

**AGENDA**  
**CALIFORNIA TRAFFIC CONTROL DEVICES COMMITTEE (CTCDC)**  
**April 15, 2010 Meeting**  
**1823 14th Street (Room 207)**  
**Sacramento, CA, 95814**

**Organization Items**

**1 Introduction**

**2 Approval of Minutes (January 21, 2010 Meetings)**

**3 Public Comments**

At this time, members of the public may comment on any item not appearing on the agenda. Matters presented under this item cannot be discussed or acted upon by the Committee at this time. For items appearing on the agenda, the public is invited to make comments at the time the item is considered by the Committee. Any person addressing the Committee will be limited to a maximum of five (5) minutes so that all interested parties have an opportunity to speak. When addressing Committee, please state your name, address, and business or organization you are representing for the record.

**Agenda Items**

**4 Public Hearing**

Prior to adopting rules and regulations prescribing uniform standards and specifications for all official traffic control devices placed pursuant to Section 21400 of the California Vehicle Code (CVC), the Department of Transportation is required to consult with local agencies and hold public hearings.

Page #s

08-18	Proposal to adopt “NO IDLING COMMERCIAL VEHICLES & SCHOOL BUSES” Sign (Requested by Air Resources Board)	(Continued) 7-26 (Henley)
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**5 Request for Experimentation**

10-4	Experiment with Bicycle Box at the Signalized Intersection (Submitted by Caltrans District 5)	(Continued) 27-41 (Henley)
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06-5	Clear The Way Signage (Drive Damaged Vehicle to Shoulder) (MTA would provide Final report with recommendations on the On-going experimentation)	(Continued) 42-42 (Maynard)
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**6 Information Items**

10-2	Proposal to amend existing typical applications and adopt new TA’s for accommodating bicyclists in TTC zones and to Revise CA MUTCD Sections 6D.101(CA) and 6G.05 and added a new Table 6H-1(CA).	(Continued) 43-64 (Henley)
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10-7	<u>National MUTCD 2009</u> The following dates are scheduled to hold CTCDC Technical Workshops to review National MUTCD for the adoption in CA	(Continued) 65 (Henley)
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WORKSHOP #2: [June 9 -10, 2010](#) - Part 2 (Signs)

WORKSHOP #3: [September 1-2, 2010](#) - Parts 3 (Markings) & 6 (TTC Work Zones)

WORKSHOP #4: [November 2-3](#) - (with CTCDC meeting in Sac. on 4th), [2010](#) - Parts 4 (Traffic Signals) & 8 (Railroad Xing)

**Information on CA MUTCD**

A List of Signs is shown [on page 65](#) that were included in to the revised CA MUTCD 2010.

The CA MUTCD 2010 has been posted on the following website:

<http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/index.htm>

**7 Next Meeting**

**8 Adjourn**

ITEM UNDER EXPERIMENTATION

- 06-2 Experiment with Colored Bike Lane (Wong)  
(Proposed by the City of San Francisco)  
**Status:** Experiment with Colored Bike Lane: This project was stalled because of the citywide injunction on all bicycle improvements for the past three years. This injunction was partially lifted last Wednesday (11/25/09) and the colored bike lane experiment was one of the projects approved to go forward.
- The revised preliminary schedule is as follows:  
Winter 2009/2010 - Issue RFP and Hire Consultant  
Spring 2010 - Collect Before Data  
Summer 2010 - Install Variable  
Fall 2010 - Collect After Data  
Winter 2010/2011 - Analyze Data and Prepare Final Report
- 07-7 Experimentation by Implementation of Two New School Site Loading Signs (Wong)  
**Status -** The City is conducting the after-study right now. They have 2 of the 15 zones evaluated so far.
- 07-19 Wildlife Corridor Signage (Babico)  
(Proposed by the County of San Bernardino)  
**Status: In the process to Request approval from the FHWA**
- 08-7 Request for Experimentation with new Warning Sign for Bicyclists (Wong)  
(Proposed by the City/Co of San Francisco)  
**Status:** Experiment with new Warning Signs for Bicyclists: The bicycle warning sign is still being evaluated, in conjunction with other improvements at the Market/Octavia intersection, all designed to decrease the incidence of illegally right turning vehicles vs. bicycle collisions. In granting permission for this experiment the committee took particular note of the sign's limited application to this single, unique location in San Francisco, with an acknowledgement that it was not likely to have broader statewide application. Consequently, our "experiment" and the associated observation/evaluation of its efficacy remains open-ended
- 08-20 Request to Experimentation with Flashing Yellow Arrow for Permissive Right Turn Movement (Mansourian)  
**Status:** See under "Status Report – Ongoing Experiments" on the following website:  
<http://www.dot.ca.gov/hq/traffops/signtech/newtech/index.htm>
- 08-21 Proposal to Experiment with Regulatory Sign "BIKES IN LANE" with Bicycle Symbol (Originally submitted as "Bike May Use Full Lane") (Henley)  
**Status:** Caltrans District 5 still looking for funding for the human factors study. The signs have been well received and there are no negative issues to report at this time. State collision data is not yet available, however, collision data obtained from the City of Santa Cruz up to 09/01/09, shows that there have been 3 bike related collisions since the signs went up, 5 in the year previous, and 7 in the year prior to that.

09-9 Request to Experiment with Steady Red Stop Line Light  
(Requested by the City of Los Angeles)

(Fisher)

**Status:**

## CTCDC STATUS OF EXPERIMENT

**Date:** March 11, 2010

**Item:** 09-09      **Experiment:** Steady Red Stop Lights

**Sponsor:**      City of Los Angeles Department of Transportation (LADOT)

**Supporting Agency and Contact:**      LA County Metropolitan Transportation Authority (Metro), Abdul Zhobi (213) 922-2114

**Next Appearance Before the CTCDC:** \_\_\_\_\_

**Milestones:** Started "before project" data collection in November 2009

Started construction in **February 2010**

Finish construction in **March 2010**

Start "after project" data collection in **May 2010**

Finish all data collection in **September 2011**

Finish final report **December 2011**

**Status:** Metro has secured limited funding to proceed with the experiment at two, instead of five intersections proposed in the original application. One is at Metro Orange Line crossing at Woodman Avenue and the other is at Metro Blue Line crossing at Los Angeles Street. The construction is currently 90% complete. We expect to turn on the lights by the end of March. We are also collecting "before project" data and will start collecting "after project" data beginning May 2010.

Applicant's Signature: \_\_\_\_\_

Applicant's Name: Kang Hu, PE, PTØE

Address: 100 S. Main Street, Los Angeles, CA 90012

Phone: 213-972-8627

FAX: 213-972-8610

09-13 Experiment Request for the USAGE OF "HOV" IN LIEU OF  
"CARPOOL" Signage Related to the Los Angeles EXPRESS LANES  
**Status:** **The project is in planning stage**

(Henley)

- 09-14 Experiment request for the Usage of “TRANSIT LANE” in lieu of “CARPOOL” Signage (Henley)  
**Status: The project is in planning stage**
- 09-21 Request for Permission to Experiment with Separated/Protected Bikeway on the Left Side of Two One-Way Streets in the City of Long Beach (Rte 9-112E) (Fisher)  
**Status: See under “Status Report – Ongoing Experiments” on the following website:**  
<http://www.dot.ca.gov/hq/traffops/signtech/newtech/index.htm>

**Pending Items for Caltrans Action**

- 07-1 Proposal to revise the sizes for the Supplemental School Plaques (S4-3, W16-7p and W16-9p)  
(Revised draft Table 7B-1 & 7B-1(CA) will be discussed on April 14, 2010 during the Workshop)

**08-18 Proposal to adopt “NO IDLING COMMERCIAL VEHICLES & SCHOOL BUSES” Sign**

**Recommendation:**

California Air Resources Board request that the Committee recommend adoption of the “**NO IDLING COMMERCIAL VEHICLES & SCHOOL BUSES**” Sign

**Agency Making Request:** California Air Resources Board

**Sponsor:** Caltrans

**Background:**



**Linda S. Adams**  
Secretary for  
Environmental Protection

## Air Resources Board

**Mary D. Nichols, Chairman**  
1001 I Street • P.O. Box 2815  
Sacramento, California 95812 • [www.arb.ca.gov](http://www.arb.ca.gov)



**Arnold Schwarzenegger**  
Governor

California Traffic Control Devices Committee

March 10, 2010

### **SUBJECT: REQUEST FOR “NO IDLING” SIGNS PLACED AT STATE PROPERTIES**

Dear Committee Members:

The Air Resources Board (ARB) is responsible for the protection of air quality in California. Over its 40 year plus history, the ARB has adopted regulations that have significantly reduced pollution from mobile and stationary sources such as dry cleaners, refineries, power plants, locomotives, off-road vehicles and equipment, passenger cars and diesel powered trucks and buses. As a result of these regulations, air quality in California has improved significantly as evidenced by tremendous reductions in peak ozone (smog) levels. Despite these improvements, approximately 90 percent of Californians live in regions that have unhealthy air quality.

To help further protect California residents from respiratory and cardiovascular diseases, especially in children and the elderly, ARB adopted regulations to prohibit idling of commercial vehicles, school buses and off-road equipment. AB 233 of 2007 added Section 43011.5 to the Health and Safety Code which calls for education and outreach to increase public awareness of diesel regulations, including idling regulations. Under the requirements of this legislation, ARB is mandated to place signs in multiple languages where appropriate in locations where significant numbers of idling trucks and engines have been found.

The ARB needs your assistance in order to develop signs that prohibit idling. Per the AB 233 directive, these signs need to be strategically placed at state owned properties as well as any other properties that may benefit from the posting of anti-idling signage. Examples of state owned properties where signage would require Caltrans approval, that would benefit from such signage include but are not limited to; highway roadside rest stops operated by Caltrans; State parks such as Hearst Castle; the State Capitol; California Highway Patrol Commercial Vehicle Inspection Facilities and Platform Scales; the campuses of the University of California, California State Universities and Community Colleges and any other properties owned by the State.

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.*

California Environmental Protection Agency

Attached is a proposal for “No Idling” signage for your review and approval. If you have any questions, please contact me at (916) 322-8325 or at [noconnor@arb.ca.gov](mailto:noconnor@arb.ca.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Nancy O'Connor", is placed over a light gray rectangular background.

Nancy O'Connor, Manager  
Manager, Heavy Duty Diesel Enforcement Section

## **PROPOSAL FOR THE DEVELOPMENT OF SIGNS TO PROHIBIT THE IDLING OF HEAVY DUTY VEHICLES**

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### **BACKGROUND**

The California Air Resources Board (ARB) is responsible for the protection of air quality in California. California is the only state in the nation that the United States Environmental Protection Agency has given authority to implement its own mobile air quality programs, and utilizing this authority has proven to be an exciting, and at times difficult, undertaking for ARB.

