

BASIC SPECIFICATIONS

SECTION H

TRAFFIC CONTROL SPECIFICATIONS

1. PUBLIC CONVENIENCE AND SAFETY

A. General

It is the Contractor's responsibility to comply with the following requirements and to make any adjustments necessary to provide a route around or through the work area that is clear of obstructions and is signed and delineated in accordance with standard industry practice, applicable County standards, Cities requirements, Caltrans standards, current California Manual on Uniform Traffic Control Devices for Streets and Highways, the Work Area Traffic Control Handbook, Encroachment Permit requirements, and the following requirements.

Failure to comply with these requirements will result in an order to cease all work within the public street. Any deviation from these requirements shall require written approval from the Cities and JCSD.

Maintaining traffic shall conform to the Caltrans provisions in 7-1.02 "Load Limitations", 7-1.06 "Safety and Health Provisions", 7-1.08 "Public Convenience", 7-1.09 "Public Safety", and 12-3.04 "Portable Delineators" of the Standard Specifications, the Manual of Traffic Controls, the Section of these contract documents entitled "Insurance - Hold Harmless", and these Special Provisions.

All existing traffic control signs and street name signs shall be maintained in visible locations as directed by the Engineer. The Contractor shall cover conflicting signs and remove conflicting striping and pavement markings.

All warning lights, signs, flares, barricades and other facilities for the sole convenience and direction of public traffic shall be furnished and maintained by the Contractor. All signs shall conform to and be placed in accordance with the California Manual on Traffic Control Devices for Street and Highways Supplement latest edition and its approved changes.

All construction signs shall be either covered or removed when not required by the nature of the work or if no present hazard to the motorist exists.

No payment for extra work will be allowed for work performed as specified in Section 12-2.02 (Flagging Costs) of the Standard Specifications. Flagging costs will be borne entirely by the Contractor.

All temporary travel lanes shall be a minimum of twelve feet in width unless otherwise authorized by the Cities or shown on the JCSD provided Traffic Control Plan. In addition, lane clearance shall be a minimum of five feet from an open excavation with Type II barricades with "OPEN TRENCH" C27 (CA) signs spaced every 150-feet, and two feet from a curb or other vertical obstruction.

The Contractor shall provide access for USPS, refuse collection, and other service providers on regular basis.

When traffic is diverted from the existing pavement, suitable surfacing shall be provided and shall be approved by the Cities.

The Contractor shall provide personnel who will be responsible for the maintenance of all traffic control devices and will be available on a 24-hour basis. The names and telephone numbers of these personnel shall be submitted to District, County, Cities, and Engineer prior to the start of any construction. The job site shall be inspected daily, during weekends and holidays, and any adjustments, corrections or repairs that are determined to be necessary for the proper operation of the traffic control system shall be made immediately.

B. Pavement Striping/Marking

Temporary striping shall be immediately provided any time the existing striping is removed or the effectiveness is reduced. Temporary striping shall also be provided immediately after paving operations are complete and prior to the opening of the roadway or lanes just paved.

Re-striping will be required under the following conditions:

1. When traffic is to be diverted to the left of an existing double yellow centerline for two or more consecutive nights.

2. When the work area is adjacent to an intersection and results in a transition within the intersection.
3. When the traffic lane is continuously obstructed for more than one week on any street that has two or more lanes in a single direction
4. In other unusual situations where traffic and physical conditions, such as speed or restricted visibility, require special treatment.

The Contractor shall notify the Cities if re-striping is required. The City shall determine the extent of striping removal and re-striping. When temporary pavement striping or markers are provided, the existing striping or markers must be removed or covered by the Contractor. The installation of temporary striping or pavement markers will be done by the Contractor.

2. TRAFFIC AND ACCESS

A. General

When driveways are inaccessible due to the Contractor's work they shall be blocked by two Type II barricades or one Type I barricade and two delineators. Driveways that are ramped or planked for temporary access shall be provided with a barricade or delineator at each side. The Contractor shall give a two week notice to affected property owners prior to blocking any driveways. All driveways shall be open and accessible during non-working hours. If driveways or parking lots are inaccessible due to the Contractor's work, the Contractor shall provide temporary parking in the construction zone or offsite. The Contractor shall provide a safe and accessible path from temporary parking location to home or business.

