

SECTION 01550

TRAFFIC REGULATIONS

PART 1 - GENERAL

1.01 OBJECTIVES

- A. The Contractor shall provide for safe movement of vehicular, bicycle and pedestrian traffic, including persons with disabilities in accordance with the American's with Disabilities Act of 1990 (ADA), through and around construction operations. Traffic control requirements set forth herein are the minimum requirements imposed. The Contractor shall be solely responsible for providing all protective measures necessary.
- B. Proper traffic movement through the work area depends upon the driver controlling and directing his/her vehicle properly under unexpected situations and pedestrian attention to signs. The means of clarifying such conditions to the public include signs, flaggers, pavement markings, barricades, lights, cones and delineators.
- C. No one standard sequence of signs or control devices will suit all conditions, which may result from construction operations. Even for the same work the conditions may vary from hour to hour, requiring adjustment and revision of the traffic control program in effect.
- D. The traffic control requirements specified herein are intended to establish general principles to be observed in the control and regulation of traffic through and around construction operations anticipated for this project. All pedestrian and vehicular detours are subject to review by the police chief, sheriff or enforcement officer of the agencies having jurisdiction, and the Contractor shall revise the detours as ordered at no additional cost.
- E. Clean up site each day after completing work and remove all traffic hazards. Daily traffic control measures shall continue until cleanup activities have been satisfactorily completed and all of the Contractor's equipment has been removed from the traveled way area.

1.02 DESCRIPTION OF WORK

- B. Work Included:
 - 1. At all times, the Contractor shall provide safe and adequate passage for vehicular and pedestrian traffic through, around and adjacent to all construction operations by use of detours, bridging, backfilling, paving, traffic barriers or other favorably reviewed means.
 - 2. The Contractor shall establish and maintain detours and conduct his construction operations in such a manner as to minimize hazard, inconvenience and disruption to the public.

3. Traffic control shall be directed equally to the regulation and protection of pedestrian traffic including pedestrians, bicyclists, joggers, skaters, skateboarders, etc.
4. The Contractor shall provide for protection of pedestrians and separation of pedestrians from construction operations at all times.
5. The Contractor shall direct, divert and detour traffic through, around and adjacent to construction operations in accordance with the traffic control plans as specified herein or in accordance with favorably reviewed Traffic Control Plans. The Contractor may revise the Traffic Control Plan as necessary only with the favorable review of the Engineer.

1.03 REFERENCES

- A. Standard Plans and Specifications, California Department of Transportation, latest edition.
- B. California Manual on Uniform Traffic Controls (CAMUTCD), California Department of Transportation, latest edition.
- C. Work Area Traffic Control Handbook, Building News Incorporated, P.O. Box 3031, Terminal Annex, Los Angeles, California 90051.

1.04 SUBMITTALS

- A. Traffic Control Plans:
 1. Submit Traffic Control Plans to clearly describe proposed traffic control measures. The plans shall be in accordance with the Standard Plans and Specifications and the CAMUTCD. When required by the City Engineer Traffic Control Plans shall be prepared by a licensed Civil or Traffic Engineer.
 2. The Traffic Control Plan shall provide a detailed approach for detours and to control traffic through the construction zone, shall conform to Caltrans and City standards, and will be approved by the City Engineer before construction begins.
 3. The submittals shall consist of scaled drawings for each situation anticipated to be encountered, i.e., intersections, mid-block (each during working and non-working hours), etc. and necessary details.
 4. The scaled drawings shall show signs, traffic control devices and flaggers as required.

PART 2 - PRODUCTS

2.01 CONSTRUCTION SIGNS

- A. Construction signs shall conform to the standards of the Standard Plans and Specifications and the CAMUTCD.
- B. Temporary warning signs in construction areas shall have a black legend and border on an orange background. Color for other signs shall follow the standard for all highway signs.

- C. All signs used during hours of darkness shall be retroreflective.