Since 1968, the ARB has adopted stringent vehicular exhaust standards to reduce harmful exhaust gases and particulates from diesel and gasoline powered sources. Today's cars spew out 99 percent fewer criteria pollutants such as nitrogen oxides, hydrocarbons, carbon monoxide, and lead than a car from the late 1960s. New vehicle diesel engines are now required to reduce particulates and oxides of nitrogen, and In-use vehicle diesel engines are being equipped with oxidation catalysts and diesel particulate filters (retrofit devices) to reduce particulates. In the future, ARB standards will render the diesel engine to be a smokeless and odorless device, and will enable ARB to meet the challenge of reducing greenhouse gas emissions presented by California's landmark climate change legislation.

In spite of the great steps taken to improve air quality in California, the State still faces a severe air pollution problem. Exhaust gases and small particles emitted from almost 30 million gasoline and diesel powered cars, trucks and buses are constantly pumped into California's air, where they chemically react with other gases and form additional harmful substances. California's air pollution problem is compounded by numerous air basins (flatlands surrounded by mountains), which retain these gases in populated areas and dramatically aggravate the issues of pollution and its effects on human health.

Diesel gases and particulates cause great harm to the respiratory and cardiovascular systems of California's residents, and small children and the elderly are especially susceptible to the detrimental effects of poor air quality. Since 1989, the ARB has conducted in depth scientific and epidemiological studies on the effects of pollution on human and animal health. These studies were discussed by the Scientific Review Panel, a panel composed of independent scientists that review studies for scientific accuracy and consequentially, in 1998, ARB identified diesel exhaust as a toxic air contaminant due to its link to cancer risk. Diesel exhaust is also linked to cardiovascular and cardiopulmonary diseases. In 2000, ARB issued a Diesel Risk Reduction Plan (DRRP), calling for the reduction of the public's exposure to diesel exhaust by 75 percent by 2010 and 85 percent by 2020.

The Diesel Risk Reduction plan is intended to reduce diesel exhaust exposure through the adoption of Toxic Air Contaminant Control Measures. Additionally, more recent legislation has added to ARB's ability to battle the effects of diesel exhaust on public health. Through the adoption of AB 233, ARB has been granted authority to increase commercial vehicle idling penalties, place DMV registration holds on vehicles with outstanding ARB violations; regulate off-road sources in addition to on-road sources, and to publish a legislative report regarding ARB's strategic plan to enforce diesel emission programs. Additionally, AB 233 establishes an education and outreach component to increase public awareness, including signage related to diesel vehicle idling. Under the requirements of this legislation, ARB is mandated to place signs in multiple languages where appropriate, in locations where significant numbers of idling trucks and buses have been found.

Since the idling reduction program's implementation in 2003, ARB has made significant efforts to make stakeholders aware of the idling regulation. Since 2003, the total number of outreach efforts numbers well over 900 and includes both presentations and visits to shareholders. Other outreach efforts to date have included mass mailing informational fliers to IRP carriers in California, Oregon and Washington, creation and distribution of idling-related enforcement advisories, and fliers via staff at rest areas and

truck stops. Additionally, ARB efforts to reach shareholders have included truck association meetings, and numerous presentations by ARB staff, generally set up at either shareholder request or as a part of a case settlement agreement. Current outreach efforts, within the past year, have included the launch of the “Truck Stop” website, which provides expansive information regarding current and upcoming ARB programs, as well as the 2009 Holt-Caterpillar tour, during which a dozen ARB staff from Enforcement and Mobile Sources Control Divisions travelled to Holt-Caterpillar dealerships throughout California in order to speak to shareholders about current and upcoming regulations and answer questions regarding program compliance. In addition to ARB’s efforts, information regarding California’s no idling regulations is included on page 8 of the DMV’s California Commercial Driver Handbook. In spite of the amount of available information and ARB’s outreach efforts, it appears that many commercial drivers are still not aware of the anti idling regulations. In 2008 alone, there were over 300 violations of the idling law, and most drivers cited indicated that they were not aware of the regulation. Based on these facts, it is evident that the additional outreach efforts that AB 233 seeks to put in place are necessary to inform industry and the public regarding California’s no-idling regulations.

### **PROPOSAL**

The ARB proposes that the California Traffic Control Devices Committee assist in the design and approval of signs to increase awareness of California’s diesel vehicle idling regulations, and to prohibit idling of school buses and commercial vehicles.

The signs would be drafted according to the following criteria:

- Appropriate language to limit idling
- Specific regulatory notation
- Sized to be consistent with existing roadside signs (e.g. “No Parking” signs).
- In multiple languages

#### Placement Locations

- California Highway Patrol Inspection Facilities and Platform Scales;
- Caltrans owned and operated highway rest stops;
- State parks and the State Capitol building;
- Campuses of the University of California, California State Universities and Community Colleges
- State-owned buildings and facilities with loading docks.
- Freeway on-ramps and off-ramps.
- Other locations as needed.

### **JUSTIFICATION**

Diesel exhaust particulates range in size from 10 microns to 2.5 microns and less. That is smaller than roughly 1/5 of the diameter of a human hair. In contrast, dust particles from other sources are often large enough to be easily expelled from the airways by cilia, tiny hairs that work to expel foreign substances from the lung. The extremely small diesel particulates are easily lodged in between the cilia and can cause carcinogenic and mutagenic effects in the human respiratory and cardiovascular systems. Children are more vulnerable than adults to air pollutants because they have higher inhalation rates, narrower airways, and less mature immune systems. The elderly are also extremely susceptible to these effects.

One of the more immediate solutions to reduce human exposure to diesel toxic air contaminants is to turn off the diesel engines that power school buses, and on and off- road commercial vehicles as soon as possible. Not only does doing so reduce exposure to toxic air contaminants, but reducing idle time has additional benefits. Less idling means greater fuel efficiency, and less release of harmful greenhouse gases into the atmosphere. In addition, a vast array of alternatives to idling has become readily available.

Available alternatives to idling include battery-operated auxiliary power systems, vehicle-battery systems, truck stop electrification (on-board or off-board power infrastructure), thermal energy storage systems, diesel fueled auxiliary power systems, and fuel fired heaters. In addition to these alternatives, truckers may also opt to stay in a hotel.

In recent years, the California Code of Regulations has been modified to include regulations designed to limit unnecessary idling of commercial vehicles. Section 2480 (Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools) became effective in 2003, and Section 2485 (Airborne Toxic Control Measure to Limit Diesel fueled Commercial Motor Vehicle Idling) effective in 2005. Additionally in 2008, Section 2449 (Regulation for In-Use Off-Road diesel vehicles) prohibits the idling of diesel powered construction and mining vehicles. Cities and counties are also adopting their own anti-idling ordinances. The city of Sacramento has adopted Title 8, Ch. 8116 and Placer County has adopted Placer County Code, Article 10.14. More cities and counties are expected to follow suit in the future. San Francisco and other cities are presently inquiring on the topic. It should also be noted that cities and counties are able to post signage on properties within their jurisdictions at their own discretion.

These regulations affect the following vehicles: Commercial vehicles meaning any vehicle or combination of vehicles defined in Vehicle Code Section 15210(b) and any other motor truck or bus with a gross vehicle weight rating of 10,001 pounds or more, except zero emission vehicles or pickup trucks. Specific examples of such vehicles include UPS and FedEx trucks as well as trucks that one would typically see on local highways; and school buses, defined as a motor vehicle designed, used, or maintained for the transportation of any school pupil at or below the 12th-grade level to or from a public or private school or to or from public or private school activities, regardless of fuel type. There are several exemptions to the idling rules, such as allowing idling when necessary to complete a function of the vehicle (e.g. concrete agitation, or for hydraulic power to a crane or fuel pump), or when performing safety checks. These exemptions are easily found within the regulation text.

Currently, California's state and local ant-idling regulations are enforced by peace officers, ARB staff and local Air Pollution Control District staff. These entities often use CCR 2480 and 2485 when writing citations for idling. In addition to the CCR codes, enforcement authorities can cite California Health and Safety Code (HSC) Section 42403.5, which applies to emissions which cause injury, detriment, nuisance, etc. or endanger public health or cause damage to property, or California HSC Section 40720, which applies to vehicles at marine terminals. ARB is also currently working toward a statutory change that will amend California Vehicle Code Section 27159, enabling the California Highway Patrol to enforce the idling regulations more easily, which they currently do not do due to a lack of appropriate code.

Operators of vehicles, wherever they are domiciled, need to be informed of these regulations, thus, the staff of the Air Resources Board recommends that the California Traffic Control Devices Committee develop and promote the distribution of "No Idling" signs at appropriate locations.

The proposed sign is included as an attachment. ARB believes that one version of the anti idling sign is prudent since the main difference between the school bus and commercial vehicle idling regulations is attributed to location, i.e. the school zone. When school buses and other vehicles that are subject to the school bus regulation are away from a school zone, they fall under the commercial vehicle regulation, thus a five minute idling limit is in effect the same as for commercial vehicles. Additionally, there is no need to specify fuel type on signage, as the school bus regulation applies to all school vehicles, regardless of what fuel type is used.

**The following policy statement will be incorporated into the Section 2B.39 Parking, Standing and Stopping Signs (R7 and R8 Series):**

**Option:**

The NO IDLING sign may be placed to remind drivers that idling is prohibited of commercial vehicles and school buses for a duration greater than 5 minutes (refer to CCR Title 13, 2480 and 2485).

**Standard:**

**If used, the NO IDLING sign shall be placed in areas where idling commonly occurs.**

**Air Resources Board installing the NO IDLING sign shall be responsible for furnishing, installing, maintaining and replacing the signs as needed. Air Resources Board installing the signs shall receive approval from the agency having jurisdiction of the roadway prior to installation of these signs.**

**Support:**

The properties where this sign can be placed include rest stops operated by Caltrans, State parks, the State Capital, the California Highway Patrol Commercial Vehicle Inspection Facilities and Platform Scales, the Campuses of universities and colleges owned by the State of California, and any other properties where deemed necessary. The California Code of Regulations includes the following regulations designed to limit unnecessary idling of commercial vehicles: Section 2480 (Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools), and Section 2485 (Airborne Toxic Control Measure to Limit Diesel fueled Commercial Motor Vehicle Idling). These regulations prohibit idling of commercial vehicles for a duration greater than 5 minutes.