Construction equipment, or vehicles not actively engaged in the work shall not be parked in such a manner as to restrict or obstruct the traffic flow.

Construction spoils or materials may be stored in the same lanes as the work obstruction provided they remain a minimum of two feet from the travel lane and do not restrict or obstruct the traffic flow.

B. Pedestrian Traffic

When the work area encroaches upon a sidewalk, walkway or crosswalk area, the Contractor shall give special consideration to separating the pedestrian from the work area. The passageway for pedestrians shall be at least four feet in width, free from obstructions, free of abrupt changes in grade, well defined, and meet ADA requirements. Any obstructions in the walkway shall be illuminated during hours of darkness. Minimum vertical clearance to any obstruction within the walkway shall be seven feet.

Where walks are closed by construction, an alternate walkway shall be provided, preferably within the parkway. Where it is necessary to divert pedestrians into the parking lane of a street barricading or delineation shall be provided to separate the pedestrian walkway from the adjacent traffic lane. At no time shall pedestrians be diverted into a portion of the street used for vehicular traffic.

At locations where adjacent alternate walkways cannot be provided, appropriate signs and barricades must be installed at the limits of construction and in advance of the closure at the nearest crosswalk or intersection to divert pedestrians across the street.

3. STREET CLOSURES, DETOURS, BARRICADES

A. General

The Contractor shall not close additional streets except as shown on the Traffic Control Plans within the City without first obtaining the approval of the City. Traffic control and detour diagrams shall be submitted by the Contractor as required by the City and JCSD.

During paving operations, delineators are to be spaced no more than 25-feet apart. At all access points such as intersecting streets, alleys and driveways, barricades and/or delineators shall be provided at five-foot intervals to prevent vehicular access to the paving area. Where access from an intersecting street is prohibited, a "Road Closed" sign shall be provided at the nearest prior intersection. "No Left Turn" signs shall be provided to prevent traffic from crossing new pavement.

B. Signs

All signs and barricades shall be provided, installed, maintained and removed by the Contractor.

Signs may not be attached to utility poles, public agency sign posts or trees.

The use of any “Regulatory” signs must be approved by the Cities.

Existing “Regulatory” and/or “Warning” signs within or adjacent to the work area must be maintained by the Contractor. Any signs which are damaged or found to be missing during the course of construction shall be replaced by the Contractor. If existing signs are not appropriate for traffic conditions in the work area, the Cities shall be notified to determine if the signs shall be covered, replaced or relocated.

Whenever the Contractor’s operations require that parking be restricted, the Contractor shall notify the Cities, and install temporary “No Parking” signs 48 hours in advance of the restriction. Once the signs are installed the Contractor shall notify the Cities Inspector.

All signs shall be free of any contaminants that reduce the visibility or reflectivity, shall be placed so as to be clearly visible to on-coming traffic and shall resist displacement. The center of signs shall be at least 4-1/2 feet above the roadway. Vertical clearance for signs where pedestrian traffic is permitted shall be seven feet. “Advance Warning” signs shall be located on the right-hand side of traffic lanes. On a divided highway, supplemental advance warning signs shall be placed on the divider.

Signs to be used during darkness shall be reflectorized or illuminated.

All signs shall be removed or covered when work is not in progress, or the lane/street closure is not in effect.

C. Barricades

Barricades shall not be placed in a moving lane of traffic without advance warning, such as a high-level warning device and appropriate delineation. A single barricade shall not be placed alone in the traveled way.

When barricades are used to close a street, they should be placed so there is no gap large enough for a vehicle to pass, except where necessary to provide access for local traffic or emergency vehicles.

Type II barricades mounted with flashers shall be installed around work areas in parkways.

Markings on barricade rails shall be alternate orange and white stripes sloping downwardly toward the travel lane at an angle of 45 degrees. The entire area of white and orange shall be reflectorized.

