pursuant to this encroachment permit, or under color of authority of this encroachment permit but not in full compliance with the Permit Conditions as defined in General Provision Number 5 ("Unauthorized Work or Activity"); and/or (c) the installation, placement, design, existence, operation, and/or maintenance of the encroachment, work, and/or activity; and/or (d) the failure by the Permittee or anyone acting on behalf of the Permittee to perform the Permittee's obligations under any part of the Permit Conditions as defined in General Provision Number 5, in respect to maintenance or any other obligation; and/or (e) any change to the Department's property or adjacent property, including but not limited to the features or conditions of either of them, made by the Permittee or anyone acting on behalf of the Permittee; and/or (f) a defect or obstruction related to or caused by the encroachment, work, and/or activity whether conducted in compliance with the Permit Conditions as defined in General Provision Number 5 or constituting Unauthorized Work or Activity, or from any cause whatsoever. The duty

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of the Permittee to indemnify and save harmless includes the duties to defend as set forth in Section 2778 of the Civil Code.

It is the intent of the parties that except as prohibited by law, the Permittee will defend, indemnify, and hold harmless as set forth in this General Provision Number 28 regardless of the existence or degree of fault or negligence, whether active or passive, primary or secondary, on the part of: the State; the Department; the Directors, officers, employees, agents and/or contractors of the State and/or of the Department, including but not limited to the Director of Transportation and the Deputy Directors; the Permittee; persons employed by the Permittee; and/or persons acting on behalf of the Permittee.

The Permittee waives any and all rights to any type of expressed or implied indemnity from or against the State, the Department, and the Directors, officers, employees, agents, and/or contractors of the State and/or of the Department, including but not limited to the Director of Transportation and the Deputy Directors.

The Permittee understands and agrees to comply with the obligations of Titles II and III of the Americans with Disabilities Act in the conduct of the encroachment, work, and/or activity whether conducted pursuant to this encroachment permit or constituting Unauthorized Work or Activity, and further agrees to defend, indemnify, and save harmless the State, the Department, and the Directors, officers, employees, agents, and/or contractors of the State and/or of the Department, including but not limited to the Director of Transportation and the Deputy Directors, from any and all claims, demands, damages, costs, penalties, liability, suits, or actions of every name, kind, and description arising out of or by virtue of the Americans with Disabilities Act.

The Permittee understands and agrees the Directors, officers, employees, agents, and/or contractors of the State and/or of the Department, including but not limited to the Director of Transportation and the Deputy Directors, are not personally responsible for any liability arising from or by virtue of this encroachment permit.

For the purpose of this General Provision Number 28 and all paragraphs herein, "contractors of the State and/or of the Department" includes contractors and their subcontractors under contract to the State and/or the Department.

This General Provision Number 28 and all paragraphs herein take effect immediately upon issuance of this encroachment permit, and apply before, during, and after the encroachment, work, and/or activity contemplated under this encroachment permit, whether such work is in compliance with the Permit Conditions as defined in General Provision Number 5 or constitutes Unauthorized Work or Activity, except as otherwise provided by California law. The Permittee's obligations to defend, indemnify, and save harmless under this General Provision Number 28 take effect immediately upon issuance of this encroachment permit and have no

expiration date, including but not limited to situations in which this encroachment permit expires or is revoked, the work or activity performed under this encroachment permit is accepted or not accepted by the Department, the encroachment, work, and/or activity is conducted in compliance with the Permit Conditions as defined in General Provision Number 5 or constitutes Unauthorized Work or Activity, and/or no work or activity is undertaken by the Permittee or by others on the Permittee's behalf.

29. **NO PRECEDENT ESTABLISHED:** This encroachment permit is issued with the understanding that it does not establish a precedent.

30. **FEDERAL CIVIL RIGHTS REQUIREMENTS FOR PUBLIC ACCOMMODATION:**

a) As part of the consideration for being issued this encroachment permit, the Permittee, on behalf of Permittee and on behalf of Permittee's personal representatives, successors in interest, and assigns, does hereby covenant and agree that:

i) No person on the grounds of race, color, or national origin may be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.

ii) That in connection with the construction of any improvements on said lands and the furnishings of services thereon, no discrimination must be practiced in the selection and retention of first-tier subcontractors in the selection of second-tier subcontractors.

iii) That such discrimination must not be practiced against the public in their access to and use of the facilities and services provided for public accommodations (such as eating, sleeping, rest, recreation), and operation on, over, or under the space of the State highway right-of-way.

iv) That the Permittee must use the premises in compliance with all other requirements imposed pursuant to Title 15, Code of Federal Regulations, Commerce and Foreign Trade, Subtitle A. Office of the Secretary of Commerce, Part 8 (15 C.F.R. Part 8) and as said Regulations may be amended.

b) That in the event of breach of any of the above nondiscrimination covenants, the State and the Department have the right to terminate this encroachment permit and to re-enter and repossess said land and the facilities thereon and hold the same as if said permit had never been made or issued.

31. **MAINTENANCE OF HIGHWAYS:** By accepting this encroachment permit, the Permittee agrees to properly maintain any encroachment. This assurance requires the Permittee to provide inspection and repair any damage, at Permittee's expense, to State facilities resulting from the encroachment.

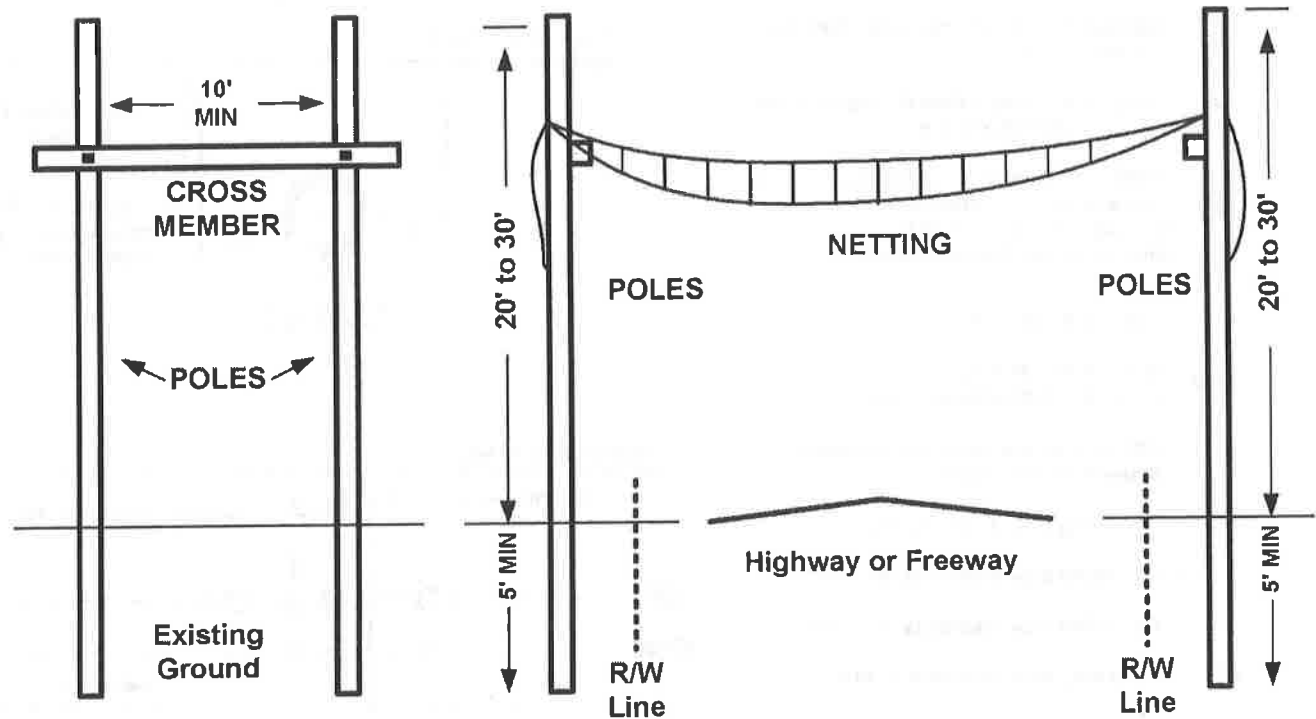
32. **SPECIAL EVENTS:** In accordance with subdivision (a) of Streets and Highways Code section 682.5 and 682.7, the Department is not responsible for the conduct or

STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION
ENCROACHMENT PERMIT GENERAL PROVISIONS
TR-0045 (REV. 01/2020)

- operation of the permitted activity, and the applicant agrees to defend, indemnify, and hold harmless the State, the Department, and the Directors, officers, employees, agents, and contractors of the State and/or of the Department, including but not limited to the Director of Transportation and the Deputy Directors, from any and all claims, demands, damages, costs, liability, suits, or actions of every name, kind and description arising out of any activity for which this encroachment permit is issued. The Permittee is required, as a condition of this encroachment permit, for any event that awards prize compensation to competitors in gendered categories, for any participant level that receives prize compensation, to ensure the prize compensation for each gendered category is identical at each participant level. (Streets and Highways Code, section 682.7.)
- The Permittee understands and agrees to comply with the obligations of Titles II and III of the Americans with Disabilities Act in the conduct of the event, and further agrees to defend, indemnify, and save harmless the State and the Department, and the Directors, officers, and employees of the State and/or Department, including but not limited to the Director of the Department and the Deputy Directors, from any and all claims, demands, damages, costs, liability, suits, or actions of every name, kind and description arising out of or by virtue of the Americans with Disabilities Act.
33. **PRIVATE USE OF STATE HIGHWAY RIGHT-OF-WAY:** State highway right-of-way must not be used for private purposes without compensation to the State. The gifting of public property uses and therefore public funds is prohibited under the California Constitution, Article XVI, Section 6.
34. **FIELD WORK REIMBURSEMENT:** Permittee must reimburse the Department for field work performed on Permittee's behalf to correct or remedy hazards or damaged facilities, or to clear refuse, debris, etc. not attended to by the Permittee.
35. **LANE CLOSURE REQUEST SUBMITTALS AND NOTIFICATION OF CLOSURES TO THE DEPARTMENT:** Attention is directed to Section 12-4.02A(3) Submittals, of the Department's Standard Specifications, for lane closure requests submittals requirements and schedules. The Permittee must notify the Department's representative and the Traffic Management Center (TMC) before initiating a lane closure or conducting an activity that may cause a traffic impact. In emergency situations when the corrective work or the emergency itself may affect traffic, the Department's representative and the TMC must be notified as soon as possible.
36. **SUSPENSION OF TRAFFIC CONTROL OPERATION:** The Permittee, upon notification by the Department's representative, must immediately suspend all lane closure operations and any operation that impedes the flow of traffic. All costs associated with this suspension must be borne by the Permittee.
37. **UNDERGROUND SERVICE ALERT (USA) NOTIFICATION:** Any excavation requires compliance with the provisions of Government Code section 4216 et seq., including but not limited to notice to a regional notification center, such as Underground Service Alert (USA). The Permittee must provide notification to the regional notification center at least forty-eight (48) hours before performing any excavation work within the State highway right-of-way.
38. **COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA):** All work within the State highway right-of-way to construct and/or maintain any public facility must be designed, maintained, and constructed strictly in accordance with all applicable Federal Access laws and regulations (including but not limited to Section 504 of the Rehabilitation Act of 1973, codified at 29 U.S.C. § 794), California Access laws and regulations relating to ADA, along with its implementing regulations, Title 28 of the Code of Federal Regulations Parts 35 and 36 (28 C.F.R., Ch. I, Part 35, § 35.101 et seq., and Part 36, § 36.101 et seq.), Title 36 of the Code of Federal Regulations Part 1191 (36 C.F.R., Ch. XI, Part 1191, § 1191.1 et seq.), Title 49 of the Code of Federal Regulations Part 37 (49 C.F.R., Ch. A, Part 37, § 37.1 et seq.), the United States Department of Justice Title II and Title III for the ADA, and California Government Code section 4450 et seq., which require public facilities be made accessible to persons with disabilities.
- Notwithstanding the requirements of the previous paragraph, all construction, design, and maintenance of public facilities must also comply with the Department's Design Information Bulletin 82, "Pedestrian Accessibility Guidelines for Highway Projects."
39. **STORMWATER:** The Permittee is responsible for full compliance with the following:
- a) For all projects, the Department's Storm Water Program and the Department's National Pollutant Discharge Elimination System (NPDES) Permit requirements under Order No. 2012-0011-DWQ, NPDES No CAS000003; and
 - b) In addition, for projects disturbing one acre or more of soil, with the California Construction General Permit Order No. 2009-0009-DWQ, NPDES No CAS000002; and
 - c) In addition, for projects disturbing one acre or more of soil in the Lahontan Region with Order No. R6T-2016-0010, NPDES No CAG616002.
 - d) For all projects, it is the Permittee's responsibility to install, inspect, repair, and maintain all facilities and devices used for water pollution control practices (Best Management Practices/BMPs) before performing daily work activities.