The following are different Mock Up variations for the Committee's review and recommendations:

Sign 1 Option A

18" x 18"



Sign 1 Option B

Main Sign: 18" x 18"  
Supplemental Sign: 18" x 6"



Sign 2 Option A

18" x 24"



Sign 2 Option B

Main Sign: 18" x 21"  
Supplemental Sign: 18" x 6"



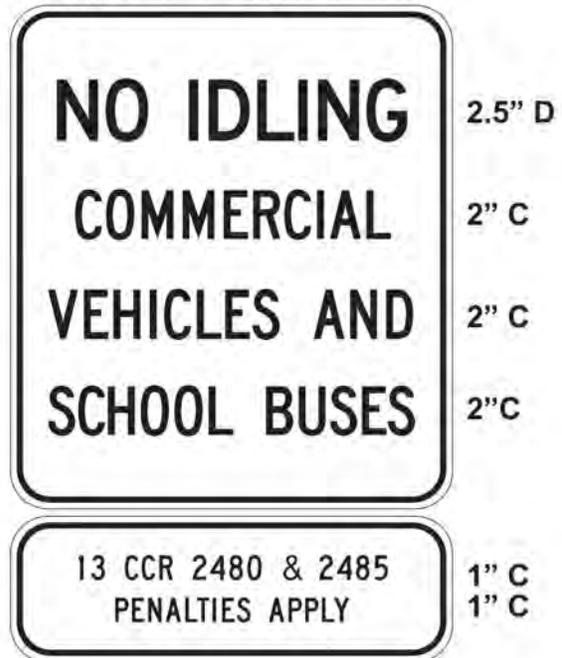
**Sign 3 Option A**

**18" x24"**



**Sign 3 Option B**

**Main Sign: 18" x21"  
Supplemental Sign: 18" x6"**



**Background:****Attachments: AB 233, The CCR Title 13, 2485 & 2480****Assembly Bill No. 233**

## CHAPTER 592

An act to add Sections 43011.5 and 43704 to the Health and Safety Code, and to add Section 4755 to the Vehicle Code, relating to air pollution.

[Approved by Governor October 13, 2007. Filed with Secretary of State October 13, 2007.]

legislative counsel's digest

AB 233, Jones. Diesel vehicles and engines: Healthy Heart and Lung Act.

(1) Existing law gives the State Air Resources Board the responsibility for control of emissions from motor vehicles and requires the state board to coordinate efforts of all levels of government as they affect air quality. The state board is required to identify toxic air contaminants and to establish airborne toxic control measures for toxic air contaminants. The state board has adopted an airborne toxic control measure to limit diesel-fueled commercial motor vehicle idling. Violations of this regulation are subject to a minimum civil penalty of \$100. This bill would increase this minimum civil penalty to \$300. The bill would also require the state board, every 3 years, to review enforcement of specified diesel emission control regulations and develop a strategic plan for consistent, comprehensive, and fair enforcement of these regulations. The bill would require the state board to submit this plan to the relevant legislative policy and fiscal committees by January 1, 2009, and every 3 years thereafter. (2) Existing law requires a commercial motor vehicle that operates with a declared gross or combined gross vehicle weight that exceeds 10,000 pounds to register with the Department of Motor Vehicles, and subjects these vehicles to special weight fees. This bill would require the department to, for any diesel commercial vehicle subject to these provisions, refuse registration, or renewal or transfer of registration, if the owner or an operator of the vehicle has been cited for a violation pertaining to the vehicle of specified air pollution laws until the violation has been cleared, as determined by the State Air Resources Board.

*The people of the State of California do enact as follows:*

SECTION 1. This act shall be known, and may be cited as, the Healthy Heart and Lung Act.

SEC. 2. The Legislature finds and declares all of the following:

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(a) The State Air Resources Board's Emission Reduction Plan for Ports and Goods Movement, adopted April 2006, states that goods movement activity, including trips made by diesel-fueled trucks, contributes to increases in cancer risk, premature deaths, hospitalizations for respiratory and cardiovascular causes, bronchitis, asthma attacks, and other respiratory symptoms.

(b) The State Air Resources Board identified particulate matter emissions from diesel-fueled engines as a toxic air contaminant in 1998. The state board subsequently developed a risk reduction plan that included a goal of reducing the public health risk from diesel particulate matter by 85 percent by 2020, and began to develop regulations designed to further reduce diesel particulate matter emissions from diesel-fueled engines and vehicles.

(c) As part of its efforts to reduce diesel emissions, the State Air Resources Board has adopted regulations to control idling of diesel-fueled vehicles, including buses and trucks. Additional enforcement measures are needed to ensure consistent enforcement of these and other regulations.

SEC. 3. Section 43011.5 is added to the Health and Safety Code, to read:

43011.5. (a) Every three years, the state board shall review its existing enforcement of diesel emission control regulations and anticipated enforcement needs for future diesel emission control regulations for manufacturers, owners, or operators of on-road and off-road vehicles and engines to implement the state board's Diesel Risk Reduction Plan and Emission Reduction Plan for Ports and Goods Movement, and develop a strategic plan for consistent, comprehensive, and fair enforcement of these regulations.

(b) The state board shall consult with the districts and the public in developing the plan, and shall review the plan at a public board meeting. (c) The plan shall include, but is not limited to, all of the following:

(1) An assessment of the need for additional staff and technology resources at the state board to ensure that the appropriate resources are available to ensure consistent enforcement of diesel emission control regulations for on-road and off-road vehicles and engines throughout the state and in areas where diesel emissions are concentrated.

(2) Goals for inspection frequency for the next three years to promote the maximum level of compliance with diesel emission control regulations for on-road and off-road vehicles and engines.

(3) An education and outreach component to increase public awareness and understanding of the diesel regulations identified in subdivision (a). The education and outreach component shall include the placement of signs and other materials in multiple languages where appropriate in locations where significant numbers of idling trucks and engines have been found, especially locations near schools and residential communities, to ensure that operators of trucks traveling through the state and other affected individuals and businesses are aware of the state's diesel engine idling requirements.

(4) A training program for local enforcement staff, including, but not limited to, outreach to highway patrol, local police, and local air district staff on enforcement of the state's diesel engine idling requirements through workshops, educational material, and training sessions in northern and southern California.

(d) The state board shall submit the plan prepared pursuant to subdivision

(a) to the relevant legislative policy and fiscal committees by January 1, 2009, and every three years thereafter.

SEC. 4. Section 43704 is added to the Health and Safety Code, to read:

43704. Any person who violates Section 2485 of Title 13 of the California Code of Regulations is subject to a minimum civil penalty of three hundred dollars (\$300).

SEC. 5. Section 4755 is added to the Vehicle Code, to read:

4755. The department shall refuse registration, or renewal or transfer of registration for any commercial motor vehicle subject to Section 4000.6, if the owner or operator of the motor vehicle at the time of the application has been cited for a violation, pertaining to that vehicle, of Division 26 (commencing with Section 39000) of the Health and Safety Code or regulations of the State Air Resources Board adopted pursuant to that division, until the violation has been cleared, as determined by the State Air Resources Board.

### **Section 2485. Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.**

(a) Purpose. The purpose of this airborne toxic control measure is to reduce public exposure to diesel particulate matter and other air contaminants by limiting the idling of diesel-fueled commercial motor vehicles.

(b) Applicability. This section applies to diesel-fueled commercial motor vehicles that operate in the State of California with gross vehicular weight ratings of greater than 10,000 pounds that are or must be licensed for operation on highways. This specifically includes:

(1) California-based vehicles; and

(2) Non-California-based vehicles.

(c) Requirements.

On or after February 1, 2005, the driver of any vehicle subject to this section:

- (1) shall not idle the vehicle's primary diesel engine for greater than 5.0 minutes at any location, except as noted in Subsection (d); and
- (2) shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5.0 minutes at any location when within 100 feet of a restricted area, except as noted in Subsection (d).

(d) Exceptions.

Subsection (c) does not apply for the period or periods during which

- (1) a bus is idling for
  - (A) up to 10.0 minutes prior to passenger boarding, or
  - (B) when passengers are onboard;
- (2) idling of the primary diesel engine is necessary to power a heater, air conditioner, or any ancillary equipment during sleeping or resting in a sleeper berth. This provision does not apply when operating within 100 feet of a restricted area;
- (3) idling when the vehicle must remain motionless due to traffic conditions, an official traffic control device, or an official traffic control signal over which the driver has no control, or at the direction of a peace officer, or operating a diesel-fueled APS at the direction of a peace officer;
- (4) idling when the vehicle is queuing that at all times is beyond 100 feet from any restricted area;
- (5) idling of the primary engine or operating a diesel-fueled APS when forced to remain motionless due to immediate adverse weather conditions affecting the safe operation of the vehicle or due to mechanical difficulties over which the driver has no control;
- (6) idling to verify that the vehicle is in safe operating condition as required by law and that all equipment is in good working order, either as part of a daily vehicle inspection or as otherwise needed, provided that such engine idling is mandatory for such verification;
  - (7) idling of the primary engine or operating a diesel-fueled APS is mandatory for testing, servicing, repairing, or diagnostic purposes;
  - (8) idling when positioning or providing a power source for equipment or operations, other than transporting passengers or propulsion, which involve a power take off or equivalent mechanism and is powered by the primary engine for:
    - (A) controlling cargo temperature, operating a lift, crane, pump, drill, hoist, mixer (such as a ready mix concrete truck), or other auxiliary equipment;
    - (B) providing mechanical extension to perform work functions for which the vehicle was designed and where substitute alternate means to idling are not reasonably available; or
    - (C) collection of solid waste or recyclable material by an entity authorized by contract, license, or permit by a school or local government;

- (9) idling of the primary engine or operating a diesel-fueled APS when operating defrosters, heaters, air conditioners, or other equipment solely to prevent a safety or health emergency;
- (10) idling of the primary engine or operating a diesel-fueled APS by authorized emergency vehicles while in the course of providing services for which the vehicle is designed;
- (11) idling of military tactical vehicles during periods of training; and
- (12) idling when operating equipment such as a wheelchair or people assist lift as prescribed by the Americans with Disabilities Act;

(e) Relationship to Other Law.

Nothing in this section allows idling in violation of other applicable law, including, but not limited to:

- (1) California Vehicle Code Section 22515;
- (2) Title 13, Section 2480, California Code of Regulations;
- (3) California Health and Safety Code Section 40720; or
- (4) any applicable ordinance, rule, or requirement as stringent as, or more stringent than, this section.

(f) Enforcement. This section may be enforced by the Air Resources Board; peace officers as defined in California Penal Code, title 3, chapter 4.5, Sections 830 et seq. and their respective law enforcement agencies' authorized representatives; and air pollution control or air quality management districts.

(g) Penalties. For violations of subsection (c)(1) or (c)(2), the driver of a subject vehicle is subject to a minimum civil penalty of 100 dollars and to criminal penalties as specified in the Health and Safety Code and the Vehicle Code.

(h) Definitions.

The following definitions apply to this section:

- (1) "Authorized emergency vehicle" is as defined in Vehicle Code Section 165.
- (2) "Auxiliary power system" or "APS" means any device that provides electrical, mechanical, or thermal energy to the primary diesel engine, truck cab, or sleeper berth as an alternative to idling the primary diesel engine.
- (3) "Bus" means any vehicle defined in Title 13, California Code of Regulations, Section 2480, subsections (h) (13)-(16), inclusive or as defined in the Vehicle Code Section 233.
- (4) "Commercial Motor Vehicle" means any vehicle or combination of vehicles defined in Vehicle Code Section 15210(b) and any other motor truck or bus with a gross vehicle weight rating of 10,001 pounds or more, except the following:
  - (A) a zero emission vehicle; or
  - (B) a pickup truck as defined in Vehicle Code Section 471.
- (5) "Driver" is as defined in Vehicle Code Section 305.