The predominant color for other barricade components shall be white. Owner identification shall not be imprinted on the reflectorized face of any rail.

D. Delineators

Where traffic is diverted to the left of an existing double yellow centerline, into a painted median, or into a left turn lane, delineators shall be utilized beyond the work area to return traffic to normal lanes.

Delineator shall be of a material that will withstand impact without appreciable damage to the device, the striking vehicle or passing traffic.

E. High Level Warning Devices

High level warning devices shall be at least 9-feet high with legs, base or truck mounting designed to resist overturning in brisk winds. Sandbags may be used to add weight to the base or legs. High level warning devices shall be equipped with a yoke at the top to accommodate at least three flags. Flags shall be fabricated of high visibility orange material and equipped with stays to keep the flags extended. Torn or dirty flags shall be immediately replaced.

High level warning devices shall be used at locations where construction or maintenance work is being performed within or immediately adjacent to a traffic lane.

F. Flashers

Flashers shall be used only to outline the work area or to provide advance warning. Flars shall not be used to channelize traffic, to separate opposing traffic or to delineate the path that traffic is to follow. Flashing yellow lights used for

advance warning must be clearly distinguishable from the primary delineation and shall be seen above the normal reflectorized units.

G. Flashing Arrow Signs

Flashing arrow signs are sign panels with a matrix of electric lights, capable of sequential arrow displays.

Flashing arrow signs are required on all lane closures where the street has two or more travel lanes in each direction.

H. Flagger Control

Flaggers are required:

1. Where workers or equipment intermittently block a traffic lane.
2. Where two directions of traffic will be using one lane (one flagger is required for each direction of traffic).
3. Where the absence of a flagger would create an undesirable situation for the public and/or workers.

Flaggers should be alert, intelligent, neat in appearance, having good hearing and eyesight, and be capable of commanding the traveling public. They should be stationed far enough from the work to slow down or stop vehicles before they enter the work area.

A symbol sign of a flagger shall be placed as far ahead of the flagger as practicable.

All flaggers shall be provided with an orange jacket (or vest) for daytime use and a reflectorized belt and suspender harness for use at night. During daylight hours, flaggers shall be equipped with a sign paddle. At night, flaggers shall use a red light.

4. SPECIAL HAZARDOUS SUBSTANCES AND PROCESSES

A. Edison Energized Conductors

Contractor hereby promises and agrees that in the performance of the work specified in this contract, it will employ and utilize only qualified persons, as hereinafter defined, to work in proximity to Edison's secondary, primary and transmission facilities. The term "qualified person" is defined in Title 8, California Administrative Code, Section 2700, as follows:

"Qualified Person". A person who by reason of experience or instruction is familiar with the operation to be performed and the hazards involved."

Contractor further promises and agrees that the provisions of this paragraph shall be and are binding upon any subcontractor or subcontractors that may be retained by it, and that Contractor shall take such steps as are necessary to assure compliance by said subcontractor or subcontractors with the requirements of this paragraph.

B. Emergency Provisions

Unusual conditions may arise on the work which will require that immediate and unusual provisions be made to protect the public from danger or loss or damage of life and property, due directly or indirectly to the prosecution of the work, and it is part of the service required of the Contractor to make such provisions and to furnish such protection.

5. TRAFFIC CONTROL

A. General

The work to be performed under these items consist of full compensation for furnishing all labor, materials, tools and equipment for constructing temporary signing and striping for construction area traffic control in accordance with these Special Provisions and the Traffic Control Plans, including but not necessarily limited to the following:

1. Construction area signs

2. Traffic control system
3. Type I, II, III barricades
4. Removal and reconstruction of traffic striping
5. "K-railing"
6. Portable delineator
7. Cover roadside sign; and
8. Flashing arrow boards

In addition to Section 7-10 of the State Standard Specifications, the installation of temporary signing and striping for construction area traffic control shall conform to Section 12, "Construction Area Traffic Control Devices"; Section 56-2, "Roadside Signs"; and Section 84, "Traffic Stripes and Pavement Markings", of the State Standard Specifications. Signs and barricades may be relocated and reused for successive construction phases; however, signs and barricades shall not be relocated until they are no longer necessary for the construction phase where they were originally required.