ENCROACHMENT PERMIT H - SUPPORT DIAGRAM FOR AERIAL CROSSINGS

TR-0108 (REV. 03/2007)



CONSTRUCTION NOTES:

A MINIMUM OF 18' SHALL BE MAINTAINED OVER AND ACROSS HIGHWAY OR FREEWAY LANES.

NETTING SHALL BE MAINTAINED OVER AND ACROSS LANES UNTIL AERIAL FACILITIES ARE PROPERLY SECURED IN PLACE.

H - SUPPORTS SHALL BE INSTALLED OUTSIDE OF STATE R/W, UNLESS PERMITTED BY THE STATE'S REPRESENTATIVE.

CHP BREAKS SHALL NOT EXCEED 5 MINUTES FOR THE PLACEMENT OF NETTING.




PLACEMENT OF AERIAL LINES: Installation or removal of overhead conductors crossing a freeway require traffic control by the California Highway Patrol (CHP) and usually occur on weekend mornings. The CHP can perform a rolling break in traffic on most highways to allow up to a five-minute clearing. These breaks are adequate for simple cable installation. Utility personnel carry the conductors across the freeway lanes and hoist them into place on the opposite side of the freeway.

On larger conductor crossings such as transmission lines, 1" or greater in diameter, districts may determine that safety nets are needed to prevent transmission lines from falling on traffic during cabling installations. Temporary safety-net support poles are placed at protected locations outside shoulders and in medians. If locations for temporary supports are not available, the utility company may use K-rail and sand barrel crash cushions. After rope nets are strung during CHP traffic breaks other work is then allowed to proceed. Placement of the aerial line may be by helicopter.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ENCROACHMENT PERMIT SURVEY GRID

TR-0151 (REV. 09/2006)

LEGEND:

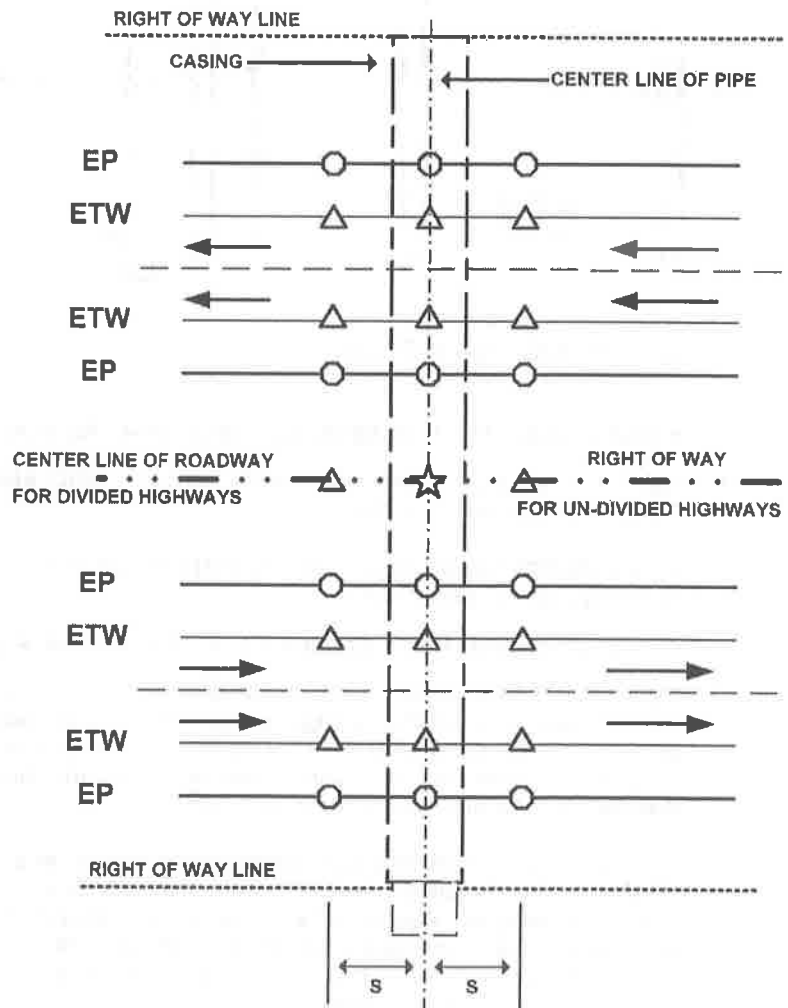
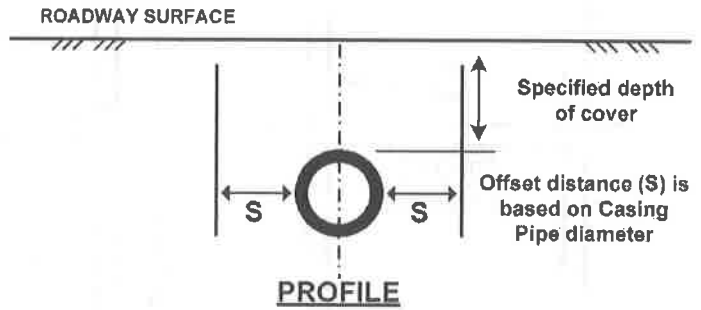
-  Octagon Data Points required when the diameter is < 8'.
-  Octagon & Triangle Data Points required when the diameter is > 8'.
-  Settlement Rod may be required when the diameter is > 5'. (Settlement Rod Detail is located in Appendix E of the Encroachment Permits Manual)

- EP** Edge of Pavement
- ETW** Edge of Travel Way
(Fog line, Yellow Stripe, etc.)
- S** Offset Distance away from the pipe alignment, as follows:
 - 3' for casing pipe diameters < 30"
 - 5' for casing pipe diameters 30" - 72"
 - 10' for casing pipe diameters 72" - 108"
 - 15' for casing pipe diameters > 108"

NOTES:

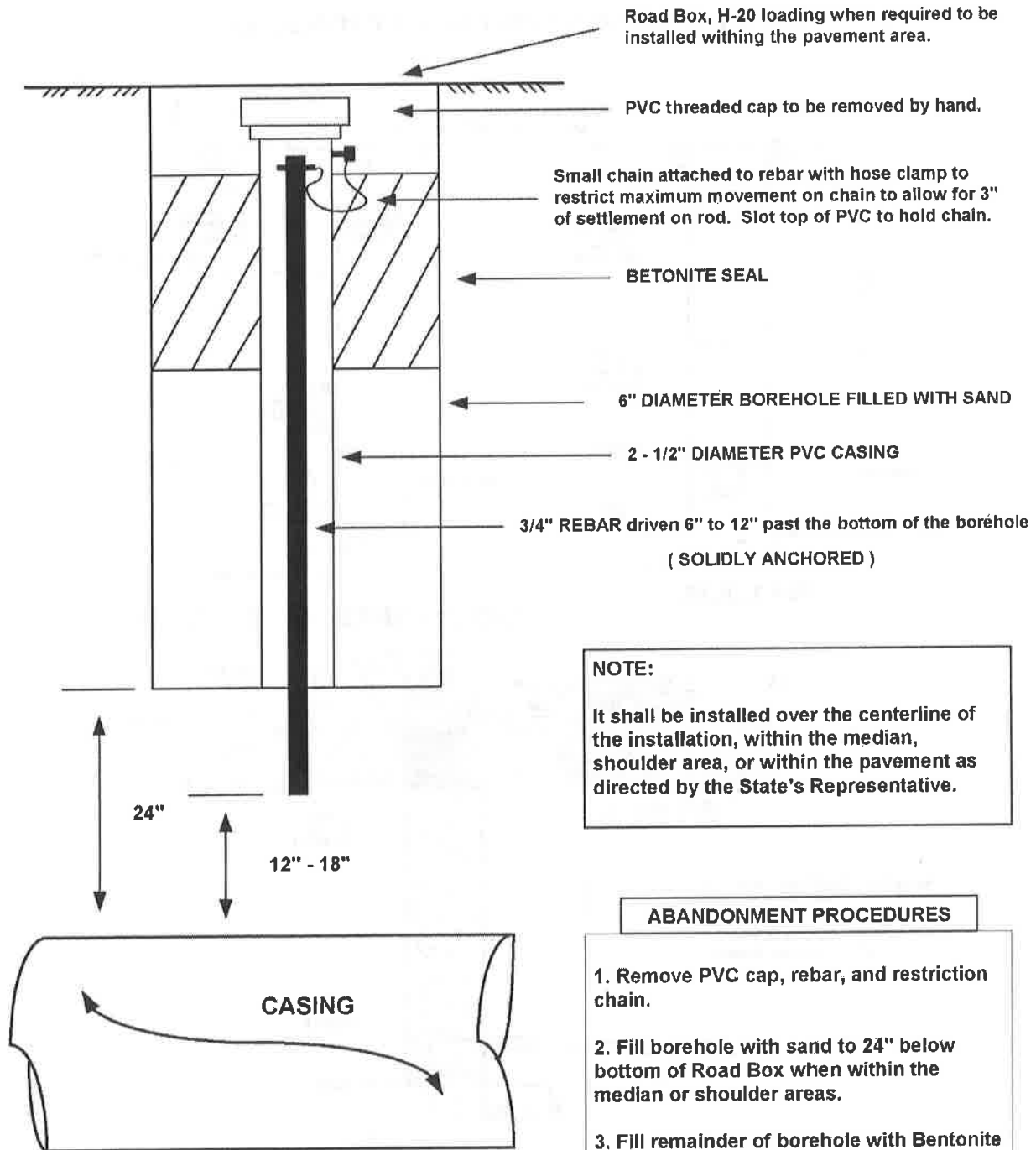
Survey data is to be collected at the specific points along the casing alignment at the following times:

1. Prior to Start of Work.
2. Every two (2) hours continuously throughout the project.
3. Upon completion of the project.
4. Every two (2) months, during a six month period after the date of completion, and or As Required by the Department.