- (6) "Gross vehicle weight rating" is as defined in Vehicle Code Section 350.
- (7) "Highway" is as defined in Vehicle Code Section 360.
- (8) "Idling" means the vehicle engine is running at any location while the vehicle is stationary.
- (9) "Motor truck" or "motortruck" means a motor vehicle designed, used, or maintained primarily for the transportation of property.
- (10) "Official traffic control device" is as defined in Vehicle Code Section 440.
- (11) "Official traffic control signal" is as defined in Vehicle Code Section 445.
- (12) "Owner" is as defined in Vehicle Code Section 460.
- (13) "Primary diesel engine" means the diesel-fueled engine used for vehicle propulsion.
- (14) "Queuing" means (A) through (C)
- (A) the intermittent starting and stopping of a vehicle;
  - (B) while the driver, in the normal course of doing business, is waiting to perform work or a service; and
  - (C) when shutting the vehicle engine off would impede the progress of the queue and is not practicable.
- (D) Queuing does not include the time a driver may wait motionless in line in anticipation of the start of a workday or opening of a location where work or a service will be performed.
- (15) "Restricted area" means any real property zoned for individual or multifamily housing units that has one or more of such units on it.
- (16) "Safety or health emergency" means:
- (A) a sudden, urgent, or usually unforeseen, occurrence; or
  - (B) a foreseeable occurrence relative to a medical or physiological condition.
- (17) "Sleeper berth" is as defined in Title 13, California Code of Regulations, Section 1265.
- (18) "Vehicle" is as defined in the Vehicle Code Section 670.

Authority: Sections 39600, 39601, 39614(b)(6)(A), 39658, 39667, 43000.5(d), 43013(b), 43013(h), 43018(b), and 43018(c), Health and Safety Code; and *Western Oil & Gas Assn. v. Orange County Air Pollution Control Dist.* (1975) [14 Cal.3d.411].

Reference: Sections 39002, 39003, 39027, 39500, 39600, 39650, 39655, 39656, 39657, 39658, 39659, 39662, 39665, 39674, 39675, 42400, 42400.1, 42400.2, 42400.3, 42402, 42402.1, 42402.2, 42402.3, 42403.5, 42410, 43013, 43018, Health and Safety Code; Sections 305, 336, 350, 440, 445, 545, 546, 642, 680, 21400, 22452, 22515, 27153, 40001, 40001(b)(5), Vehicle Code; and Sections 1201, 1900, 1962, 2480, Title 13, California Code of Regulations

#### **§ 2480. Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools.**

(a) Purpose. This airborne toxic control measure seeks to reduce public exposure, especially school age children's exposure, to diesel exhaust particulate matter and other toxic air contaminants by limiting unnecessary idling of specified vehicular sources.

(b) Applicability. Except as provided in subsection (d), this section applies to the operation of every school bus, transit bus, school pupil activity bus, youth bus, general public Para transit vehicle, and other commercial motor vehicle as defined in subsection (h).

(c) Idling Control Measure.

(1) A driver of a school bus, school pupil activity bus, youth bus, or general public Para transit vehicle:

(A) must turn off the bus or vehicle engine upon stopping at a school or within 100 feet of a school, and must not turn the bus or vehicle engine on more than 30 seconds before beginning to depart from a school or from within 100 feet of a school; and

(B) must not cause or allow a bus or vehicle to idle at any location greater than 100 feet from a school for:

(i) more than five consecutive minutes; or

(ii) a period or periods aggregating more than five minutes in any one hour.

(2) A driver of a transit bus or of a commercial motor vehicle not identified in (c)(1):

(A) must turn off the bus or vehicle engine upon stopping at a school and must not turn the bus or vehicle engine on more than 30 seconds before beginning to depart from a school; and

(B) must not cause or allow a bus or vehicle to idle at any location within 100 feet of, but not at, a school for:

(i) more than five consecutive minutes; or

(ii) a period or periods aggregating more than five minutes in any one hour.

(3) A motor carrier of a school bus, school pupil activity bus, youth bus, or general public paratransit vehicle must ensure that:

(A) the bus or vehicle driver, upon employment and at least once per year thereafter, is informed of the requirements in (c)(1), and of the consequences, under this section and the motor carrier's terms of employment, of not complying with those requirements;

(B) all complaints of non-compliance with, and enforcement actions related to, the requirements of (c)(1) are reviewed and remedial action is taken as necessary; and

(C) records of (3)(A) and (B) are kept for at least three years and made available or accessible to enforcement personnel as defined in subsection (g) within three business days of their request.

(4) A motor carrier of a transit bus or of a commercial motor vehicle not identified in (c)(1) must ensure that:

(A) the bus or vehicle driver, upon employment and at least once per year thereafter, is informed of the requirements in (c)(2), and of the consequences, under this section and the motor carrier's terms of employment, of not complying with those requirements;

(B) all complaints of non-compliance with, and enforcement actions related to, the requirements of (c)(2) are reviewed and remedial action is taken as necessary; and

(C) records of (4)(A) and (B) are kept for at least three years and made available or accessible to enforcement personnel as defined in subsection (g) within three business days of their request.

(d) Exemptions

This section does not apply for the period or periods during which:

(1) idling is necessary while stopped:

(A) for an official traffic control device;

(B) for an official traffic control signal;

(C) for traffic conditions over which the driver has no control, including, but not limited to: stopped in a line of traffic; or

(D) at the direction of a peace officer;

(2) idling is necessary to ascertain that the school bus, transit bus, school pupil activity bus, youth bus, general public paratransit vehicle, or other commercial motor vehicle is in safe operating condition and equipped as required by all provisions of law, and all equipment is in good working order, either as part of the driver's daily vehicle inspection, or as otherwise needed;

(3) idling is necessary for testing, servicing, repairing, or diagnostic purposes;

(4) idling is necessary, for a period not to exceed three to five minutes (as per the recommendation of the manufacturer), to cool down a turbo-charged diesel engine before turning the engine off;

(5) idling is necessary to accomplish work for which the vehicle was designed, other than transporting passengers, for example:

(A) collection of solid waste or recyclable material by an entity authorized by contract, license, or permit by a school or local government;

(B) controlling cargo temperature; or

(C) operating a lift, crane, pump, drill, hoist, mixer, or other auxiliary equipment other than a heater or air conditioner;

(6) idling is necessary to operate:

(A) a lift or other piece of equipment designed to ensure safe loading, unloading, or transport of persons with one or more disabilities; or

(B) a heater or an air conditioner of a bus or vehicle that has, or will have, one or more children with exceptional needs aboard;

(7) idling is necessary to operate defrosters, heaters, air conditioners, or other equipment to ensure the safety or health of the driver or passengers, or as otherwise required by federal or State motor carrier safety regulations; or

(8) idling is necessary solely to recharge a battery or other energy storage unit of a hybrid electric bus or vehicle.

(e) Relationship to Other Law

Nothing in this section allows idling in excess of other applicable law, including, but not limited to:

(1) Title 13 California Code of Regulations Section 1226;

(2) Vehicle Code Section 22515; or

(3) any local ordinance or requirement as stringent as, or more stringent than, this section.

(f) Penalties

(1) For each violation of subsection (c)(1), a driver of a school bus, school pupil activity bus, youth bus, or general public paratransit vehicle is subject to a minimum civil penalty of 100 dollars and to criminal penalties to the maximum extent provided by law.

(2) For each violation of subsection (c)(2), a driver of a transit bus or other commercial motor vehicle is subject to a minimum civil penalty of 100 dollars and to criminal penalties to the maximum extent provided by law.

(3) For each violation of subsection (c)(3), a motor carrier of a school bus, school pupil activity bus, youth bus, or general public paratransit vehicle is subject to a minimum civil penalty of 100 dollars and to criminal penalties to the maximum extent provided by law.

(4) For each violation of subsection (c)(4), a motor carrier of a transit bus or other commercial motor vehicle is subject to a minimum civil penalty of 100 dollars and to criminal penalties to the maximum extent provided by law.

(g) Enforcement. This section may be enforced by the Air Resources Board, peace officers as defined in California Penal Code, title 3, chapter 4.5, Sections 830 et seq. and their respective law enforcement agencies' authorized representatives, and air pollution control or air quality management districts.

(h) Definitions.

The following terms are defined for the purposes of this section:

(1) Children With Exceptional Needs. "Children with exceptional needs" means children meeting eligibility criteria described in Education Code Section 56026.

(2) Commercial Motor Vehicle. "Commercial Motor Vehicle" means any vehicle or combination of vehicles defined in Vehicle Code Section 15210(b) and any other motor truck with a gross vehicle weight rating of 10,001 pounds or more, with the following exceptions:

(A) a zero emission vehicle; or

(B) a pickup truck defined in Vehicle Code Section 471.

(3) Driver. "Driver" means any person who drives or is in actual physical control of a vehicle.

(4) General Public Paratransit Vehicle. "General public paratransit vehicle" means any motor vehicle defined in Vehicle Code Section 336, other than a zero emission general public Paratransit vehicle, that is transporting school pupils at or below the 12th grade level to or from public or private schools or public or private school activities.

- (5) Gross Vehicle Weight Rating. "Gross vehicle weight rating" means the weight specified by the manufacturer as the loaded weight of a single vehicle.
- (6) Hybrid Electric Bus or Vehicle. "Hybrid electric bus or vehicle" means any school bus, transit bus, school pupil activity bus, youth bus, general public Para transit vehicle, or other commercial motor vehicle equipped with at least the following two sources of motive energy on board:
- (A) an electric drive motor that must be used to partially or fully drive the bus or vehicle wheels; and
  - (B) one of the following:
    - (i) an internal combustion engine;
    - (ii) a turbine; or
    - (iii) a fuel cell.
- (7) Idling. "Idling" means the engine is running while the bus or vehicle is stationary.
- (8) Motor Carrier. "Motor carrier" means the registered owner, lessee, licensee, school district superintendent, or bailee of any school bus, transit bus, school pupil activity bus, youth bus, general public Para transit vehicle, or other commercial motor vehicle who operates or directs the operation of any such bus or vehicle on either a for-hire or not-for-hire basis.
- (9) Motor Truck. "Motor truck" or "motortruck" means a motor vehicle designed, used, or maintained primarily for the transportation of property.
- (10) Official Traffic Control Device. "Official traffic control device" means any sign, signal, marking or device, consistent with Section 21400 of the Vehicle Code, placed or erected by authority of a public body or official having jurisdiction, for the purpose of regulating, warning, or guiding traffic, but does not include islands, curbs, traffic barriers, speed humps, speed bumps, or other roadway design features.
- (11) Official Traffic Control Signal. "Official traffic control signal" means any device, whether manually, electrically, or mechanically operated, by which traffic is alternately directed to stop and proceed and which is erected by authority of a public body or official having jurisdiction.
- (12) School. "School" means any public or private school used for the purposes of education and instruction of more than 12 school pupils at or below the 12th grade level, but does not include any private school in which education and instruction is primarily conducted in private homes. The term includes any building or structure, playground, athletic field, or other area of school property. The term excludes unimproved school property.
- (13) School Bus. "School bus" means any school bus defined in Vehicle Code Section 545, except a zero emission school bus.
- (14) School Pupil Activity Bus. "School pupil activity bus" means any bus defined in Section 546 of the Vehicle Code, except a zero emission school pupil activity bus.
- (15) Transit Bus. "Transit bus" means any bus defined in Vehicle Code Section 642, except a zero emission transit bus.
- (16) Youth Bus. "Youth bus" means any bus defined in Vehicle Code Section 680, except a zero emission youth bus.

