

SECTION 12

CONSTRUCTION AREA TRAFFIC CONTROL DEVICES

Construction area traffic control devices shall conform to Section 12 of the Caltrans Standard Specifications and these City Standard Specifications.

12-1 GENERAL

12-1.02 Traffic Control Public Convenience. - After the surface of one-half of the roadbed has been brought to a smooth and even condition for the passage of public traffic as provided above, traffic shall be diverted, and work commenced on the opposite side of the roadbed. After subgrade preparation for a specified layer of material has been completed, the Contractor shall, at his expense, repair any damage to the roadbed or completed subgrade, including damage caused by his operations or use by public traffic.

At locations where traffic is being routed through construction under one-way controls and when ordered by the Engineer, the movement of the Contractor's equipment from one portion of the work to another shall be governed in accordance with such one-way controls.

Whenever a section of surfacing, pavement, or the deck of a structure has been completed, the Contractor shall open it to use by public traffic if the Engineer so orders or may open it to use by public traffic if the Engineer so consents. In either case, the Contractor will not be allowed any compensation due to any delay, hindrance, or inconvenience to his operations caused by such public traffic, but will thereupon be relieved of responsibility for damage to the work caused by public traffic, within the limits of such use. The Contractor will not be relieved of any other responsibility under the contract nor will he be relieved of cleanup and finishing operations.

Water or dust palliative shall be applied for the alleviation or prevention of dust nuisance as provided in Section 10, "Dust Control."

Except as otherwise provided in the special provisions, full compensation for conforming to the requirements in this section shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be made.

The Contractor may install "Tow-Away" or "No Parking, No Stopping" signs in critical areas to provide traffic lanes or project work areas. Prohibition of stopping/parking or the installation of tow-away signs will require the approval of the Engineer and the issuance of a permit from the Streets and Traffic Dept. The Contractor shall notify the Engineer 48 hours in advance of the work for approval. After approval of the stopping/parking restriction or tow-away signs, the Contractor shall furnish and place approved "NO STOPPING" or "NO PARKING" signs where directed. So that the stopping, parking or tow-away zone prohibition will be effective and enforceable, the messages on the signs shall include the dates and times of the required prohibition. Article 22652 of the California State Vehicle Codes requires a sign to be in place 24 hours before it becomes legally enforceable.

Vehicular travel over backfilled but unpaved trenches and other excavation will not be allowed unless a temporary wearing surface of at least 2 inches of plant mix asphalt over 6 inches of aggregate base is provided or traffic plates of sufficient width are set upon the trench and AC cutback shall be placed around the edges of the steel plate. In sidewalk areas, 1-1/8 inch plywood may be substituted.

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When pavement is broken prior to trench excavation in a lane to be left open to traffic, the broken pavement fragments must be removed and replaced with a temporary wearing surface.

The Contractor shall leave the project site in a safe, neat, clean, and presentable state at the close of every work day.

No equipment shall be allowed to be parked within any traffic lanes or medians after work hours.

The Contractor shall notify City of San Jose Communications 48 hours in advance of any detours and street closures, (408) 277-4311.

If construction will obstruct a bus stop, the Contractor shall notify Santa Clara County Transit 48 hours in advance at (408) 299-4384.

On streets with one traffic lane in each direction, the Contractor shall maintain one 14-foot lane for two-way operation. Two flaggers shall be required. On streets with two or more traffic lanes in each direction, the Contractor shall reduce traffic by one lane only in each direction. On one-way streets, the Contractor shall reduce traffic by one lane only.

The Contractor shall provide electric arrow board(s) for lane reductions. All traffic lane diversions and separations shall be delineated with Type I barricades, 28-inch traffic cones, or 37-inch delineators with two white reflective bands spaced 25 feet on center. The tapered transition length shall be 125 feet minimum. Post "KEEP RIGHT" or "KEEP LEFT" signs or Type II barricades at the beginning of each diversion or separation.

The Contractor shall be responsible for informing the public of traffic conditions existing within the construction area at all times by placement of warning and advisory signs.

The Contractor shall not work within two adjacent intersections at the same time.

The Contractor shall not close two adjacent streets at the same time.

12-1.03 Traffic Control Public Safety. - Whenever work is being performed adjacent to a lane carrying traffic, the edge of lane or pavement shall be delineated by placing temporary portable delineators adjacent thereto in accordance with the provisions in Section 12-3.04, "Portable Delineators."