ENCROACHMENT PERMIT SETTLEMENT ROD DETAIL

TR-0152 (REV. 09/2006)

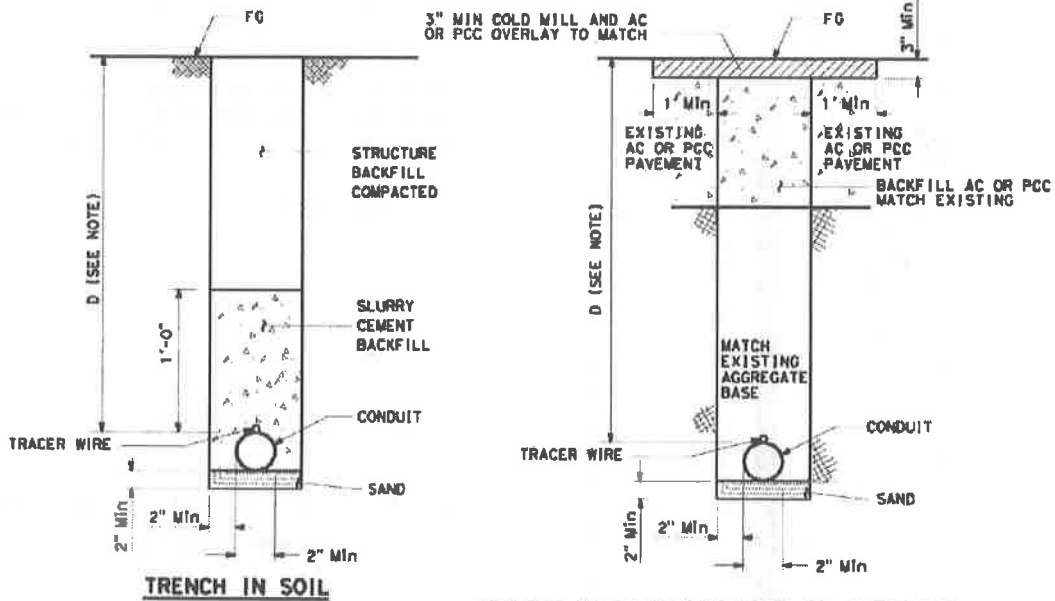


NOTE:
It shall be installed over the centerline of the installation, within the median, shoulder area, or within the pavement as directed by the State's Representative.

ABANDONMENT PROCEDURES

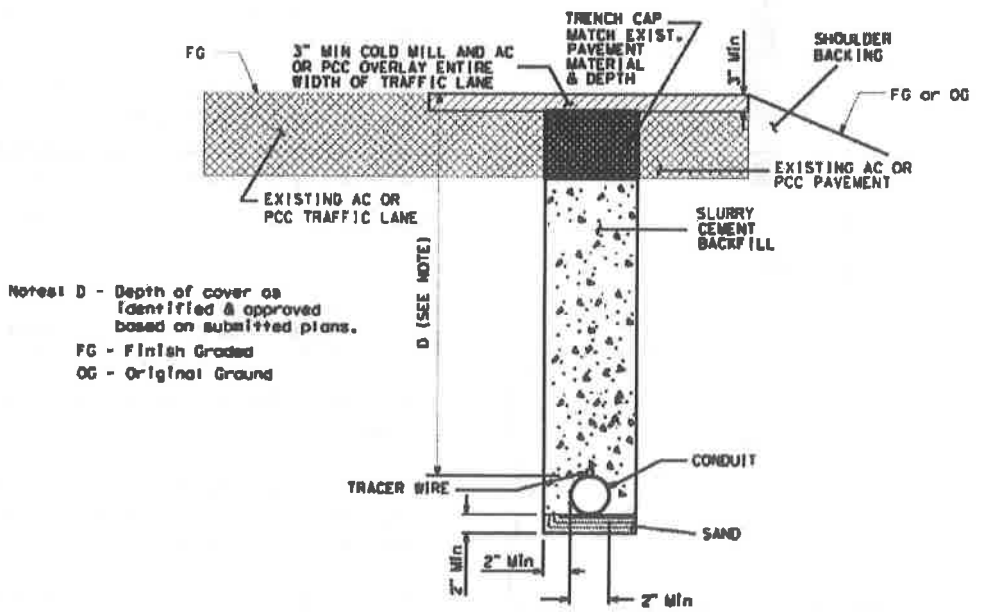
1. Remove PVC cap, rebar, and restriction chain.
2. Fill borehole with sand to 24" below bottom of Road Box when within the median or shoulder areas.
3. Fill remainder of borehole with Bentonite seal mixture.
4. Remove Road Box and back fill with an approved backfill.

TYPICAL TRENCH DETAIL (NOT TO SCALE)



TRENCH IN SOIL

TRENCH IN PAVEMENT (PCC OR ASPHALT)



LONGITUDINAL TRENCH IN PAVEMENT (PCC OR ASPHALT)

Notes: D - Depth of cover as identified & approved based on submitted plans.
 FG - Finish Graded
 OG - Original Ground

See page 2 for additional notes.

- **All work must be authorized by the encroachment permit, and/or as directed by the State's representative.**
- **A tracer wire must be placed on top of the conduit unless specified not to.**
- **Clearance between the trench wall and encroachment work less than 6 inches in width shall be a minimum of 2 inches. Clearance between the trench wall and encroachment work greater than 6 inches width shall be a minimum of 6 inches.**
- **When the trench width is less than 2' the backfill for subgrade must consist of either slurry cement or Controlled Low-Strength Material (CLSM).**
- **When trench width is greater than 2' compacted aggregate base may be used for backfill.**
- **Structure backfill must conform to Section 19-3.02C of the Standard Specifications.**
- **For trench located under unimproved surface, structure backfill can use the original soil. Soil must be compacted by mechanical means. Ponding, jetting or flooding are not allowed. Slurry cement backfill is optional at the discretion of the Caltrans District.**
- **Slurry cement backfill must conform to Section 19-3.02E of the Standard Specifications.**
- **Aggregate base shall conform to Section 26 of the Standard Specifications.**
- **CLSM must conform to Section 19-3.02G of the Standard Specifications. When CLSM is utilized the mix design and test results must be submitted to the State's representative. See Appendix H of the Encroachment Permits Manual for additional information.**
- **Cold planed surface and overlay shall be to the nearest lane line for the entire length of the trench/disturbed areas, and/or as directed by the State's representative.**
- **A paving notch ("T" Cut) shall be cold planed in exist asphalt concrete to a minimum width of 1.0' beyond each side of the trench and to a depth of 3" for the final layer of HMA.**
- **HMA or PCC to replace pavement section shall match existing pavement depth, unless directed otherwise by the State's representative.**
- **Hot mix asphalt must conform to Section 39 of the Standard Specifications.**
- **A tack coat of asphaltic emulsion conforming to Section 39-2.01C (3) (f) shall be applied.**
- **When the trench is within 4' of curb and gutter, additional cold planing may be required at the discretion of the State's representative.**
- **Pavement markings and/or striping removed or damaged during construction must be replaced as directed by the State's representative.**
- **Other trench related details are shown in Chapter 6 of the Encroachment Permits Manual as well as the Trenching and Shoring Manual. Both publications can be found on the State of California, Department of Transportation's website.**

ENCROACHMENT PERMIT STEEL PLATE BRIDGING UTILITY

TR -0157 (Rev. 04/2018)

To accommodate excavation work, steel plate bridging may be necessary. All conditions for use of steel plate bridging should be set forth in the special provisions.

Consideration of steel plate bridging should take into account the following factors:

1. Traffic speed.
2. Traffic Volume and Composition.
3. Duration and dimensions (width & daily estimated lengths) of the proposed excavation.
4. Weather conditions.

When backfilling operations of an excavation in the traveled way, whether transverse or longitudinal, cannot be properly completed within a work day, steel plate bridging with a non-skid surface and shoring (see Trenching & Shoring) may be required to preserve unobstructed traffic flow. In such cases, the following conditions shall apply:

1. Steel plate bridging on freeways is not allowed.
2. Steel plates used for bridging must extend a minimum of 12" beyond the edges of the trench.
3. Steel plate bridging shall be installed to operate with minimum noise.
4. The trench shall be adequately shored, (as mentioned in Section 603.6B-2 of the Encroachment Permits Manual) to support the bridging and traffic loads.
5. Temporary paving with cold asphalt concrete shall be used to feather the edges of the plates, if plate installation by Method (2) described below, is used.
6. Bridging shall be secured against displacement by using adjustable cleats, shims, or other devices.

As required by the district, steel plate bridging and shoring shall be installed using either Method (1) or (2):

Method 1 For speeds of 45 MPH or greater:

The pavement shall be cold planed to a depth equal to the thickness of the plate and to a width and length equal to the dimensions of the plate.

Approach plate(s) and ending plate (if longitudinal placement) shall be attached to the roadway by a minimum of 2 dowels pre-drilled into the corners of the plate and drilled 2" into the pavement. Subsequent plates are to be butted and tack welded to each other.

Method 2 For Speeds less than 45 mph:

Approach plate(s) and ending plate (if longitudinal placement) shall be attached to the roadway by a minimum of 2 dowels pre-drilled into the corners of the plate and drilled 2" into the pavement. Subsequent plates are to be butted and tack welded to each other. Fine graded asphalt concrete shall be compacted to form ramps, maximum slope 8.5% with a minimum 12" taper to cover all edges of the steel plates. When steel plates are removed, the dowel holes in the pavement shall be backfilled with either graded fines of

asphalt concrete mix, concrete slurry, epoxy or an equivalent that is satisfactory to the Caltrans' representative.

The permittee is responsible for maintenance of the steel plates, shoring, asphalt concrete ramps, and ensuring that they meet minimum specifications. Unless specifically noted or granted in the special provisions, or approved by the State representative, steel plate bridging shall not exceed 4 consecutive working days in any given week. Backfilling of excavations shall be covered with a minimum 3" temporary layer of cold asphalt concrete.

The following table shows the advisory minimal thickness of steel plate bridging required for a given trench width (A-36 grade steel, designed for HS20-44 truck loading per Caltrans Bridge Design Specifications Manual).

Trench Width	Minimum Plate Thickness
10"	1/2"
1'-11"	3/4"
2'-7"	7/8"
3'-5"	1"
5'-3"	1 3/4"

NOTE: For spans greater than 5'-3", a structural design shall be prepared by a California registered civil engineer.

All steel plates within the right of way whether used in or out of the traveled way shall be without deformation. Inspectors can determine the trueness of steel plates by using a straight edge and should reject any plate that is permanently deformed.