(17) Zero Emission School Bus, Transit Bus, School Pupil Activity Bus, Youth Bus, General Public Para transit Vehicle, or Other Commercial Motor Vehicle. A "zero emission school bus, transit bus, school pupil activity bus, youth bus, general public Para transit vehicle, or other commercial motor vehicle" means any bus or vehicle certified to zero-emission standards.

<General Materials (GM) - References, Annotations, or Tables>

Note: Authority cited: Sections 39600, 39601, 39658, 39667 and 39674, Health and Safety Code; and Western Oil & Gas Assn. v. Orange County Air Pollution Control Dist. (1975) [14 Cal.3d.411].  
Reference: Sections 39002, 39003, 39027, 39500, 39600, 39650, 39655, 39656, 39657, 39658, 39659, 39662, 39665, 39674, 39675 and 42403.5, Health and Safety Code; and Section 27153, Vehicle Code.

### **Senate Bill 124**

An act to amend Section 42407 of, and to add Chapter 3.4 (commencing with Section 39640) to Part 2 of Division 26 of, the Health and Safety Code, relating to air pollution.

Legislative counsel's digest

SB 124, Oropeza. Air pollution: school bus idling and idling at schools. Existing law designates the State Air Resources Board as the state agency charged with coordinating efforts to attain and maintain ambient air quality standards. Existing law also designates the state board as the state agency with the primary responsibility for the control of vehicular air pollution. Existing law requires the state board to identify toxic air contaminants that are emitted into the ambient air of the state, and requires the state board to establish toxic control measures for toxic air contaminants. Existing regulations adopted by the state board establish toxic control measures to limit school bus idling and idling at schools. Those existing regulations require drivers of school buses, transit buses, school pupil activity buses, youth buses, general public Para transit vehicles, as those terms are defined in the regulations, and specified transit buses and commercial motor vehicles to, among other things, turn off the bus or vehicle engine upon stopping at or within 100 feet of a school, prohibits those drivers from turning the bus or vehicle engine on more than 30 seconds before beginning to depart from a school or within 100 feet of a school, and prohibits those drivers from causing the bus or vehicle to idle for more than 5 consecutive minutes or 5 aggregate minutes in any one hour at any location greater than 100 feet from a school. Those existing regulations provide that any violation of those requirements subjects the driver or the motor carrier to a minimum civil penalty of \$100 and to criminal penalties. Those existing regulations authorize the state board, peace officers and the authorized representatives of their law enforcement agencies, and air quality management districts and air pollution control districts, to enforce those provisions.

This bill would increase the minimum civil penalty for a violation to \$300 and authorize additional civil penalties. *The people of the State of California do enact as follows:*

SECTION 1. Chapter 3.4 (commencing with Section 39640) is added to Part 2 of Division 26 of the Health and Safety Code, to read: Chapter 3.4. School bus Idling and Idling at Schools 39640. The purpose of this chapter is to reduce public exposure, especially school age children's exposure, to diesel exhaust particulate matter and other toxic air contaminants by limiting unnecessary idling of vehicular sources. 39641. The state board has adopted regulations establishing toxic control measures to limit school bus idling and idling at schools. 39642. The regulations described in Section 39641 may be enforced by the state board, peace officers, as defined in Chapter 4.5 (commencing with Section 830) of Title 3 of the Penal Code, and their respective law enforcement agencies' authorized representatives, and the air districts. A violation of any provision of the regulations described in Section 39641 is subject to a minimum civil penalty of three hundred dollars (\$300), additional civil penalties as provided in Section 39674, and to criminal penalties as provided in Article 3 (commencing with Section 42400) of Chapter 4 of Part 4. Sec. 2. Section 42407 of the Health and Safety Code is amended to read: 42407. Except as

provided in Chapter 3.4 (commencing with Section 39640) of Part 2 and Sections 40720 and 42403.5, this article is not applicable to vehicular sources.

**5. Request for Experimentation:****10-4 Experiment with Bicycle Box at a Signalized Intersection**

**Recommendation:** Caltrans District 5 request authorization to conduct an experiment with **Bicycle Box** at a Signalized Intersection

**Agency Making Request:** Caltrans District 5

**Sponsor:** Wayne Henley, Caltrans

**Note:** Some Bicyclists organization has submitted their views on the proposed experimentation and they are on Pages 53 thru 59.

**Background:** When this item was discussed during the January 2010 CTCDC meeting, some Committee members commented that the double limit line in a travel lane is not a legal concept. Since then, Caltrans has asked opinion from their Legal Branch and Caltrans Legal Branch stated that double limit line in a travel lane is not illegal.

**DEPARTMENT OF TRANSPORTATION**

50 HIGUERA STREET  
SAN LUIS OBISPO, CA 93401-5415  
PHONE (805) 549-3101  
FAX (805) 549-3329  
TTY 711  
<http://www.dot.ca.gov/dist05/>



*Flex your power.  
Be energy efficient!*

December 1, 2009

Devinder Singh  
Secretary, CTCDC  
California Department of Transportation  
1120 N Street  
Sacramento, CA 95814

**PROPOSAL FOR EXPERIMENTAL USE OF A BICYCLE BOX**

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The California Department of Transportation (Caltrans) requests permission to conduct an experiment involving the installation of a bicycle box.

**1. PROBLEM STATEMENT**

Route 227 (Madonna Road) is a four-lane, conventional highway in San Luis Obispo County (SLO). Madonna Road intersects with Higuera Street at this location. Right turns are accommodated with a fully separated, free-right-turn lane and are therefore not a factor in the experiment. However, at the intersection the #1 lane is a left-turn only, and the #2 lane is a shared-left and a through lane. A class II bicycle lane exists up to the intersection. Bicycles in the bike lane that are attempting to make a left turn do not know whether the car in the #2 lane is going to turn left, or going to proceed straight through the intersection.

**2. PROPOSED SOLUTION**

Caltrans wishes to participate in the experimentation of a bicycle box. The bicycle box will not use colored pavement or any non-standard signs, however the solution will require the use of two separate stop bars, one for vehicles, and a second one for bicycles. The experiment will also include a non-standard, Bicycle Stencil pavement legend, measuring 7' wide by 8' high.

The bike box will allow bicycles to move in front of the vehicles when the light is red, thus eliminating the potential conflict between vehicles proceeding straight through the intersection, and cyclist turning left.

The City of San Luis Obispo supports the project, as does the SLO Bicycle Coalition. The City of San Luis Obispo has offered to help educate motorists and bicyclists on the use of the bike box, through their public access television channel, as well as any

Devinder Singh  
December 1, 2009  
Page 2

other opportunities such as bicycle rallies and their annual Bicycle Rodeo (a joint effort with the SLO Police Department).

### 3. OBJECTIVE

The objective of the experiment will be to determine the effectiveness of the bicycle box, which will allow bicycles to move in front of the vehicles when the light is red and possibly eliminate the potential conflict between vehicles proceeding straight and cyclist turning left.

### 4. EXPERIMENT SCHEDULE

- |                         |                                |
|-------------------------|--------------------------------|
| • Installation          | February 2010                  |
| • Experimental Period   | February 2010 to February 2011 |
| • Evaluation of Results | March 2011                     |

Thank you for considering this request for a bicycle box. Caltrans is looking forward to receiving a response from the Committee. If you have any questions or need further information, please do not hesitate to call me at (805) 503-9374.

Sincerely,



Dario A. Senior, P.E.  
Transportation Engineer

C: Thomas Schriber

Steve Price

Aileen Loe

Deb Larson

Paul McClintic

Julie Gonzalez

Colin Jones

Adam Fukushima

Peggy Mandeville, Transportation Planner, City of San Luis Obispo

Dan Rivoire, Executive Director, San Luis Obispo Bicycle Coalition

**DEPARTMENT OF TRANSPORTATION**

50 HIGUERA STREET  
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*Flex your power!  
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**PROPOSAL FOR EXPERIMENTAL USE OF A BICYCLE BOX****SCOPE**

The California Department of Transportation (Caltrans) proposes an experiment to install a bicycle box.

**WORK PLAN****Installation**

The experimental bicycle box will be installed along Route 227 (Madonna Road) in San Luis Obispo county, in the westbound direction at the intersection of Madonna Road with Higuera Street.

**Evaluation**

Effectiveness and acceptance will be measured in accordance with the time period and evaluation procedures shown below.

**Time Period**

The schedule for testing is as follows:

- |                         |                                |
|-------------------------|--------------------------------|
| • Installation          | February 2010                  |
| • Experimental Period   | February 2010 to February 2011 |
| • Evaluation of Results | March 2011                     |

**EVALUATION PROCEDURES**

The Department requests that the Committee approve the preliminary evaluation plan outlined below. Other criteria and procedures may evolve during the evaluation period. Any additional methods of evaluation or changes in procedures will be discussed in the scheduled reports submitted to the project sponsor and the Committee.

1. Installation Documentation – to be prepared by the Department
2. The Caltrans Traffic Safety Division bicycle coordinator, as well as the Planning Division bicycle coordinator, will evaluate the effectiveness of the bike box, along with help from the San Luis Obispo Bicycle Coalition and the City of San Luis Obispo.