All traffic control devices must be in place and in proper working condition before the start of work each day. If it is found that traffic control devices are out of place or in a broken or inoperative condition, work will be halted until the necessary corrections are made.

Traffic control at intersections shall be adjusted to allow traffic access to the intersection immediately after construction is complete enough to allow safe use of the roadway.

B. Parking Restrictions

The work to be performed under these items consist of full compensation for furnishing all labor, materials, tools and equipment for constructing temporary signing and striping for construction area traffic control in accordance with these Special Provisions and the Traffic Control Plans, including but not necessarily limited to the following:

C. Notification to Businesses and Residences

All adjacent businesses and residences shall be duly notified by the Contractor, in writing (in English and Spanish), of the Contractor's proposed operation. Notice shall be delivered at least two weeks prior to start of construction. The Contractor shall be responsible for reproduction of the letters. Renotification will be required if the Contractor's schedule is altered, or other delays occur which affect the project's schedule.

D. Street Closures/Full or Partial

In case of full closure, the Contractor shall provide barricades and reflectorized "Road Closed to Through Traffic" signs at the intersections immediately in advance of all such closures at entrances to the closure, and all detour route signing. Access to local residences shall be maintained at all times as well as access for emergency and other service vehicles. Detour signs shall be posted on wood or metal posts. Signs shall not be posted on any tree, utility pole, or traffic sign.

E. Drive Approaches and Pedestrian Access

At least one driveway must remain open to commercial establishments at all times. The Contractor shall make provisions to interrupt the construction to allow access to existing driveways in the event such access is determined necessary by the Cities.

Access to all driveways in the area of construction shall be open and accessible during nonworking hours. The Contractor shall keep open all driveways except for short periods of time as outlined in Section 7-10, "Public Convenience and Safety".

Adequate provisions for pedestrian access shall be the responsibility of the Contractor at all locations.

F. Observation of Job Site

The Contractor shall appoint a person responsible to drive, observe, and maintain the job site during weekends and holidays to ensure that the safety of the public, both motoring and pedestrian, is preserved.

The name and telephone number of the person appointed by the Contractor to drive and maintain the site during weekends and holidays shall be supplied to the Project Engineer and Owner prior to start of any work.

6. DETECTORS

The Contractor shall install temporary or permanent detector loops within 24 hours after temporary or permanent pavement installation.

Detector loops' configuration shall be Type E unless otherwise shown on the construction plan, in the Special Provisions or as directed by the Engineer.

Limit Line detector loop configuration shall be modified Type E with diagonal saw cuts and wire winding conforming to Type D loop configuration.

Detector loops' wire shall be Type 2.

Detector loops' lead-in cable shall be Type B.

Detector loops' curb terminations shall be Type A in accordance with Standard Plans ES-5D.

Loop sealant shall be the Hot-Melt Rubberized Asphalt sealant type, unless otherwise directed by the Engineer. Loop conductors and sealant shall be installed on the same day the loop slots are cut.

All detector loops shall be tested sequentially by the following methods:

- impedance (measured by mega ohms)
- resistance (measured by ohms)
- inductance (measured in microhenries)

7. PAYMENT

Full compensation, except as otherwise provided herein, for conforming to the requirements of this article, Traffic Control Plans, Transportation Management Plan, and furnishing, installing and maintaining all traffic control devices, additional wireless detection related equipment, temporary and permanent detector

loops, temporary pavement markings, construction signs, traffic directing services, and all the other items shall be paid for on a lump sum basis, and no additional compensation will be allowed therefore.

Progress payments for work under this Section will be computed at the percentage of the total Contract work completed as of the progress payment, excluding contract change orders. The total payments not-to-exceed the total cost for each item. Payment for these Items at the price bid per lump sum (all inclusive) shall be considered as full compensation for doing all work as specified herein and no additional compensation will be allowed, therefore.