2.02 OTHER TRAFFIC CONTROL DEVICES

- A. General: Traffic control devices shall conform to the standards of the Standard Plans and Specifications, and the CAMUTCD.
- B. Cones or Delineators:
 - 1. Cones or delineators shall consist of cylindrical or cone shaped plastic devices, which shall be 18 inches to 48 inches in height.
 - 2. Cones or delineators shall have a flexible base of suitable weight, which will ensure stability.
 - 3. Cones or delineators used during hours of darkness shall be affixed with retroreflective sleeves or be internally illuminated meeting the requirements of the CAMUTCD.
- C. Barricades:
 - 1. Barricades shall be Type I, Type II or Type III barricades as set forth in the Standard Plans and Specifications, and the CAMUTCD.
 - 2. Barricades used during hours of darkness shall be equipped with flashers.

PART 3 - EXECUTION

3.01 DIVERTING PEDESTRIAN TRAFFIC

- A. Whenever construction operations obstruct the flow of pedestrian traffic or present a hazard to pedestrians, the Contractor shall take appropriate action to protect and separate pedestrians from the work area and to direct pedestrians to alternate routes.
- B. Such action may include placement of barricades between pedestrians and work areas, placement of warning signs, and provision of personnel as required to protect pedestrians as conditions warrant.

3.02 DIVERTING VEHICULAR TRAFFIC

- A. Whenever construction operations obstruct the flow of vehicular traffic or present a hazard to vehicles operating in the vicinity of construction operations, the Contractor shall take appropriate action to warn, detour and otherwise protect approaching drivers and vehicles.

3.03 TRAFFIC CONTROL DEVICES

- A. General:
 - 1. Provide traffic control devices in sufficient quantities and types as required to provide safe and adequate traffic control.
 - 2. During hours of darkness approved lights shall be included, in proper working order, to illuminate signs and hazards and alert approaching traffic.
 - 3. Provide and maintain barricades along all open trenches in contact with traffic.

4. No work may begin on any day or at any time before traffic control devices have been placed, test driven and, if required, adjusted and revised.
- B. Placement:**
1. Place all traffic control devices in accordance with the Standard Plans and Specifications, the CAMUTCD and approved Traffic Control Plan.
 2. Adjust locations of devices to suit the conditions and circumstances of each detour situation. In all cases, place signs to most effectively convey their messages to approaching traffic.
 3. The Contractor shall adjust and revise all traffic control devices if determined to be required by the City Engineer or Police Department.
 4. The Contractor shall provide additional traffic control devices if required to maintain the safe flow of traffic through construction operation.
- C. Maintenance of Devices:**
1. The Contractor shall maintain all traffic control devices, at proper locations and in proper working order, at all times during construction operations and whenever a hazard resulting from Contractor's operations exists.
 2. The Contractor shall adjust and revise traffic control devices, placement, etc., to suit changing conditions around construction operations.
- D. Removal of Devices:**
1. Traffic control devices shall remain in place at all times required to alert approaching traffic of upcoming hazards.
 2. After hazard has been removed, remove all traffic control devices. Remove signs or completely cover their messages.

3.04 FLAGGERS

- A. General:** The Contractor shall employ flaggers:
1. As required for each specific detour.
 2. At all locations on a construction site where barricades and warning signs cannot control the moving traffic.
- B. Placement:** Where flaggers are required, they shall be logically placed in relation to the equipment or operation so as to give adequate warning and shall be placed in accordance with the Standard Plans and Specifications, the CAMUTCD, and the approved Traffic Control Plan.
- C. Warning Signs:**
1. Place warning signs ahead of the flagger in accordance with the Standard Plans and Specifications, the CAMUTCD, and the approved Traffic Control Plan. The distance between signs and the flagger shall be based on the posted traffic approach speed.
 2. During hours of darkness, illuminate flagger stations such that the flagger will be clearly visible to approaching traffic. Lights for illuminating the flagger station shall comply with the Standard Plans and Specifications, the CAMUTCD, and the approved Traffic Control Plan.

- D. Equipment:**
1. Provide flaggers with high-visibility safety apparel in accordance with the Standard Plans and Specifications, and the CAMUTCD at all times. Provide flaggers with hand signs in accordance with the Standard Plans and Specifications, and the CAMUTCD.
 2. Provide flaggers with two-way radios for communication when necessary. Red flags shall only be used for traffic control in emergency situations.