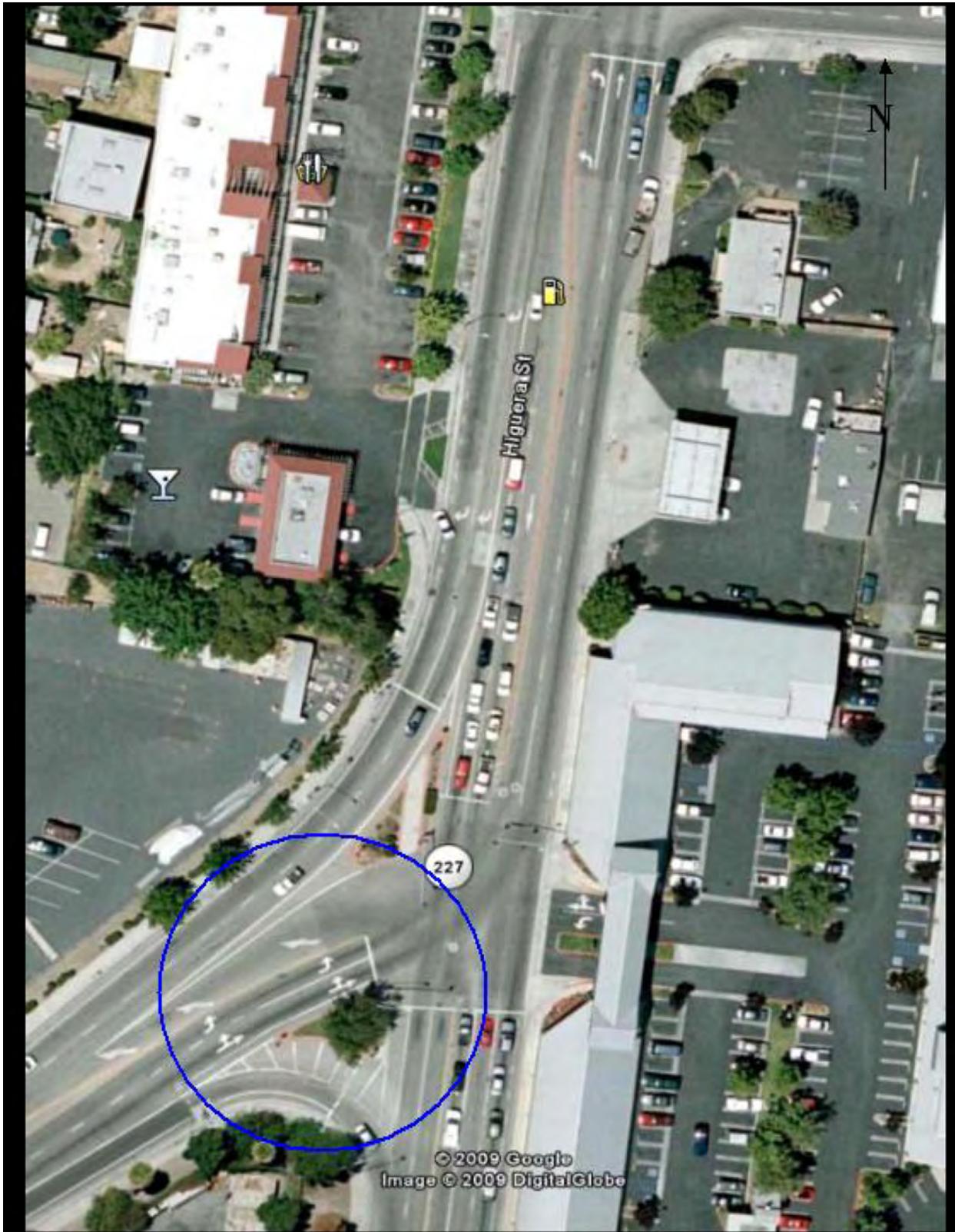
Devinder Singh  
December 1, 2009  
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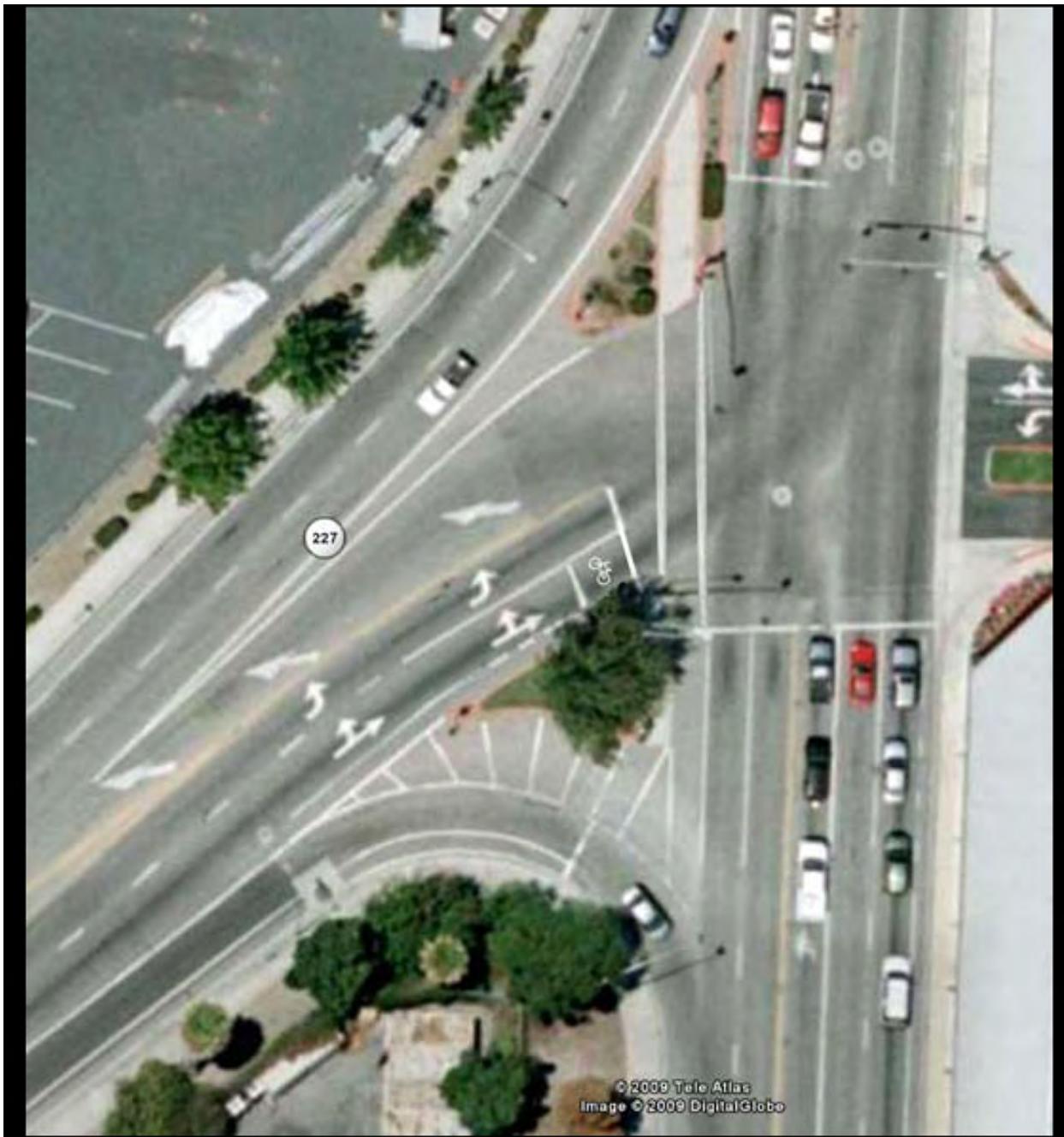
**ADMINISTRATION**

Sponsoring Agency: CA Department of Transportation  
Traffic Safety, District 5

Contact Information: Dario A. Senior, P.E.  
Transportation Engineer  
50 Higuera Street  
San Luis Obispo, CA 93401  
Tel: (805) 503-9374  
Fax:(805) 542-4705

Installations: Caltrans Maintenance Crew







**Letters in the Support of proposed Experimentation:****San Luis Obispo County Bicycle Coalition**

PO Box 14860 • San Luis Obispo, CA 93406-4860

Dan Rivoire, Executive Director  
Phone: 805-547-2055  
Email: dan@slobikelane.org

November 20, 2009

Attn: Adam Fukushima, Transportation Planner  
Caltrans District 5  
50 Higuera Street  
San Luis Obispo, CA 93401

Dear Mr. Fukushima,

The San Luis Obispo County Bicycle Coalition would like to state our support of the proposed *bike box* at the intersection of Madonna Road and South Higuera in San Luis Obispo.

Thank you for making public comment at our November board meeting. We are very excited that Caltrans is considering such an innovative project to provide safer access for cyclists traveling from southwest San Luis Obispo to the city core. The Bicycle Coalition is very concerned about safe and convenient corridors for bicycling throughout our County.

The proposed *bike box* effectively addresses the potential for collisions by inviting cyclists to take a more prominent lane position through the intersection. Cyclists taking a central lane position through the intersection will be more visible, predictable, and consequently far safer.

Thank you for the opportunity to voice our concerns on this project. We would be pleased to work with Caltrans in finding solutions as the project moves forward.

Best regards,

Dan Rivoire, *Executive Director*  
*San Luis Obispo County Bicycle Coalition*

---

*The San Luis Obispo County Bicycle Coalition is a 501(c)(3) nonprofit organization working to transform SLO County into a safer and more livable community by promoting bicycling and walking for everyday transportation and recreation. For more information, visit [www.slobikelane.org](http://www.slobikelane.org).*



995 Market Street Suite 1550  
San Francisco, CA 94103

415.431.BIKE  
415.431.2468 fax  
www.sfbike.org

PROMOTING THE BICYCLE FOR EVERYDAY TRANSPORTATION

March 4th, 2010

Ken McGuire  
Secretary, CBAC  
California Department of Transportation  
P.O. Box 942874  
Sacramento, CA 94274-0001

Dear Mr. McGuire,

On behalf of the 11,000 members of the San Francisco Bicycle Coalition, I am writing to express our support for the Caltrans request to experiment with a bike box at the intersection of Madonna Road and Higuera Street in San Luis Obispo. This proposal follows successful implementations in many cities, including San Francisco, where bike boxes have been installed in multiple locations for years. Recently, San Francisco used colored pavement to further draw attention from drivers and cyclists to the space in an effort to continue experimentation.

Portland, Oregon has installed many bike boxes using colored pavement leading up to, and continuing through, the intersection and their official study will be released shortly. Preliminary data shows that these implementations have a proven track record of improving safety for all road users, especially novice cyclists who may not feel confident in taking the lane in order to take a left or a center bike lane.

The design of these bike boxes clearly delineates a stop line for motor vehicles in the 8-foot or greater right lane with a secondary stop line, closer to the crosswalk which crosses the designated bike space. This design allows for cyclists to approach the intersection and queue in front of the waiting motorists improving visibility and safety of cyclists without crossing the advance stop line.

We are pleased that Caltrans is considering an experimental bike box to provide safer conditions for cyclists travelling from southwest San Luis Obispo to the city center. SF Bicycle Coalition supports measures that will provide safer and more convenient routes for cyclists throughout the state, especially for new and novice cyclists.

The results of the experimental bike box will be very valuable for the state and other municipalities to implement similar projects. The bike box is an opportunity for the state to explore solutions that foster a bicycle infrastructure that serves not only dedicated cyclists, but a diverse group of people and potential riders.

The proposed bike box has the potential to be effective in reducing the risk of collision between cyclists and motorists. It allows the cyclists to take a central lane position, be more visible, and act more predictably. Thus, San Francisco Bicycle Coalition is very supportive of the implementation of this bike box and looks forward to viewing its results.