The Contractor shall not block the movement of pedestrian traffic. Where necessary, the Contractor shall provide for movement by phasing his operations, by providing 4-foot wide temporary bridges across trenches or establishing 4-foot wide passageways in the parkway or street area as applicable. Each bridge or passageway shall be bordered with safe railings or barricades, which shall be lighted at night and with non-slip walking surface, and which shall remain in place until all work at the particular location has been completed and the sidewalk, walk or crosswalk has been opened to the safe transit of pedestrian traffic. On barricades which direct pedestrians around the work site or to crosswalks not closed, the Contractor shall post, where directed by the Engineer, informational signs directing pedestrians. Railings or barricades which border passageways located in roadway areas shall be reflectorized on the side facing oncoming traffic.

Traffic signals shall not be shut down or put into a flashing mode unless approved by the City. When traffic signal shut down is permitted by City, Contractor shall notify the Engineer and San Jose Communication Center at least 5 working days prior to shut down.

The operation of any existing traffic signal shall not be disturbed before 9:00 a.m. and shall be returned to normal operation before 4:00 p.m. of the same day.

The Contractor shall restrict traffic lanes from 8:15 a.m. to 4:15 p.m. only. Whenever a lane closure is made, the Contractor shall close the lane by placing fluorescent traffic cones, portable delineators, or other devices approved by the Engineer, along a taper and along the edge of the closed lane adjacent to public traffic. An arrowboard should be placed adjacent to the first cone of the taper, as shown on the State Typical Plans T-10 and T-11. Advanced warning signs should be placed prior to the taper (this distance should be in relationship to the speed of traffic and conditions of the road).

Fluorescent traffic cones shall be of good commercial quality, flexible material suitable for the purpose intended. The outer section of the portion above the base of the cone shall be a highly pigmented fluorescent orange polyvinyl compound. The overall height of the cone shall be at least 28 inches. The base shall be of sufficient weight and size or shall be anchored in a manner such that the traffic cone will remain in an upright position.

If the traffic cones or portable delineators are damaged, displaced or are not in an upright position, from any cause, cones or portable delineators shall immediately be replaced or restored to their original location, in an upright position, by the Contractor.

Telescoping flag trees shall be of good commercial quality material, suitable for the purpose intended and shall be capable of maintaining an upright position at all times while in use.

The fluorescent traffic cones or portable delineators shall be placed at intervals as directed by the Engineer, or as shown in the "Manual of Traffic Controls for Construction and Maintenance of Work Zones."

If the work requires that fluorescent traffic cones or portable delineators be placed in the lane open to public traffic, cones or portable delineators shall be placed on a 1-1/2 foot width of the lane open to traffic along the side adjacent to the lane to be closed.

Traffic cones or portable delineators, telescoping flag trees with flags, arrowboards and signs shall be placed before beginning work each day and shall be removed from the work site at the end of each working day.

Upon completion of all work requiring lane closure, traffic cones and telescoping flag trees and construction signs shall be removed from the work site.

If material from the trench excavation spills onto the roadway, the roadway area shall be swept and washed with water to provide a safe and dust free surface before the lane is reopened.

Full compensation for furnishing, placing, maintaining and removing the traffic cones and telescoping flag trees with flags required for lane closure, and for moving and placing signs shall be considered as included in the contract prices paid for the items of work requiring the lane closure and no separate payment will be made therefor.

The provisions for lane closure in this Section will in no way relieve the Contractor from his responsibility to provide devices or measures necessary to comply with Section 7-1.09, "Public Safety."

On projects such as rechannelization and street widening work where changes in traffic patterns require either relocation, removal or installation of permanent regulatory traffic control and other signs, the Contractor shall relocate,

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remove or install signs and standards where and as specifically shown on the plans, or where directed by the Engineer.

For all existing permanent traffic controls signs which are to be removed and not relocated, the Contractor shall remove the signs, all hardware and the standards. The Contractor shall deliver the above items to a designated City Corporation Yard. Any signs, standards or hardware damaged by the Contractor through negligence shall be replaced by the Contractor.

The temporary relocation of each "STOP" or other traffic regulatory sign shall be done immediately upon its removal, and to a location as close as possible to the original position of sign or as directed by the Engineer.

Any excavation permitted to be left open shall be barricaded with Type II and Type III barricades with flashers. "OPEN TRENCH" signs shall be posted at 30 feet off center. A minimum of 15 Type III barricades shall be available for diverting traffic and barricading trenches. See Caltrans Standard Details "Securing Open Trench "A" or "B" for K-railing and Chain Link Fencing."

All open excavated areas shall be barricaded with at least 2 Type III barricades at the end of the excavation that faces oncoming traffic. The longitudinal edge of pavement excavation shall be delineated with Type II barricades spaced 25 feet on center. Attach "OPEN TRENCH" signs to barricades 200 feet on center.

12-1.04 Traffic Control Responsibility. - The Contractor shall provide and maintain all traffic control and safety items. The Contractor assumes sole and complete responsibility for the job and site conditions during the course of construction, including safety of all persons and property. This requirement shall apply continuously 24 hours/day and shall not be limited to normal work hours.