Steel plates used in the traveled portion of the highway shall have a surface that was manufactured with a nominal Coefficient Of Friction (COF) of 0.35 as determined by California Test Method 342 (See Appendix H, Encroachment Permits Manual). If a different test method is used, the permittee may utilize standard test plates with known coefficients of friction available from each Caltrans District Materials Engineer to correlate skid resistance results to California Test Method 342. Based on the test data, the permittee shall determine what amount of surface wear is acceptable, and independently ascertain when to remove, test, or resurface an individual plate.

Caltrans Inspectors should not enforce plate removal unless it is permanently deformed or delivered without the required surfacing. However, an inspector should document in a diary all contacts with the contractor.

A "Rough Road" (W8-8) sign and a "Steel Plate Ahead" (W8-24) sign with black lettering on an orange background must be used in advance of steel plate bridging along with the required construction area signs. These signs must be used along with any other construction area signs.

Surfacing requirements are not necessary for steel plates used in parking strips, on shoulders not used for turning movements, or on connecting driveways, etc., not open to the public.

UNCASED HIGH PRESSURE NATURAL GAS PIPELINE

TR-0158 (Rev 04/2018)

In addition to the attached General Provisions (TR-0045), the following special provisions are also applicable:

In accordance with the Department's Project Development Procedures Manual, all new high priority utilities and pressurized facilities are required to be encased on both conventional and access controlled highway rights-of-way.

Based on the Memorandum dated November 9, 1994, "Exception to Policy - Uncased High-pressure Natural Gas Pipelines," the Department may allow the installation of uncased natural gas pipeline crossings in specific circumstances. The Department's primary concerns are for public safety, the integrity of the highway facility and the mechanical protection of the pipeline itself, it is necessary to limit the number of requests for transverse natural gas transmission pipeline crossings without casings to locations where all of the following conditions are met:

UNG 1. The pipeline owner agrees that the crossing will be designed for construction in accordance with the Code of Federal Regulations, Title 49, Part 192, and/or the California Public Utilities Commission General Orders No. 112-D with respect to natural gas pipelines. The crossing design shall be comprehensive in all respects including but not limited to" material specification, pipe wall thickness determination, coating selection, and cathodic protection. Soil conditions at each site shall be analyzed for characteristics that may prove harmful to the protective pipe coating. This analysis shall be used by the pipeline owner in selecting a protective pipe coating sufficient to withstand the potential for gouging or peeling during the boring and jacking operation, or other methods approved by Caltrans. The final condition of the coating will be determined by the pipeline owner through monitoring of the boring and jacking operation, visually inspecting the exiting initial pipe segment, and electrical testing by an engineer or technician with expertise in cathodic protection. The test data shall be noted on the as-built drawings. Remedial action will be taken if the condition of the coating is such that cathodic protection is not practical.

UNG 2. The minimum depth of cover within State highway right of way, from the final ground line (finished grade or original ground) to the top of the proposed gas carrier pipeline, is 7.5 feet. If the location is such that it is not practical to achieve the above depth of cover, then an engineered protective cover (such as a reinforced concrete structure) may be provided outside of pavement areas in lieu of casing.

At no time shall the minimum depth of cover be less than 42 inches.

UNG 3. The permit specifies that the uncased gas carrier pipeline shall, as a minimum, be designed for a Class 3 Location (Code of Federal Regulations referenced above) for hard surfaced roads, highways, public streets, and railroads. (See attached Excerpts from the Code of Federal Regulations, Design Factor to be used for Natural Gas Pipelines.).

UNG 4. The existence of the crossing is adequately identified by signing at the right-of-way line, with at least one identifying sign, which is visible from the roadway in each direction of travel.

UNG 5. The pipeline owner agrees to provide as-built drawings at completion of the pipeline crossing, with a letter certifying that the pipeline was installed properly and in accordance with the permit plans (including approved changes to the permit plans), and meets industry and regulatory standards for such installation.

UNG 6. All other applicable requirements in Chapter 600 of the Encroachment Permits Manual are satisfied.

UNG 7. All submittals requesting installations of such uncased natural gas pipeline crossings greater than 6 inches in diameter or with normal operating pressures greater than 60 psig and meeting all of the above requirements may be approved by the district. Any deviations from the above requirements require an encroachment policy exception.

EXCERPTS FROM CODE OF FEDERAL REGULATIONS

DESIGN FACTORS TO BE UTILIZED FOR NATURAL GAS PIPELINES

In addition to the attached General Provisions (TR-0045), the following special provisions are also applicable:

In the design of steel natural gas pipelines the Minimum Yield Strength for the grade of steel used is reduced by a Design Factor (F). This Design Factor is determined by the type of road being crossed by the pipeline and a Class Location established by Code of Federal Regulations, Title 49, Part 192 (Office of the Federal Register, 1990).

The Class Location depends on the occupancy of buildings or activities within an area that extends 660 feet from either side of the pipeline centerline for a continuous 1 mile segment of the pipeline. There are four Class Locations as follows:

- Class 1. A location that has 10 or less buildings intended for human occupancy.
- Class 2. A location that has more than 10 but less than 46 buildings intended for human occupancy.
- Class 3. a) Any location that has 46 or more buildings intended for human occupancy; or
 b) Area where pipeline lies less than 300 feet of either a building or a small well defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. (The days or weeks need not to be consecutive).
- Class 4. A location where buildings of four or more stories are prevalent.

The design factor used for a specific Class Location also depends on the kind of road involved as indicated on the following Table.

DESIGN FACTOR (F)

TYPE OF THOROUGHFARE	CLASS LOCATION			
	1	2	3	4
Privately owned roads	0.72	0.60	0.50	0.40
Unimproved public roads	0.60	0.60	0.50	0.40
Hard surfaced roads, highways public streets, and railroads	0.60	0.50	0.50	0.40

Example: A pipe made of X42 grade of steel which has a Minimum Yield Strength (MYS) of 42,000 psi used in a Class 4 location at a hard surface road crossing would be designed using a reduced Minimum Yield Strength, by applying a Design Factor of 0.4, of 16,800 psi.

TREE PRUNING (TRIMMING) AND CHEMICAL APPLICATION

TR – 0159 (Rev. 01/2018)

In addition to the attached General Provisions (TR-0045), the following special provisions are also applicable:

I. GENERAL (Applies to BOTH Non-Utility and Utility Projects):

1. Scheduled pruning work may be restricted by Caltrans to maintain mobility during special events, commuter traffic, or other periods of projected high traffic volumes.
 - i. Traffic control is generally authorized from 9 a.m. to 3 p.m., Monday through Friday, excluding holidays. Extended traffic control hours may be required by Caltrans.
 - ii. Traffic control must conform to requirements shown in the State Standard Plans. When required, the use of a flashing arrow board is MANDATORY.
 - iii. Suspend work during inclement weather, such as heavy fog, if lane or shoulder closures will be required. Do not perform pruning work during periods of high wind to minimize the spread of debris into the traveled way.
2. Prune trees in compliance with the most recent version of ANSI A300-Pruning Part 1, the American National Standard for Tree Care Operations, Tree, Shrub and Other Woody Plant Maintenance-Standard Practices (Pruning), and the International Society of Arboriculture (ISA) Tree Pruning Best Management Practices.
3. Prune trees in compliance with the seasonal tree pruning restrictions specified in the Migratory Bird Act and meet the seasonal requirements of specific tree species. Perform pruning based upon the age of the tree (newly planted or established), type of tree (evergreen or deciduous), purpose for pruning (maintenance of form, structure, maintaining sight lines, utility clearance), and to minimize the spread of disease (pine pitch canker, eucalyptus psyllid, eucalyptus borer beetles, Dutch elm disease, or mistletoe).
4. Tree trimmers must be licensed by the California State Contractors State License Board and hold a current C61/D49 license.
5. Do not use climbing spurs to prune trees, except when working in the tops of Eucalyptus, Palms, and Conifers.
6. Prune trees to maintain their natural structure and shape. If unbalanced growth already exists, first thin and head prune the tree. Where prior topping or side pruning has resulted in excessive growth over the State right-of-way, prune to restore a balanced, symmetrical shape. Avoid creating large holes in the canopy. Upon completion of work, trees should present a balanced, symmetrical shape that is characteristic of their species.
7. Prune trees to maintain their natural open crown structure. Do not cut young growth year after year at the same fixed distance from the trunk. This technique creates very dense growth at the tree canopy margin, growth called “crow’s nests” or “brooms”. Maintain the natural open crown structure by thinning out dense growth.
8. Prune trees to restore an open crown structure. Remove limbs larger than 2-inches in diameter as necessary to open up dense growth, called “crows’ nests” or “brooms.” Make these cuts at laterals or parent branches in older wood so that the following season’s growth will result in a crown structure free of dense, disfiguring growth.

ENCROACHMENT PERMIT SPECIAL PROVISIONS

9. Prune trees to avoid redirecting growth over the highway. Maintain the terminal bud of the leader. Perform top or center pruning only after these trees have recovered their natural balance and form.
10. Final cuts must not leave stubs. Prune in ways that maximize wound recovery from callus growth. Keep wounds as small as practicable, reasonably flush, within the shoulder ring area, keeping cambial tissues at the cut edge alive and healthy. Do not make extreme flush cuts that produce large wounds and weaken the tree.
11. Remove debris, cuttings, and tree limbs from the State right-of-way at the end of each workday, leaving the work area in a safe and presentable condition. In regions where pruned limbs and bark might harbor pests or disease (such as pine pitch canker, eucalyptus psyllid, eucalyptus borer beetles, Dutch elm disease, or sudden oak death) dispose pruned materials in accordance with Federal, State, and local agency requirements.
12. Topping of trees is not allowed.
13. Prune trees to allow 8' over sidewalks and 17' over vehicular pavement.
14. Pruning must not change the character of the tree.

VIII. ADDITIONAL TREE PRUNING REQUIREMENTS FOR UTILITIES ONLY:

Comply with the requirements under "I. General" above, and the following:

15. Severity of utility tree pruning work may be restricted by the District Landscape Specialist to preserve the appearance of trees that possess high value due to local community significance, historic landscape potential, or documented horticultural value.
16. Limit pruning severity such that required minimum clearances are maintained for no more than two years.
17. Comply with minimum utility clearances as established by the CPUC General Orders, California Public Resources Code and Federal and State laws. Clearances that exceed the established minimum must be agreed upon by Caltrans and the Utility Company. For most locations, pruning should not take place more frequently than once per year. Pruning clearances and pruning frequencies must reflect the species, growth habit, condition, and health of each tree.
18. Prune trees receiving their first pruning, or recently pruned trees with "directional pruning" as defined in the ISA Tree-Pruning Guidelines. Trees that cannot be directionally pruned, such as older trees that have been topped many times may be submitted for consideration of removal.
19. Do not perform initial, severe "V" shaped pruning on trees along any highway, expressway or freeway without approval from the District Landscape Specialist or District Landscape Architect. Do not perform severe "V" pruning on any tree along a state or federally designated scenic highway without approval from the District Landscape Architect.
20. Maintain previously "rounded over" trees consistent with past practices, unless Caltrans and the Electric Utility owner agree that the tree can be directionally pruned or have its crown restored without creating structural defects or growth that presents a liability.