Sincerely,

A handwritten signature in black ink that reads "Marc Caswell".

Marc Caswell  
Program Manager





# *San Luis Obispo Bicycle Club*



P.O. Box 1585, San Luis Obispo, CA 93406

*To promote safe and legal riding of bicycles and encourage bicycle riding as an accepted mode of transportation*

March 5, 2010

Mr. Devinder Singh  
Senior Transportation Engineer  
California Dept of Transportation  
P.O. Box 942873  
Sacramento, CA 94273-0001

Dear Mr. Singh,

RE: CalTrans proposed construction of a bike box in San Luis Obispo

The San Luis Obispo Bicycle Club Board of Directors has reviewed a proposal by CalTrans District 5 to install a bicycle box as a test at the intersection of Madonna Road and Higuera Street in San Luis Obispo.

The bike club fully supports the installation of a trial bike box to measure its effect on increased safety for bicyclists on Madonna Road as it intersects with South Higuera.

Our club has more than 500 members and we have riders on county roads and streets every day of the year. We feel this is a great location to try out a new traffic safety device. It is an intersection that, because of its design, has several points of conflict between bicyclists and motorists. We support experimenting with a bike box to help left-turning cyclists avoid conflict with motorists who are moving straight ahead.

Thank you for your support as this proposal moves forward in your approval process.

Sincerely,

Robert Fuller Davis, President



Los Angeles County Bicycle Coalition  
634 S. Spring St. Suite 821  
Los Angeles, CA 90014  
Phone 213.629.2142  
Facsimile 213.629.2259  
www.la-bike.org

March 9, 2010

Ken McGuire  
Secretary, CBAC  
California Department of Transportation  
P.O. Box 942874  
Sacramento, CA 94274-0001

Dear Mr. McGuire,

Los Angeles County Bicycle Coalition (LACBC) would like to state its support for the installation of a bike box at the intersection of Madonna Road and Higuera Street in San Luis Obispo.

We are pleased that Caltrans is considering an experimental bike box to provide safer conditions for cyclists travelling from southwest San Luis Obispo to the city center. LACBC supports measures that will provide safer and more convenient routes for cyclists throughout the state.

The results of the experimental bike box will be very valuable for the state and other municipalities to implement similar boxes. The bike box is a valuable opportunity for the state to explore solutions that foster a bicycle infrastructure that serves not only dedicated cyclists, but a diverse group of people.

The proposed bike box has the potential to be effective in reducing the risk of collision between cyclists and motorists. It allows the cyclists to take a central lane position, be more visible, and act more predictably. Thus, LACBC is extremely supportive of the implementation of this bike box and looks forward to viewing its results.

Thank you for the opportunity to voice our concerns for this project. We would be pleased to work with Caltrans in finding solutions as the project moves forward.

Sincerely,

A handwritten signature in blue ink that reads "Jennifer Klausner".

Jennifer Klausner  
Executive Director  
Los Angeles County Bicycle Coalition

**Comments from CABO on the proposed Bike Box Experiment:**

**California Association of Bicycling Organizations  
Headquarters: PO Box 2684 • Dublin, CA 94568**

*Please reply to:*

Jim Baross  
3335 N Mountain View Dr  
San Diego, CA 92116-1738

March 9, 2010

Devinder Singh, Secretary  
California Traffic Control Devices Committee – MS36  
P.O. Box 942874, Sacramento, CA-94274-0001

Subject: Item 10-4  
Experiment with Bicycle Box at Signalized Intersection

by email to <devinder\_singh@dot.ca.gov>

Dear Mr. Singh:

The California Association of Bicycling Organizations (CABO) is encouraged that attention is being directed toward increasing the safety and effectiveness of roadway design and operation toward making bicycling a more desirably transportation mode choice for more people. California's traffic control devices, roadway design standards and operations could certainly be made something closer to the bicycling and walking friendly "Complete Streets" concepts that the legislature has decided will be a model for our future.

However we have several concerns about the Bike Box RTE that was on the agenda of the January CTCDC meeting and will again be on the agenda of the April CTCDC meeting. We understand that the RTE has not changed since the January meeting. We have reviewed that RTE. We have participated in informal discussions with the Bike Box proponents at two meetings of the California Bicycle Advisory Committee and at a previous CTCDC meeting. We have reports from our members about their experiences with the City of Long Beach experiments with Bike Boxes, and I have personally conducted bicycling instructor training groups through the subject intersection in San Luis Obispo.

We have the following suggestions for changes and additions in the RTE in order to more completely meet the guidance in Section 1A-10 of the CA MUTCD:

1. Work Plan: Add the following:
  - a. A detailed description of the proposed plan of study;
  - b. The variables that are to be measured;
  - c. The criteria against which the device is to be evaluated;
  - d. Observations, measures and data which will be collected;

- e. Whether a before-after study will be conducted;
  - f. How installations of the experimental device or application will be made;
  - g. The indication if any adverse effects on safety or traffic operations can be anticipated, together with the means that may be taken to minimize them; and
  - h. The factors which will be held constant or measured and controlled in order to ensure that the true effects of the device are measured.
2. Supporting Data: Include any supporting data explaining how the traffic control device was developed, if it has been tried, in what ways it was found to be adequate or inadequate, and how this choice of device or application was derived.
  3. Time Periods: Indicate the time periods over which the experimentation will take place. The CA MUTCD says that time periods for experimentation will normally not be less than six months nor more than two years.
  4. Evaluation Personnel: Indicate who will be the Principal Investigator for the evaluation study along with his/her institution, professional engineering credentials, history performing similar studies, etc. Indicate the specialists, from whom advice will be sought, such as human factor experts, statisticians, etc.
  5. Reporting: Include an agreement to provide a written status report 45 days before each CTCDC meeting during the duration of the experiment and a written final report within 90 days of the completion date of the experiment.
  6. Removal of Experimentation Installations: Include an agreement to remove all experimental installations either upon termination of the experiment (unless specific permission is given for continued operation) or when a decision is made by the California Traffic Control Devices Committee that the device is not warranted.

We also have several questions about the proposed desired and/or expected behaviors for bicyclists and motorists at the Bike Box.

In particular, CABO is concerned that the proposed operation of the Bicycle Box has not been fully described. For instance, what happens when a bicyclist approaches the Bicycle Box in the Bike Lane as the traffic signal is turning green? Will the bicyclist be expected and be able to merge safely into the travel lane in order to avoid the conflict that the Bicycle Box is intended to avoid?

Also, is the Bicycle Box and the planned adjacent area that looks like a Bike Lane to be considered a Bike Lane and thus subject to CVC 21208, which requires a bicyclist traveling slower than the speed of traffic to use the Bike Lane (with several exceptions). We are particularly concerned for those bicyclists who would otherwise, legally and with relative safety, desire to merge with normal through traffic without the presence of the Bicycle Box. Will the Bicycle Box pavement markings include a Bike Lane stripe that is dashed and/or dropped within 200 feet of the intersection? If the Bike Lane stripe is not dashed or dropped, will it encourage left-turning bicyclists to stay too far to the right, in potential conflict with motorists continuing into the driveway?

The proposed experiment in SLO is at an intersection where right turns are not allowed and where very few straight-through movements occur (into a shopping center driveway) – a relatively non-standard facility. What if any general applicability potential is expected to be discovered for the potential uses of a Bike Box at more normally designed/operated intersections where right turns are allowed and potential turning conflicts will be able to be observed?

CABO has proposed an alternative experimental approach for addressing the bicycle travel difficulties that are sought to be addressed by this RTE; the difficulty for bicyclists and motorists to each sort out lane positioning for their intended destinations. We propose the experimental use of two traffic control devices that were suggested at CBAC and that are included in the new 2009 Federal MUTCD but not yet in the CA-MUTCD: the Bikes May Use Full Lane sign (for use where a travel lane is too narrow for side-by-side sharing between a motor vehicle and a bicycle) and the expanded allowance for use of the Shared Lane Markings (in the absence of adjacent on-street vehicular parking). The use of these devices at approach to this intersection would directly address the problems that SLO and local Caltrans District staff wish to address without apparently requiring somewhat radical changes to normal traffic movements. Both of these devices – the Bike May Use Full Lane sign and Shared Lane Markings – are intended to encourage and show authorization for bicyclists to join the orderly and normal flow of traffic. Since these two new devices will be under consideration for inclusion in the next CA-MUTCD, it would certainly be appropriate to have some California experiment experience with these while deliberating whether to include them in the CA-MUTCD.

CABO therefore encourages the CTCDC to require modification of the RTE. One way to accomplish this might be to refer the RTE to a subcommittee of CTCDC or to CBAC. The referral should include direction for assisting Caltrans District 5 staff to incorporate the elements described in Section 1A.10 of the CA MUTCD and possibly to change the experiment to one involving use of the Bikes May Use Full Lane sign and Shared Lane Markings.

Sincerely,

A handwritten signature in black ink, appearing to read "Jim Baross", written over a light yellow rectangular background.

Jim Baross  
CABO President

Email: <jimbaross@cox.net>

**06-5 Clear The Way Signage (Drive Damaged Vehicle to Shoulder)****Clear the Way Campaign  
Executive Summary**

On February 15, 2007, the California Traffic Control Devices Committee (CTCDC) approved the Bay Area Incident Management Task Force (IMTF) to install “Clear the Way” signage along a 20-mile segment of Interstate 880 as part of an experimental demonstration. The project is an effort to increase public awareness of a pre-existing “Clear the Way” (CTW) law passed in 1999, which requires motorists involved in collisions with only minor property damage to move out of the main travel lanes. Additionally, the signage demonstration aimed to reduce the occurrence of secondary collisions caused by inattentive drivers distracted by minor incidents. The specific goals and objectives targeted by the signage demonstration, which was conducted from July 2008 to June 2009, are as follows:

- Educate motorists on the “Clear the Way” law;
- Reduce the number of secondary collisions;
- Reduce delay and loss of productivity caused by minor incidents; and
- Improve operational efficiency and mobility within a major trade corridor.

Motorist survey results suggest that few people to this date are aware of this law. However, preliminary findings show that the percentage of people who knew of the law increased after the installation of the CTW signs. At the same time, there has not been any evidence implying that the signage was a cause of distraction to drivers.

Driver adaptation to a traffic control or safety implementation takes time. The IMTF believes that through an ongoing education campaign, public awareness of the CTW law will be increased in the longer term. As drivers adopt a “clear the way habit” in their driving culture, the occurrence of secondary collisions, and thus the total number of collisions, will be reduced. It is therefore recommended that the CTCDC approves this signage for statewide deployment.

**Final Report has been posted on the CTCDC website as an “Attachment A”.**

<http://www.dot.ca.gov/hq/traffops/signtech/newtech/agenda.htm>

**6. Information Item****10-02 Proposal to amend existing typical applications and adopt new typical applications for accommodating bicyclists in TTC zones and to Revise CA MUTCD Sections 6D.101(CA) and 6G.05 and added a new Table 6H-1(CA).**

Caltrans has revised this item to address the Committee's concerns and comments provided at the previous meeting in San Diego to amend typical applications as well as add new typical applications for accommodating bicyclists in TTC zones into the California MUTCD.