3.05 NOTICE TO AGENCIES

- A.** The Contractor shall notify in writing all agencies having jurisdiction at least forty-eight (48) hours, excluding holidays and weekends, prior to instituting any lane closure or detour. At the end of each day's work, the Contractor shall inform the ambulance services, police and fire departments of the status of all detours and/or lane or road closures that will be in effect after the next day.
- B.** List of Agencies:
1. City of Redwood City:
 - a. Fire Department.
 - b. Police Department.
 2. U.S. Postal Service.
 3. School District Transportation Office, as appropriate.
 4. SamTrans for bus services.
 5. Ambulance Companies.

3.06 EMERGENCY VEHICLE ACCESS THROUGH DETOURS

- A.** During construction in or adjacent to roadways in the project site, Contractor shall maintain at least one lane open in each direction of the road to allow emergency vehicle access for police, fire and ambulance to the project vicinity.
- B.** During all detours and/or street closures the Contractor shall provide for movement of emergency vehicles through the work area.
- C.** When temporary traffic control is provided by flaggers they shall be instructed to give immediate passage to emergency vehicles with active lights or sirens.
- D.** It is essential that the Contractor's work and equipment do not impede egress from any fire or police station to other areas of their service area.

3.07 ACCESS TO PRIVATE PROPERTY

- A.** General: The Contractor shall schedule operations to minimize disruption of access to private property.
- B.** Notice to Residents: Prior to blocking access to any private driveway or parking lot entrance, the Contractor shall notify the resident or business owner or tenant of pending closure and allow resident to remove vehicles.
- C.** Nights: During non-working hours no driveway, house or parking lot shall be denied access to a public roadway.

3.08 DETOURS DURING NON-WORKING HOURS

- A.** General: The Contractor shall not be permitted to maintain any lane closure or road closure during non-working hours without first obtaining written approval of the Engineer.
- B.** Restoration of Pavement:
 - 1. During non-working hours the Contractor shall restore travel lanes to their original alignment and configuration by means of backfilling and temporary pavement or bridging in accordance with City Standards and approved by the City Engineer.
 - 2. The Contractor shall place signs conforming to the Standard Plans and Specifications, and the CAMUTCD at uneven temporary pavement or bridging.

3.09 PARKING RESTRICTIONS

- A.** General: The Contractor shall post approved **"NO PARKING – CONSTRUCTION TOW-AWAY ZONE"** signs at all locations necessary to establish work areas and detour traffic.
- B.** Signs:
 - 1. Signs shall read: **"NO PARKING - CONSTRUCTION TOW-AWAY ZONE"**.
 - 2. Signs shall be placed at least 48 hours in advance of restriction.

3.10 BRIDGING OVER TRENCHES AND EXCAVATIONS

- A.** General: Bridging shall be placed across all trenches and excavations in existing streets and at driveways when work is not in progress. Bridging shall be in accordance with the Standard Plans and Specifications and the CAMUTCD and approved by the City Engineer.
- B.** Design of Bridging:
 - 1. Bridging for vehicular traffic shall be of sufficient width to accommodate the required number of travel lanes.
 - 2. Bridging shall be designed to support H-20 vehicular traffic.
 - 3. All bridging shall be set flush with travel surface or a satisfactory transition from travel surface to top of bridging shall be provided.
 - a. A satisfactory transition shall mean a change in elevation between the levels of not less than twelve (12) inches horizontal to one (1) inch vertical.
 - b. Transition may be accomplished by means of temporary pavement.

3.11 TEMPORARY TRAFFIC LANES

- A.** Temporary traffic lanes shall be at least 10 feet wide. Provide an additional 2 feet of clearance from curbs. The length of temporary lanes should be limited to the area under construction and the distance necessary to divert traffic in accordance with the Standard Plans and Specifications, the CAMUTCD, and the approved Traffic Control Plan.

3.12 STAGING AREAS

- A. The Contractor shall provide his own staging areas.
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