IX. CHEMICAL CONTROL:

21. Do not apply chemicals to trees located on scenic highways.
22. Upon approval by Caltrans to use chemicals, also obtain approval by the County Agricultural Commissioner.

ENCROACHMENT PERMIT SPECIAL PROVISIONS

23. Control resprouting tree species using integrated vegetation management program techniques, including chemical and non-chemical methods.
24. Prior to chemical application, obtain a pest control recommendation from a licensed Pest Control Advisor. Submit a copy of the recommendation to the Caltrans District Landscape Specialist or their designee.
25. Utility Companies must maintain a list of locations, chemical types, and quantities used for treatment in pruning operations. Provide this information upon expiration of your annual permit or upon request of the Department during the annual/biennial permit period.
26. Utility Companies must submit copies of MSDS sheets for all chemical compounds used in tree pruning operations along with their permit application.
27. Utility Companies must notify the District Encroachment Permits Office when they change or modify the chemicals used in their pruning operations. Do not apply chemicals to trees located on scenic highways.

ENCROACHMENT PERMIT ANNUAL UTILITY

TR – 0160 (Rev. 10/2019)

In addition to the attached General Provisions (TR-0045), the following special provisions are also applicable:

Annual utility permits UE are issued to utilities who maintain their facilities within State highway right-of-way. Any utility or public corporation, who lawfully maintains a utility encroachment, or their agent, may perform routine or emergency maintenance on such facility in accordance with the following provisions:

UE1. EXCLUSIONS: These provisions do not authorize any work on freeways and expressways, tree trimming, aerial capacity increases on designated "Scenic Highways", pole replacement / relocation work, or other activities not specifically provided for in this permit.

UE2. EMERGENCY REPAIRS: The permittee may make emergency repairs, alter traffic flow, and excavate through improved surfaces only when breaks in the conduit, cable, or pipeline over or under the pavement presents a definite public hazard or serious interruption of essential services. In such cases, the Department's representative shall be notified immediately.

Replace poles knocked down by vehicles, accidental causes or natural disasters. The entire length of poles and stubs must be removed from the ground and replacement pole must be placed at the exact location. Planned pole replacements/installations are not allowed under this permit.

UE3. OPEN EXCAVATIONS: Excavation must not be left open after daylight hours unless specifically authorized and adequate protection for traffic is provided in accordance with the General Provisions, "Public Traffic Control" And "Minimum Interference with Traffic". Backfill and pavement replacement must be performed in accordance with General Provisions, "Restoration and Repairs in State Highway right-of-way."

UE4. TRAFFIC CONTROL: Work requiring traffic control shall be conducted between Monday-Friday 9:00 a.m. and 3:00 p.m. or as otherwise authorized by the Permit Engineer. Adequate traffic control must be provided in accordance with the General Provisions, "Public Traffic Control", "Minimum Interference with Traffic" and "Suspension of Traffic Control Operation."

Only those maintenance activities that can be performed using a Caltrans Standard Plans for Temporary Traffic Control Systems and Temporary Pedestrian Access Routes are authorized under the annual maintenance permit. Otherwise a separate permit application for the work, along with a traffic control plan designed and signed by a California Registered Civil or Traffic Engineer must be submitted for review and approval.

Advanced notification must be provided to Caltrans Traffic Management Center for any activities that may cause a traffic impact including all lane closures. Adequate notice must be provided in accordance with the General Provisions, "Notification of Closure to Department and Traffic Management Center (TMC)."

UE5. WORK PERMITTED - AERIAL: All permitted activity must not be over the traveled way or within the limits of officially designated scenic highways and/or on Caltrans structures.

1. Maintain, inspect, remove, repair or replace (in the same location) all aerial facilities. Work over the traveled way requires a separate permit and the placement of "H" poles and netting as per form TR-0108, located in Appendix "E" of the Encroachment Permits Manual.

Replace broken pins and/or insulators, repair broken wires, pull slack wires, and replace or pull broken or slack guys.

Replace aerial wires and cross arms on existing poles except where wires cross the highway. Unless otherwise specifically required by the Department, protected cable, tree wire or plastic tree wire guard used for communication lines may be used through trees where necessary, provided the appearance of the tree or the tree itself will not be damaged.

ENCROACHMENT PERMIT SPECIAL PROVISIONS

Perform insulator washing and interconnect splicing of cables.

Install additional capacity (in the same location), install, maintain, remove, repair or replace aerial service connections with potential to ground of 300 volts or less.

2. Installations and clearances must be equal to those required by either the California Public Utilities Commission orders or the Division of Occupational Safety and Health (Cal/OSHA) regulations promulgated in the California Code of Regulations, Title 8, Chapter 4, whichever is more restrictive.

UE6. WORK PERMITTED - UNDERGROUND:

1. Maintain, inspect, remove, repair or replace (in the same location) all underground facilities except those requiring trenching in the traveled way or require uncovering more than 50 feet of line at any one time. The permittee may open existing manholes to repair underground cables. Where the manhole lies within the improved surface of the highway, the permittee will provide adequate protection for traffic in accordance with the General Provisions "Public Traffic Control" and "Minimum Interference with Traffic".
2. Install additional capacity in existing ducts except for facilities not in compliance with the Department's High priority utility policies or on Structures.
3. Install air flow monitoring transducers and piping in existing ducts.
4. Barholing, potholing, cleaning, rodding and placing float ropes.
5. Adjust access cover to grade and replace in kind or with larger size pull boxes.
6. Interconnect splicing of cables.
7. Install service connections (laterals) perpendicular to the highway for the following:

- i. Natural gas service lines less than 2 inches in pipe diameter that have normal operating pressures of 60 psig or less
 - ii. Subsurface electrical service connections with a potential to ground of 50 volts or less
 - iii. Service connections for water, sewer, telephone, telecommunication, and cable service
8. Permanent pavement patching for work authorized by this permit. The patching must be made within thirty (30) days of completion of backfill unless otherwise specified by the Permit Engineer. See Underground Utility Provision UG 9 (form TR-0163).

UE7. POLE MAINTENANCE & CHEMICAL TREATMENT:

1. Utility Companies are to provide a list of the pole identification, locations, type of chemicals and quantities used for their pole treatment maintenance operations. This information must be provided upon expiration of their annual permit or upon request of the Department as needed.
2. Utility Companies must submit copies of the Safety Data Sheets (SDS) for all chemical compounds to be used in their pole treatment maintenance operations, in conjunction with the permit application submittal.
3. Utility Companies are to notify the District Landscape Specialist or their designee and the District Encroachment Permits Office when there is any change or modification in the type(s) of chemical used in their pole treatment maintenance operations.
4. Prior to any application of Tree Growth Regulators (TGR) approval shall be obtained from the District Landscape Specialist or their designee.

UE8. MISCELLANEOUS:

1. Install new and replace existing transformers on existing poles.
2. Clear grass from around base of poles and excavate around poles for inspection, including tamping and straightening. The use of herbicides or other chemicals is not authorized by this permit. A separate encroachment permit is required for that purpose.

ENCROACHMENT PERMIT OVERHEAD UTILITY PROVISIONS

TR - 0162 (Rev. 10/2019)

OH1. LOCATION POLE LINES, ETC.:

Pole lines must be located as specifically directed in the provisions of the permit.

OH2. INSTALLATIONS AND CLEARANCES:

Horizontal clearances, as measured from the edge of traveled way to the installation must be in accordance with the minimum clearance required for Discretionary Fixed Objects. According to Caltrans' Highway Design Manual (309.1) The installation should be located beyond the clear recovery zone at a minimum of 52 feet horizontally or 8 feet vertically up-slope from the edge of traveled way, unless they are made breakaway or shielded behind existing guardrail, barrier or other safety device. In no case is a pole allowed closer than 1.5' behind a curb face or less than 2' from the edge of a slope catch point or 3' from the curb returns of intersections and near the edges of driveways, or within a drainage ditch. New installations should adhere to setback limits or should be protected. Consideration should be given to placing such encroachments underground in shoulder or parking areas. Also, installations and clearances must comply with applicable orders of the California Public Utilities Commission (CPUC), or the Division of Occupational Safety and Health (Cal/OSHA) Safety Orders, whichever is more restrictive.

OH3. PERMISSION FROM PROPERTY OWNERS:

When necessary, permission must be secured from the abutting property owner(s) in written form by the permittee before starting work.

OH4. CLEARANCE OF TREES:

Unless otherwise specifically required by the Department, protected cables, tree wires or plastic tree wire guards used for communication lines may be used through trees where necessary, provided the installation and any necessary pruning does not damage or affect the appearance of the tree or the tree itself will not be damaged. This allowance does not apply to scenic highways.

OH5. GUY WIRES:

No guy wires are to be attached to trees except as may be specified in the permit and in no event must they be so attached as to girdle the tree or interfere with its growth. Guy wires must be kept to a minimum elevation above ground as directed.

OH6. ANCHOR:

Anchors must not be placed closer to the traveled way than the pole itself.

OH7. REMOVE OLD POLES, STUBS AND GUY RODS:

The entire length of poles and stubs must be removed from the ground and the holes backfilled. Guy rods must be removed to a minimum depth of 3' below original ground.

OH8. AERIAL CROSSING:

Works involving new or additions to existing aerial crossings must not be performed in rainy, foggy or inclement weather which creates hazardous conditions for highway users.

OH9. CLEARANCE FROM CURBS:

The face of poles must not be placed closer than 1.5' from any curb face.

OH10. POLE INSTALLATION OR REMOVAL:

Where poles are to be installed or removed behind the curb in a parkway that is paved with Portland Cement Concrete, the concrete must be saw cut, removed and replaced to the nearest score lines or expansion joints. The hole in the PCC sidewalk created by pole removal must be temporarily backfilled with 2" minimum temporary AC at the time the pole is removed. Poles are not to be installed without prior approval of the final location by the Department's field representative.

OH11. CONTROLLED ACCESS R/W:

Poles, anchors, etc., must not be installed inside of any controlled access right of way. All such requests are "exceptions" to policy.

UNDERGROUND UTILITY

TR - 0163 (Rev. 04/2018)

In addition to the attached General Provisions (TR-0045), the following special provisions are also applicable:

High priority utilities, pressurized facilities, pipes or ducts 6" or larger in diameter, or placement of multiple pipes or ducts, regardless of diameters are required to be encased on both conventional and access-controlled highway rights-of-way.

A "High Priority Utility" is defined as: 1) a natural gas pipeline greater than 6" in diameter, or with normal operating pressures greater than 60 psig, 2) petroleum pipelines, 3) pressurized sanitary sewer pipelines, 4) high-voltage electric supply lines, conductors, or cables that have a potential to ground of greater than or equal to 60 kV, or 5) hazardous materials pipelines that are potentially harmful to workers or the public if damaged.

An exception to this policy may be allowed on a case by case basis for the installation of Uncased High-Pressure Natural Gas Pipelines when in compliance with the TR-0158 Special Provisions.

The pavement or roadway must not be open-cut unless specifically allowed under a separate "UT" permit. Utility installations must not be installed inside of culverts or drainage structures.

For additional details regarding longitudinal utility encroachments on both conventional and access-controlled highway rights-of-way, see Chapter 600.