All personnel occupying the roadway or median shall be required to wear approved safety vests with protective coloration.

12-2 FLAGGING

12-2.01 Flaggers. - Flag personnel shall be used where necessary to control the flow of traffic through the construction site and shall be used in all cases where traffic is being routed through the construction under one-way control, and when ordered by the Engineer.

12-2.02 Flagging Costs. - Delete the first paragraph of Section 12-2.02 of the Caltrans Standard Specifications.

The cost of furnishing all flaggers, including transporting flaggers to provide for passage of public traffic through the work in accordance with the provisions of Section 7-1.08, "Public Convenience" and 7-1.09, "Public Safety" shall be borne by the Contractor.

12-3 TRAFFIC - HANDLING EQUIPMENT AND DEVICES

12-3.02 Barricades. - Delete the first paragraph of Section 12-3.02 of the Caltrans Standard Specifications.

12-3.02A Types. - Barricades are designated by type according to function and physical characteristics. Type I, II and III barricades are portable construction barricades and the Type IV barricade is intended for permanent installation. Type

I, II and III barricades shall conform to the provisions, details and dimensions as specified in Caltrans, "Manual of Traffic Controls for Construction and Maintenance of Work Zones." Type IV barricades shall conform to the plan dimensions and the provisions as specified herein.

12-3.02B Materials

12-3.02B(1) - Materials for Type I, II and III barricades shall conform to provisions of the Caltrans manual referenced above.

12-3.02B(2) - Type IV barricades shall be constructed of materials as specified herein.

Posts shall be 4 inch by 4 inch, nominal size, highway post grade redwood or No. 2 heart structural grade redwood (1000f).

Rails shall be 2 inch by 6 inch, nominal size light framing construction grade Douglas fir, free of heart center.

Object markers for mounting on each post between the rails shall be red reflectorized sheeting, tape or plates, (3 inch by 5 inch minimum size). Where called for on the plans, object markers shall be Type M markers (9-spot) conforming to the provisions of the Caltrans "Traffic Manual."

Paint for posts and rails shall consist of a minimum of one coat of wood primer and 2 coats of white exterior enamel, conforming to the provisions of Section 91, "Paint."

12-3.02B(3) - Barricade warning lights shall conform to the provisions as specified in the Manual as referenced above. Unless otherwise specified in the special provisions, Type A Barricade Warning Lights (flashers) shall be used.

12-3.02B(4) - The Contractor shall establish the necessary quality control to assure compliance with these specifications. No Certificate of Compliance, as such, will be required for Type IV barricades. Certificate of Compliance may be required for Type I, II and III barricades for warning lights to assure compliance with these specifications.

12-3.02C Installation

12-3.02C(1) Construction Barricades. - Construction barricades of the type specified in the special provisions shall be furnished and set at locations as the Engineer may direct. The barricades shall be maintained for as long as necessary and shall be checked for their position location at the close of each day's activity and more often as necessary.

The batteries of warning lights shall be maintained at a high rate of charge at all times.

12-3.02C(2) Permanent Barricades. - The posts of the barricade shall be placed in holes excavated to the required depth as shown on the plans. The space around the posts shall be backfilled with selected earth free of deleterious material, and tamped solid. Wood wedges may be used to plumb posts prior to backfilling voids. Wood posts of barricades shall not be embedded in concrete.

Rails shall be attached to posts with 16d galvanized nails, before or after setting posts in the ground.

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All exposed wood surfaces shall be given one application of wood primer and 2 coats of white exterior enamel paint. After painting, the object markers shall be attached to each post as shown on the plan details.

12-3.04 Portable Delineators. - If the portable delineators are damaged, from any cause, delineators shall immediately be replaced in an upright position by the Contractor.

When work is in progress in a trench or other excavation adjacent to the traveled way, the portable delineators shall be placed on the edge of pavement. At other times, the portable delineators shall be placed off of and adjacent to the edge of pavement.

The portable delineators shall be spaced as necessary for proper delineation.

When no longer required for delineation, the portable delineators shall be removed from the work site.

12-4 MEASUREMENT AND PAYMENT

12-4.01 Measurement and Payment. - When the Engineer's Estimate includes a contract item for Type I, II, III, and IV barricades, the barricades will be measured as units of actual count of the number of barricades ordered by the Engineer. After initial placement of Type I, II, and III barricades, and if ordered by the Engineer, the barricades shall be moved from location to location and the cost thereof will be paid for as extra work as provided in Section 4-1.03D. The contract unit price paid for Type I, II, and III barricade shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in the furnishing, placing, maintaining, repairing, replacing and removing the barricades, as shown on the plans, as specified in these specifications and the special provisions, and as directed by the Engineer.