UG 1. CASINGS: Casings must be steel conduit with a minimum inside diameter sufficiently larger than the outside diameter of the pipe or ducts to accommodate placement and removal. The casing can be either new or used steel pipe, or an approved connector system. Used pipe must be pre-approved by the Department's engineer or representative before installation.

When the method of Horizontal Directional Drilling (HDD) is used to place casing, the use of High Density Polyethylene Pipe (HDPE) as casing is acceptable.

Reinforced Concrete Pipe (RCP) in compliance of State Standard Specifications is an acceptable carrier for storm drain gravity flow or non-pressure flow. RCP when installed by Bore & Jack must have rubber gaskets at the joints, and holes for grouting of voids left by jacking operations, see "E" below.

- A. Minimum wall thickness for steel pipe casing for different lengths and diameters of pipes are as follows:

Minimum Wall Thickness

Casing Pipe (Diameter)	Up to 150 ft (Length)	Over 150 ft (Length)
6" to 28"	1/4"	1/4"
30" to 38"	3/8"	1/2"
40" to 60"	1/2"	3/4"
62" to 72"	3/4"	3/4"

- B. Spiral welded casing is authorized provided the casing is new and the weld is smooth.

- C. The ends of the casing must be plugged with ungrouted bricks or other suitable material approved by the Department's representative.
- D. When required by the Department's representative, the permittee must at his expense, pressure grout the area between the pavement and the casing from within the casing in order to fill any voids caused by the work covered under this permit. The increments for grout holes inside the pipe must be 8' staggered and located 22-1/2 degrees from vertical axis of the casing. Pressure must not exceed 5 psig for a duration sufficient to fill all voids.
- E. There is a spacing requirement when placement of multiple encasements is requested. The distance between multiple encasements must be the greater of either 24" or twice that of the diameter of the larger pipe being installed.
- F. Casings placed within access controlled highway rights-of-way must extend to the right-of-way lines.
- G. Wing cutters, if used, must be a maximum of 1" larger than the casing. Voids caused by the use of wing cutters must be grouted in accordance with "E" above.
- H. A band welded to the leading edge of the casing must be placed square to the alignment. The band must not be placed on the bottom edge. Flaring the lead section on bores over 100' must not be permitted.

ENCROACHMENT PERMIT SPECIAL PROVISIONS

- I. All casing lengths must equal to the auger length.
- J. The casings within conventional highways must extend 5' beyond the back of curb or edge of pavement, or to the right of way line if less. Where PCC cross-gutter exists, the casing must extend at least 5' beyond the back of the cross-gutter, or to the right of way line if less.

Bore and receiving pits must:

- A. be located at least 10' or more from the edge of pavement on conventional highways in rural areas.
- B. be located 5' behind the concrete curb or AC dike on conventional highways in urban areas.
- C. be located 5' outside the toe of slope of embankment areas.
- D. be located outside access controlled highway rights-of-way.
- E. be adequately fenced and/or have a Type-K barrier placed around them.
- F. be adequately shored in accordance with Cal-OSHA requirements. Shoring for jacking and receiving pits located within 15' of traffic lanes on a State highway must not extend more than 36" above the pavement grade unless otherwise authorized by Department's representative. Reflectors must be affixed to the shoring on the sides facing traffic. A 6' chain link fence must be installed around the perimeter of the pits during non-working hours.
- G. have crushed-rock and sump areas to clear groundwater and water used to clean the casing. Where ground water is found and pumping is required, the pits must be lined with filter fabric.

UG 2. HORIZONTAL DIRECTIONAL DRILLING: Bore and receiving pits

When HDD is the approved method for pipe installation, drilling plans must contain information listed as follows:

- 1. Location of: entry and exit point, access pit, equipment, and pipe staging area.
- 2. Proposed drill path alignment (horizontal and vertical).
- 3. Location and clearances of all other facilities.
- 4. Depth of cover.
- 5. Soil analysis.*
- 6. Carrier pipe length, diameter, thickness, and material (HDPE/steel) and ream pipe diameter.
- 7. Detailed carrier pipe calculations confirming ability to withstand installation loads and long-term operational loads including H20.
- 8. Proposed drilling fluid composition, viscosity, and density (based on soils analysis).
- 9. Drilling fluid pumping capacity, pressures, and flow rates
- 10. State right-of-way lines, property, and utility right of way or easement lines.
- 11. Elevations.
- 12. Type of tracking method/system and accuracy used.
- 13. A detailed plan for monitoring ground surface movement (settlement or heave) resulting from the drilling operation.
 - * May be waived by the District Permit Engineer for HDD jobs less than 6" in diameter and a traverse crossing less than 150'.

UG 3. LIMIT OF EXCAVATION: No excavation is allowed within 10' from the edge of pavement except in curbed urban areas or as specified in the permit. Where no curb exists and excavations within 10' of the traveled way are to remain open, a temporary Type-K railing must be placed at a 10:1 taper or as otherwise directed by the Department.

UG 4. TUNNELING: Review, requirements of Section 603.6A-6 of the Encroachment Permits Manual, if applicable. In addition to the requirements of "UG1" the following requirements apply:

- A. For the purpose of this provision, a tunnel is defined as any pipe, 30" or larger in diameter placed.
- B. When tunneling is authorized, the permittee must provide full-time inspection of tunneling operations. The Department's representative must monitor projects.
- C. A survey grid must be set and appropriately checked over the centerline of the pipe jacking or tunneling operation. Copies of the survey notes must be submitted to the Department's representative.
- D. Sand shields may be required as ground conditions change.
- E. The method used to check the grade and alignment must be approved by the Department's representative.
- F. Pressure grouting for liner plates, rib and spiling, or rib and lagging tunnels must be at every 8' section or at the end of work shift before the next section is excavated. All grouting must be completed at the end of each workday.
- G. A method for securing the headway at the end of each workday is required. Breastplates must be

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installed during working hours for running sand or super-saturated soil.

UG 5. CLEARANCE AND OFFSET

REQUIREMENTS: All installations must comply with Chapter 17, Article 4 of the Project Delivery Procedures Manual (PDPM) for utility clearance and offset requirements.

UG 6. FACILITIES EXEMPT FROM THE HIGH

PRIORITY UTILITY REQUIREMENTS: The following utilities (not including State owned utilities) are exempt from these policies and do not need to be plotted on the plans unless the depiction of the utility is needed for interconnectivity with the proposed work:

- Natural gas service lines less than 2 inches in pipe diameter that have normal operating pressures of 60 psig or less
- Subsurface electrical service connections with a potential to ground of 50 volts or less
- Service connections (laterals) for water, sewer, telephone, telecommunication, and cable service

All State owned utilities must be plotted on the plans.

UG 7. DETECTOR STRIP: A continuous metallic detector strip must be provided with non-metallic main installations. Service connections must be installed at right angles to the centerline of the State highway where possible.

UG 8. BACKFILLING: All backfilling must conform to the applicable sections of the Department's Standard Specifications. Ponding or jetting methods of backfilling are prohibited.

Any required compaction tests must be performed by a certified laboratory at no cost to the Department and the laboratory report furnished to the Department's representative.

UG 9. ROADWAY SURFACING AND BASE MATERIALS: When the permit authorizes installation by the open cut method, surfacing and base materials and thickness thereof must be as specified in the permit.

Temporary repairs to pavements must be made and maintained upon completion of backfill until permanent repairs are made. Permanent repairs to pavements must be made within thirty (30) days of completion of backfill unless otherwise specified by the Department. Temporary pavement patches must be placed and maintained in a smooth riding plane free of humps and/or depressions.

UG 10. DAMAGE TO TREE ROOTS: Tree roots 3" or larger in diameter will not be cut within the tree drip

line when trenching or other underground work is necessary adjacent to roadside trees. If such roots are encountered, they must be tunneled under, wrapped in burlap and kept moist until the trench is backfilled. Trenching machines may not be used under trees if the trunk or limbs will be damaged by their use.

If the trees involved are close together and of such size that it is impractical to protect all roots over 3" in diameter, or when roots are less than 4" in diameter, outside tree drip line, special arrangements may be made whereby pruning of the tree tops to balance the root loss can be done by the permittee under the close supervision of the District Landscape Specialist or District Tree Maintenance Supervisor. Manholes must not be installed within 20' of any trunk.

UG 11. PIPES ALONG ROADWAY: Pipes and conduits paralleling the pavement must be located as shown on the plans or located outside of pavement as close as possible to the right-of-way line.

UG 12. BORROW AND WASTE: Borrow and waste will be allowed within the work limits only as specified in the permit.

UG 13. MARKERS: The permittee must not place any markers that create a safety hazard for the traveling public or departmental employees.

UG 14. CATHODIC PROTECTION: The permittee must perform stray current interference tests on underground utilities under cathodic protection. The permittee must notify the Department prior to the tests. The permittee must perform any necessary corrective measures and advise the Department.

UG 15. DELETED. Provision left blank intentionally

UG 16. INSTALLATION BY OPEN CUT METHOD: When the permit authorizes installation by the open cut method no more than one lane of the highway pavement must be open-cut at any one time. Any exceptions must be in writing by the Department's representative. After the pipe is placed in the open section, the trench is to be backfilled in accordance with specifications, temporary repairs made to the surfacing and that portion opened to traffic before the pavement is cut for the next section.

If, at the end of the working day, backfilling operations have not been properly completed, steel plate bridging must be required to make the entire highway facility available to the traveling public in accordance with the "Steel Plate Bridging Special Provisions" (TR-0157)

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UG 17. PAVEMENT REMOVAL: PCC pavement to be removed must be saw cut at a minimum depth of 4" to provide a neat and straight pavement break along both sides of the trench. AC pavement must be saw cut to the full depth.

Where the edge of the trench is within 2' of existing curb and gutter or pavement edge, the asphalt concrete pavement between the trench and the curb or pavement edge must be removed.

UG 18. DELETED. Provision left blank intentionally.*

UG 19. SIDES OF OPEN-CUT TRENCHES: Sides of open cut trenches in paved areas must be kept as nearly vertical as possible. Trenches must not be more than 2' wider than the outside diameter of the pipe to be laid therein, plus the necessary width to accommodate shoring.

UG 20. EXCAVATION UNDER FACILITIES: Where it is necessary to excavate under existing curb and gutter, or underground facilities, the void must be backfilled with two (2) sack cement-sand slurry.

UG 21. PERMANENT REPAIRS TO PCC PAVEMENT: Repairs to PCC pavement must be made of Portland Cement Concrete containing a minimum of 658 lbs. or 7 sack of cement per cubic yard. Replaced PCC

pavement must equal existing pavement thickness. The concrete must be satisfactorily cured and protected from disturbance for not less than forty-eight (48) hours. Where necessary to open the area to traffic, no more than two (2%) percent by weight of calcium chloride may be added to the mix and the road opened to traffic after six (6) hours.

UG 22. REMOVAL OF PCC SIDEWALKS OR CURBS: Concrete sidewalks or curbs must be saw cut to the nearest score marks and replaced equal in dimension to that removed with score marks matching existing sidewalk or curb.

UG 23. SPOILS: No earth or construction materials are to be dragged or scraped across the highway pavement, and no excavated earth placed or allowed to remain at a location where it may be tracked onto the highway traveled way, or any public or private approach by the permittee's construction equipment, or by traffic entering or leaving the highway traveled way. Any excavated earth or mud so tracked onto the highway pavement or public or private approach must be immediately removed by the permittee.

*NOTE: Special Provision was deleted since it is already part of the EP General Provisions (TR-0045)

TREE REMOVAL

TR – 0171 (New 01/2018)

In addition to the attached General Provisions (TR-0045), the following special provisions are also applicable:

I. GENERAL (Applies to BOTH Non-Utility and Utility Projects):

1. Scheduled removal work may be restricted by Caltrans to maintain mobility during special events, commuter traffic, or other periods of projected high traffic volumes.
 - i. Traffic control is generally authorized from 9 a.m. to 3 p.m., Monday through Friday, excluding holidays. Extended traffic control hours may be required by Caltrans.
 - ii. Traffic control must conform to requirements shown in the State Standard Plans. When required, the use of a flashing arrow board is MANDATORY.
 - iii. Suspend removal work during inclement weather, such as heavy fog, if lane or shoulder closures will be required. Do not perform removal work during periods of high wind to minimize the spread of debris into the traveled way.
2. Remove trees in compliance with the seasonal restrictions specified in the Migratory Bird Act.
3. Contractors must be licensed by the California State Contractors State License Board and hold a current C61/D49 license.
4. Remove debris, cuttings, and limbs from the State right-of-way at the end of each workday, leaving the work area in a safe and presentable condition. In regions where debris, cuttings, limbs and bark may harbor pests or disease (such as pine pitch canker, eucalyptus psyllid, eucalyptus borer beetles, Dutch elm disease, or sudden oak death) dispose the vegetative materials in accordance with Federal, State, and local agency requirements.
5. Permittee or their contractors may collect woodchips produced by removing trees located both inside and outside Caltrans right-of-way, and dispose of these woodchips by placing them in locations within Caltrans right-of-way, when approved in advance by Caltrans Maintenance. Woodchips must not create a fire hazard, encourage illegal dumping, block traveler sightlines, or obstruct drainage ditches or drain inlets.

X. NON-UTILITY TREE REMOVAL PROJECTS:

When a permit is issued for removal of a tree as an independent operation or as a part of other work, the entire stump must be taken out to a depth of at least 12-inches below the ground surface. All debris must be removed from the right of way. The hole left by the stump must be backfilled and thoroughly tamped and the site left in a safe presentable condition.

XI. UTILITY TREE REMOVAL PROJECTS ONLY:

Removal of trees over sub-surface Gas lines:

After trees are removed, cut trunks flush with the ground, leaving no more than 2-inches exposed above the finished grade. If required by Caltrans, remove the stump to a depth of at least 12-inches, remove all debris from the hole, backfill with clean fill, and thoroughly compact the soil, leaving the area in a safe presentable condition.

1. GENERAL: The purpose of these Special Provisions is to provide the Permittee with specifications for water pollution control to minimize, prevent, or control the discharge of material into the air, surface waters, groundwater, and storm sewers owned by the State or local agencies. These provisions are not intended to take the place of the Caltrans Water Pollution Control Program (WPCP) for projects where soil disturbance from work activities less than one acre, or work activities of one acre or more subject to the preparation of the Caltrans Storm Water Pollution Prevention Plan (SWPPP). The Permittee must comply with the following Special Provisions and the direction of the State Representative. All Stormwater Best Management Practices (BMPs) must conform to Section 13 Water Pollution Control of Caltrans' Standard Specifications.

2. NPDES REQUIREMENTS: The Permittee must be responsible for full compliance with the Caltrans Storm Water Program and the Caltrans National Pollutant Discharge Elimination System (NPDES) Permit requirements (*Order No. 2012-0011-DWQ, NPDES No CAS000003*) and for and projects disturbing one acre or more of soil, full compliance with the California Construction General Permit (*Order No. 2009-0009-DWQ, NPDES No CAS000002*) or for projects for projects that have one acre or more of soil disturbance in the Lahontan Region (*Order No. R6T-2016-0010, NPDES No CAG616002*). It is the Permittee's responsibility to install, inspect, and repair or maintain facilities and devices used for water pollution control practices (BMPs) before performing daily work activities. Installation, inspection and maintenance responsibilities on the job site include: 1) soil stabilization materials in work areas that are inactive or prior to storm events, 2) water pollution control devices to control sediment and erosion, 3) implementation of spill and leak prevention procedures for chemical and hazardous substances stored on the job site, 4) material storage, 5) stockpile management, 6) waste management, 7) non-stormwater management, 8) water conservation, 9) tracking controls and 10) illicit connection, illegal discharge detection and reporting. The Permittee must report to the State representative when discharges enter into receiving waters, adjacent property, drainage systems or when discharges could be a cause or a threat for water pollution. The Permittee must also control illicit discharges or illegal dumping prior to start of daily work schedule. Copies of written notices or orders from the Regional Water Quality Control Board or other regulatory agency must be provided to the State representative within 48 hours of reported activity. For additional information on stormwater compliance, visit the State Water Resources Control Boards storm water Website at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater

3. RESPONSIBILITY FOR DEBRIS REMOVAL: The Permittee must be responsible for preventing sediment, trash, debris, and other construction waste from entering the street, the storm drains, local creeks, or any other bodies of water.

4. SPOILS AND RESIDUE: The Permittee must vacuum any saw-cut concrete waste material, debris, residue, etc. No spoils, debris, residue, etc. must be washed into a drainage system.

5. SWEEPING: Sweep paved roads at construction entrance and exit locations and surrounding paved areas daily within the job site during: 1) clearing and grubbing, 2) earthwork, 3) trenching, 4) soil disturbance, 5) pavement grinding and/or cutting, and 6) after observing tracking of material onto or off the State property. Keep dust to a minimum during sweeping activities. Use vacuum whenever dust generation is excessive or sediment pickup is ineffective.

Roadways or work areas must not be washed down with water. Street sweeping operations must conform to Section 13 Water Pollution Control of Caltrans' Standard Specifications.

6. VEHICLES AND EQUIPMENT: Permittee must prevent all vehicles, equipment, etc. from leakage or mud tracking onto roadways. If leaks cannot be repaired immediately, remove the vehicle or equipment from the job site.

7. MAINTENANCE AND FUELING OF VEHICLES AND EQUIPMENT: Maintenance and fueling of equipment must not result in any pollution at the job site. The Permittee must immediately clean up spills/leaks, and properly dispose of contaminated soil and materials.

8. CLEANING VEHICLES AND EQUIPMENT: Limit vehicle and equipment cleaning or washing at the job site except what is necessary to control vehicle tracking or hazardous waste. The Permittee must clean all equipment within a bermed area or over a drip pan large enough to prevent run-off. No soaps, solvents, degreasers, etc. must be used in State right-of-way. Any water from this operation must be collected and disposed of at an appropriate site. Containment berms or dikes must be used for fueling, washing, maintaining and washing vehicles or equipment in outside areas. Containment must be performed at least 100 feet from concentrated flows of storm water, drainage courses, and storm drain inlets if within a flood plain, otherwise at least 50 feet if outside the floodplain. Keep adequate quantities of absorbent spill- cleanup material and spill kits in the fueling or maintenance area and on fueling trucks.

9. DIESEL FUELS: The use of diesel fuel from petroleum or other fossil fuel as a form-oil or solvent is not allowed.

10. WEATHER CONDITIONS AT WORKSITE: Any activity that would generate fine particles or dust that could be transported off site by stormwater must be performed during dry weather.

11. WIND EROSION PROTECTION: The use of Wind Erosion BMPs must be deployed year-round in instances where dust or fine particles could be transported off site.

11. HOT MIX ASPHALT: Runoff from washing hot mix asphalt must not enter into any drainage conveyances.

12. PROTECTION OF DRAINAGE FACILITIES: The Permittee must protect/cover gutters, ditches, drainage courses, and inlets with gravel bags, fiber rolls, State approved fabric filters, etc., to the satisfaction of the State representative during grading, paving, saw-cutting, etc. and materials must conform to Section 13-6.02 Materials for Water Pollution Control of Caltrans' Standard Specifications. No such protection measures must cause an obstruction to the traveling public. The Permittee must implement spill and leak prevention procedures for chemicals and hazardous substances stored on the job site (including secondary containment requirements) in accordance to section 13-4.03B Spill Prevention and Control, and 14-11 Hazardous Waste and Contamination, Water Pollution Control of Caltrans' Standard Specifications.

13. PAINT: Rinsing of painting equipment and materials is not permitted in State right-of-way. When thoroughly dry, dispose of the following as solid waste: dry latex paint, paint cans, used brushes, rags, gloves, absorbent materials, and drop cloths. Oil based paint sludge and unusable thinner must be disposed of at an approved hazardous waste site.

14. CONSTRUCTION MATERIALS: Stockpile of all construction materials, including, but not limited to; pressure treated wood, asphalt concrete, cold mix asphalt concrete, concrete, grout, cement containing premixes, and mortar, must conform to section 13-4.03C (2) Material Storage & 13-4.03C (3) Stockpile Management of Caltrans' Standard Specifications.

STORMWATER SPECIAL PROVISIONS for MINIMAL or NO IMPACT (SWSP)

TR-0400 (Rev 05/2018)

- 15. CONCRETE EQUIPMENT:** Concrete equipment must be washed in a designated washing area in a way that does not contaminate soil, receiving waters, or storm drain systems.
- 16. EXISTING VEGETATION:** Established existing vegetation is the best form of erosion control. Minimize disturbance to existing vegetation. Damaged or removed vegetation must be replaced as directed by the State Representative.
- 17. SOIL DISTURBANCE:** Soil disturbing activities must be avoided during the wet weather season. If construction activities during wet weather are allowed in your permit, all necessary erosion control and soil stabilization measures must be implemented in advance of soil disturbing activity.
- 18. SLOPE STABILIZATION AND SEDIMENT CONTROL:** Consider a certified expert in Erosion and Sediment control in cases where slopes are disturbed during construction. The Permittee is directed to comply with Section 13.5 Temporary Soil Stabilization and Section 21 Erosion Control of Caltrans' Standard Specifications during application of temporary soil stabilization measures to the soil surface. Fiber rolls or silt fences may be required down slope until permanent soil stabilization is established. Remove the accumulated sediment whenever the sediment accumulates to 1/3 of the linear sediment barrier height. The Permittee must limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist or when environmental regulations prohibit their use within the project.
- 19. STOCKPILES:** Stockpiles containing aggregate and/or soil must be stored at least 100 feet from concentrated flows of storm water, drainage courses, and storm drain inlets if within a flood plain, otherwise at least 50 feet if outside the floodplain, and must be covered and protected with a temporary perimeter sediment barrier. Cold mix stockpiles must be stored on an impermeable surface and covered with 9 mil plastic to prevent contact with water. Minimize stockpiling of materials on the job site. Manage stockpiles by implementing the water pollution control practices in Section 13-4.03C (3) Stockpile Management of the State of California standard specifications for construction.
- 20. DISCOVERY OF CONTAMINATION:** The State Representative must be notified in case any unusual discoloration, odor, or texture of ground water, is found in excavated material or if abandoned, underground tanks, pipes, or buried debris are encountered.
- 21. SANITARY AND SEPTIC WASTE:** Do not bury or discharge wastewater from a sanitary or septic system within the highway. Properly connected sewer facilities are free from leaks. With State Representative approval place portable sanitary facility at least 50 feet away from storm drains, receiving waters, and flow lines. Permittee must comply with local health agency provisions when using an on-site disposal system.
- 22. LIQUID WASTE:** Prevent job site liquid waste from entering storm drain systems and receiving waters. Drilling slurries, grease or oil-free waste water or rinse water, dredging, wash water or rinse water running off a surface or other non-storm water liquids not covered under separate waste water permits must be held in structurally sound, leak-proof containers, such as portable bins or portable tanks. Store containers at least 50 feet away from moving vehicles and equipment. Liquid waste may require testing to determine hazardous material content prior to disposal. All measures must conform to section 13-4.03D (5) Liquid Waste, Water Pollution Control of Caltrans' Standard Specifications.
- 23. WATER CONTROL AND CONSERVATION:** Manage water use in a way that will prevent erosion and the discharge of pollutants into storm drain systems and receiving waters. Direct runoff, including water from water line repair from the job site to areas where it can infiltrate into the ground. Direct water from off-site sources around the job site or from contact with jobsite runoff.
- 24. PILE DRIVING:** Keep spill kits and cleanup materials at pile driving locations. Park pile driving equipment over drip pans, absorbent pads, or plastic sheeting with absorbent material, and away from stormwater run-on when not in use.
- 25. DEWATERING:** Dewatering consists of discharging accumulated storm water, groundwater, or surface water from excavations or temporary containment facilities. All dewatering operations must comply with the latest Caltrans guidelines including the *Field Guide for Construction Site Dewatering*. Contact State representative for approval of dewatering discharge by infiltration or evaporation, otherwise, any effluent discharged into a permitted storm water system requires approval from the Regional Water Quality Control Board. Prior to the start of dewatering, the Permittee must provide the State Representative with a dewatering and discharge work plan that complies with section 13-4.03G Dewatering, Water Pollution Control of Caltrans' Standard Specifications. A copy of the Waste Discharge Permit and a copy of a valid WDID number issued by the Regional Board must be provided to the State representative.

ROLLING TRAFFIC BREAKS

TR-0407 (Rev 10/2017)

In addition to the attached General Provisions (TR-0045), the following special provisions are also applicable:

1. Permittee must arrange a meeting with the California Highway Patrol (CHP) and the Caltrans permit inspector, at least two (2) weeks prior to the start of work in order to determine the appropriate number of CHP vehicles required for planned traffic breaks. A minimum of two (2) CHP vehicles in each direction are required. One CHP vehicle will be conducting the planned traffic break and the second CHP vehicle will be stationed on the shoulder with its rear emergency lights on to caution motorists at the end of the queue. Additional CHP vehicles may be required if determined to be necessary by the CHP. It is the responsibility of the permittee to make arrangements with CHP for providing planned traffic breaks to facilitate the approved work.
2. The duration of a planned traffic break **MUST NOT** exceed five (5) minutes. If additional traffic breaks are required, traffic backup must be cleared before performing another break.
3. The permittee must provide a minimum of one (1) Portable Changeable Message Sign (PCMS). Additional PCMSs must be provided if required by Caltrans permit inspector or CHP. PCMS(s) must be placed at the locations directed by the CHP and be moved or relocated as needed. Each PCMS must comply with section 12-3.32 of the Caltrans Standard Specifications. PCMS(s) must be removed promptly after the planned traffic break is completed.
4. Message to be displayed on the PCMSs must be coordinated with Caltrans permit inspector/representative and CHP.
5. All aerial crossings should be scheduled on Sunday mornings (excluding holidays), from daylight to 10:00 AM, unless otherwise authorized by the District Permit Engineer or authorized Caltrans' representative.
6. No aerial crossings must be performed in rainy, foggy or other inclement weather.

HAZARDOUS MATERIALS AND HAZARDOUS WASTE MANAGEMENT

TR-0408 (New 09/2017)

By acceptance of this encroachment permit, Permittee hereby agrees that:

1. All construction debris/materials/water/excess soil must become the property of the Permittee, and must be transported and disposed of, outside of Caltrans' right-of-way, in accordance with all applicable environmental laws and regulations. The Permittee must be identified as the generator for all construction debris/materials/water/excess soil and must be responsible for proper identification (including sampling and analysis) and management of all construction and contaminated debris/materials/water/excess soil that are removed, and/or excavated, from the work site. If hazardous waste is generated, the Permittee must obtain an Environmental Protection Agency (EPA) Identification Number issued in their name. State Permit Inspector does not sign any manifests or shipping papers. The Permittee must be named as the generator on all Uniform Hazardous Waste Manifests and shipping papers. Caltrans must not be identified or written anywhere on the manifests or shipping papers. Prior to waste disposal, the Permittee should submit the waste generator form(s) to State Permit Inspector for verification. The Permittee must submit to the State Permit Inspector, a copy of all manifests and/or shipping papers generated for materials removed, transported and/or excavated from the state right-of-way.
2. If contaminated material is encountered, Permittee is to stop work and contact the State Permit Inspector immediately. The Permittee must submit a Sampling and Analysis Plan (SAP), and a Health and Safety Plan (HaSP) prepared by a Certified Industrial Hygienist (CIH) and in conformance with California Code of Regulations title 8, section 5192, "Hazardous Waste Operations and Emergency Response" for sampling activity through a separate permit application. Upon the permit review, additional environmental documents may be required prior to resumption of construction activity.
3. Permittee is responsible for any violation, penalty, enforcement action, corrective action, remedial action, and any other type of consequences resulting from cross contamination of groundwater (including perched groundwater), improper handling/managing of hazardous materials and/or placement of contaminated materials inside Caltrans right-of-way.
4. It is the Permittee's responsibility to comply with the Department of Toxic Substances Control (DTSC) ADL requirements for roadway soil management. Reuse of soils containing greater than 80 mg/kg total lead is not allowed without written approval of the DTSC and Caltrans. The Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils between Caltrans and the DTSC does not constitute written approval for the Permittee to reuse soils containing greater than 80 mg/kg total lead.
5. The Permittee must implement the emergency notification requirements established in the California Office of Emergency Management Hazardous Materials, Spill / Release Notification Guidance (<http://www.caloes.ca.gov/>).
6. Any imported material used for backfill must be free of contamination, and a certificate of the material as "clean" with the source area of the material must be provided to Permit Inspector upon request. Importing soils containing greater than 80 mg/kg total lead for use in state right-of-way is not allowed.

Stockpiles of material containing aerially deposited lead shall not be placed where affected by surface run-on or run-off. Stockpiles shall be covered with plastic sheeting 13 mils minimum thickness or with one foot of nonhazardous material. Stockpiles shall not be placed in environmentally sensitive areas. Stockpiled material shall not enter storm drains, inlets, or waters of the State.

CALTRANS STANDARD SPECIFICATIONS 2010

SECTION 14-11 HAZARDOUS WASTE AND COTAMINATION

14-11.02 CONSTRUCTION

14-11.02A Unanticipated Discovery of Asbestos and Hazardous Substances

Upon discovery, immediately stop working in and notify the Engineer of areas where asbestos or a hazardous substance is present if the:

1. Contractor reasonably believes the substance is asbestos as defined in Labor Code § 6501.7 or a hazardous substance as defined in Health & Safety Code § 25316 and § 25317
2. Presence is not described in the Contract
3. Substance has not been made harmless

14-11.02B Hazardous Waste Management Practices

Handle, store, and dispose of hazardous waste under 22 CA Code of Regs Div 4.5.

Use the following storage procedures:

1. Store hazardous waste and potentially hazardous waste separately from nonhazardous waste at the job site.
2. For hazardous waste storage, use metal containers approved by the United States Department of Transportation (US DOT) for the transportation and temporary storage of hazardous waste.

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SECTION 14 ENVIRONMENTAL STEWARDSHIP

3. Store hazardous waste in sealed, covered containers labeled with the contents and accumulation start date under 22 CA Code of Regs, Div 4.5. Labels must comply with the provisions of 22 CA Code of Regs, Div 4.5. § 66262.31 and § 66262.32. Immediately replace damaged or illegible labels.

4. Handle hazardous waste containers such that no spillage occurs.

5. Store hazardous waste away from storm drains, watercourses, moving vehicles, and equipment.

6. Furnish containers with adequate storage volume at convenient satellite locations for hazardous waste collection. Immediately move these containers to secure temporary containment facilities when

no longer needed at the collection location or when full.

7. Store hazardous waste and potentially hazardous waste in secure temporary containment enclosures having secondary containment facilities impervious to the materials stored there for a minimum contact time of 72 hours. Temporary containment enclosures must be located away from public access. Acceptable secure enclosures include a locked chain link fenced area or a lockable shipping container located within the project limits until disposal as authorized.

8. Design and construct secondary containment facilities with the capacity to contain precipitation from a 24-hour-long, 25-year storm; and 10 percent of the aggregate volume of all containers, or the entire volume of the largest container within the facility, whichever is greater.

9. Cover secondary containment facilities during non-working days and if a storm event is predicted. Secondary containment facilities must be adequately ventilated.

10. Keep secondary containment facility free of accumulated rainwater or spills. After a storm event, or in the event of spills or leaks, collect accumulated liquid and place into drums within 24 hours. Handle these liquids as hazardous waste unless testing determines them to be nonhazardous.

11. Do not store incompatible wastes, such as chlorine and ammonia, in the same secondary containment facility.

12. Provide sufficient separation between stored containers to allow for spill cleanup or emergency response access. Storage areas must be kept clean, well organized, and equipped with cleanup supplies appropriate for the wastes being stored.

13. Repair or replace perimeter controls, containment structures, covers, and liners as necessary. Inspect storage areas before and after a storm event, and at least weekly during other times.

Do not:

1. Overfill hazardous waste containers
2. Spill hazardous waste or potentially hazardous waste
3. Mix hazardous wastes
4. Allow hazardous waste or potentially hazardous waste to accumulate on the ground

Dispose of hazardous waste within 90 days of the start of generation. Use a hazardous waste manifest

and a transporter registered with the DTSC and in compliance with the CA Highway Patrol Biennial Inspection of Terminals Program to transport hazardous waste to an appropriately permitted hazardous waste management facility.

14-11.02C Dust Control

Excavation, transportation, and handling of material containing hazardous waste or contamination must result in no visible dust migration. Have a water truck or tank on the job site at all times while clearing and

grubbing and performing earthwork operations in work areas containing hazardous waste or contamination.

14-11.02D Stockpiling

Do not stockpile material containing hazardous waste or contamination unless ordered by the Engineer.

Stockpiles of material containing hazardous waste or contamination must not be placed where affected by

surface run-on or run-off. Cover stockpiles with 13 mils minimum thickness of plastic sheeting or 1 foot of

nonhazardous material. Do not place stockpiles in environmentally sensitive areas. Stockpiled material must not enter storm drains, inlets, or waters of the State.