*The key change was to remove the "optional" designation for the bike signs and explain their application in notes (on typical applications) similar to the Section 6G.05 text recommending their usage if existing bicycle facilities are disrupted or closed and the project is long term.*

**Agency Making Request/Sponsor:** Caltrans

**Background:**

California's Strategic Highway Safety Plan, or SHSP, is a statewide, comprehensive, data-driven plan that provides a coordinated framework for reducing fatalities and serious injuries on California's public roads. The SHSP establishes statewide goals, objectives, and strategies to address California's safety needs. The SHSP identifies 152 key actions in 16 Challenge Areas to meet these needs.

See the attached SHSP Fact Sheet for more details.

This proposal is a result of two of these 152 specific key actions. Representatives on the statewide SHSP Challenge Areas 13 (Improve Bicycling Safety) and 14 (Enhance Work Zone Safety) teams have extensively discussed the topic and developed this proposal over several meetings throughout this year. Following are the specific SHSP identified actions pursuant to which this recommendation is being made:

- 13.6 - Provide improved guidance and standards in the CAMUTCD for safely accommodating bicyclists in work zones.
- 14.12 - Encourage present efforts to improve access and detours for bicyclists and pedestrians near work zones.

Following are some excerpts pertaining to these recommendations that were specifically identified in the Safety Needs Action Plan (SNAP) for Challenge Area 13 & 14 and key actions 13.6 & 14.12:

*"Develop more detailed plans to accommodate bicyclists in work zones."*

*"Additional designs needed to better address bicyclists in work zones."*

*"By improving the designs of traffic control in work areas to accommodate pedestrians and bicycles, non-compliance for these two groups will be reduced and correspondingly so will their risk of injury."*

*"The CA MUTCD currently has standards and guidance to accommodate pedestrians. It can be anticipated that any typical applications developed to accommodate bicycles should not be as expensive to implement as those for pedestrians."*

*"Standards and guidance for pedestrians exists but needs to be applied in the field. More work is needed to provide the same level of detail for bicycles."*

*“Work with FHWA, Caltrans, Challenge Area 14 and the National Committee on Uniform Traffic Control Devices, Bicycle Technical Committee to improve the Manual of Uniform Traffic Control Devices (MUTCD), Part 6, Temporary Traffic Control, to provide improved guidance and standards by incorporating bicycle travel considerations in all situations where bicycle travel is permitted.”*

*“The California MUTCD emphasizes the importance of accommodating bicyclists and pedestrian in work zones but does not provide sufficient guidance on bicycles. Implementation of this strategy will provide better tools.”*

This proposal was reviewed by the California Bicycle Advisory Committee (CBAC) at their October and December meetings and reflects their comments and suggestions. At the December 3, 2009 meeting of the CBAC, the committee reviewed the finalized proposal and recommended approval and support for placing it on the CTCDC agenda. CTCDC reviewed and discussed this item at their January 21, 2010 meeting in San Diego.

**Proposal:**

The existing California MUTCD policy is shown below in black text (National MUTCD) and blue text (CA MUTCD additions/edits), while amendments/additions per this proposal are shown in red text.

**The following existing Typical Applications are being amended per this proposal:**

- Notes & Figure 6H-15 - Work in Center of Road with Low Traffic Volumes
- Notes & Figure 6H-30 - Interior Lane Closure on Multi-lane Street
- Notes & Figure 6H-32(CA) - Half Road Closure on Multi-lane, High-Speed Highway
- Notes & Figure 6H-36(CA) – Lane Shift on Freeway

**Following are new typical applications that are being added to the CA MUTCD per this proposal:**

- Notes & Figure 6H-101(CA) - Shoulder Closure on Urban (Low Speed) locations to accommodate bicyclists
- Notes & Figure 6H-102(CA) – Lane Closure on Freeway, Expressway, Rural and Urban (High Speed) locations to accommodate bicyclists
- Notes & Figure 6H-103(CA) – Detour for One Travel Direction on Bike Lane Roadway Closure
- Notes & Figure 6H-104(CA) - Right Lane Closure on Bike Lane at Far Side of Intersection

In addition, changes are being proposed to existing Sections 6D.101(CA) and 6G.05 and a new Table 6H-1(CA) is being added.

[Section 6D.101\(CA\) Bicycle Considerations](#)

Support:

There are several considerations in planning for bicyclists in TTC zones on highways and streets:

- A travel route that replicates the most desirable characteristics of a wide paved shoulder or bikeway through or around the traffic control zone is desirable for bicyclists.
- If the traffic control zone interrupts the continuity of an existing bikeway system, signs directing bicyclists through or around the zone and back to the bikeway is desirable.

- Unless a separate bike path through or around the traffic control zone is provided, adequate roadway lane width to allow bicyclists and motor vehicles to travel side by side through or around the zone is desirable.
- Bicyclists must not be led into direct conflicts with mainline traffic, work site vehicles, or equipment moving through or around the traffic control zone.

Figures 6H-15(CA), 6H-30(CA), 6H-32(CA), 6H-36(CA), 6H-101(CA), 6H-102(CA), 6H-103(CA), and 6H-104(CA) show typical TTC device usage and techniques for bicycle movement through work zones.

### **Section 6G.05 Work Affecting Pedestrian and Bicycle Facilities**

#### **Support:**

It is not uncommon, particularly in urban areas, that road work and the associated TTC will affect existing pedestrian or bicycle facilities. It is essential that the needs of all road users, including pedestrians with disabilities, are considered in TTC zones.

In addition to specific provisions identified in Sections 6G.06, 6G.07, 6G.08, 6G.10, 6G.11, 6G.12, and 6G.13, there are a number of provisions that might be applicable for all of the types of activities identified in this Chapter.

#### **Guidance:**

Where pedestrian or bicycle usage is high, the typical applications should be modified by giving particular attention to the provisions set forth in Chapters 6D and 6G, Section 6F.68, and in other Sections of Part 6 related to accessibility and detectability provisions in TTC zones.

Pedestrians should be separated from the worksite by appropriate devices that maintain the accessibility and detectability for pedestrians with disabilities.

Bicyclists and pedestrians should not be exposed to unprotected excavations, open utility access, overhanging equipment, or other such conditions.

Except for short duration and mobile operations, when a highway shoulder is occupied, a SHOULDER WORK sign should be placed in advance of the activity area. When work is performed on a paved shoulder 2.4 m (8 ft) or more in width, channelizing devices should be placed on a taper having a length that conforms to the requirements of a shoulder taper. Signs should be placed such that they do not narrow any existing pedestrian passages to less than 1200 mm (48 in).

Except for short duration and mobile operations, when a highway shoulder is occupied, and bicyclists have to share traveled way with vehicular traffic, a combination of Bicycle crossing (W11-1) and SHARE THE ROAD (W16-1) plaque should be placed in advance of the activity area. When work is performed on a paved shoulder 2.4 m (8 ft) or more in width, channelizing devices should be placed on a taper having a length that conforms to the requirements of a shoulder taper. Signs should be placed such that they do not block the bicycle path and they do not narrow any existing pedestrian passages to less than 1200 mm (48 in).

Pedestrian detours should be avoided since pedestrians rarely observe them and the cost of providing accessibility and detectability might outweigh the cost of maintaining a continuous route. Whenever possible, work should be done in a manner that does not create a need to detour pedestrians from existing routes or crossings.

#### **Standard:**

Where pedestrian **and/or bicycle** routes are closed, alternate pedestrian **and/or bicycle** routes shall be provided.

When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, the temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.

#### **Guidance:**

When existing bicycle facilities are disrupted or closed, information and devices contained in Figures 6H-101(CA) through 6H-104(CA), as appropriate per situation encountered, should be used to consider the needs and control of bicyclists through a TTC zone.

**Table 6H-1. Index to Typical Applications (Sheet 2 of 2)**

Typical Application Description	Typical Application Number
<b>Work Within the Traveled Way of Multi-lane, Nonaccess Controlled Highways (see Section 6G.12)</b>	
Interior Lane Closure on Multi-lane Street	TA-30
Lane Closure on Street with Uneven Directional Volumes	TA-31
Half Road Closure on Multi-lane, High-Speed Highway	TA-32
Lane Closure on Divided Highway	TA-33
Lane Closure with Temporary Traffic Barrier	TA-34
Mobile Operation on Multi-lane Road	TA-35
<b>Work Within the Traveled Way of Expressways and Freeways (see Section 6G.14)</b>	
Lane Shift on Freeway	TA-36
Double Lane Closure on Freeway	TA-37
Interior Lane Closure on Freeway	TA-38
Median Crossover on Freeway	TA-39
Median Crossover for Entrance Ramp	TA-40
Median Crossover for Exit Ramp	TA-41
Work in Vicinity of Exit Ramp	TA-42
Partial Exit Ramp Closure	TA-43
Work in Vicinity of Entrance Ramp	TA-44
Temporary Reversible Lane Using Movable Barriers	TA-45
<b>Work in the Vicinity of Highway-Rail Grade Crossings (see Section 6G.19)</b>	
Work in Vicinity of Highway-Rail Grade Crossing	TA-46

**Table 6H-1(CA). Index to Typical Applications**

Typical Application Description	Typical Application Number
<b>Work affecting Pedestrian and Bicycle Facilities (see Section 6G.05)</b>	
Shoulder Closure on Urban (Low Speed) Locations to Accommodate Bicyclists	TA-101(CA)
Lane Closure on Freeway, Expressway, Rural and Urban (High Speed) Locations to Accommodate Bicyclists	TA-102(CA)
Detour for One Travel Direction on Bike Lane Roadway Closure	TA-103(CA)
Right Lane Closure on Bike Lane at Far Side of Intersection	TA-104(CA)

**Notes for Figure 6H-15 – Typical Application 15****Work in Center of Road with Low Traffic Volumes****Guidance:**

1. The lanes on either side of the center work space should have a minimum width of 3 m (10 ft) as measured from the near edge of the channelizing devices to the edge of pavement or the outside edge of paved shoulder.
2. Workers in the roadway should wear high-visibility safety apparel as described in Section 6D.03.

**Option:**

3. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.
4. If the closure continues overnight, warning lights may be used on the channelizing devices.
5. A lane width of 2.7 m (9 ft) may be used for short-term stationary work on low-volume, low-speed roadways when motor vehicle traffic does not include longer and wider heavy commercial vehicles.

**Standard:**

**Note 5 is not applicable for State highways. Note #1 shall be used instead for State highways.**

**Option:**

6. A work vehicle displaying high-intensity rotating, flashing, oscillating, or strobe lights may be used instead of the channelizing devices forming the tapers or the high-level warning devices.
7. Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.

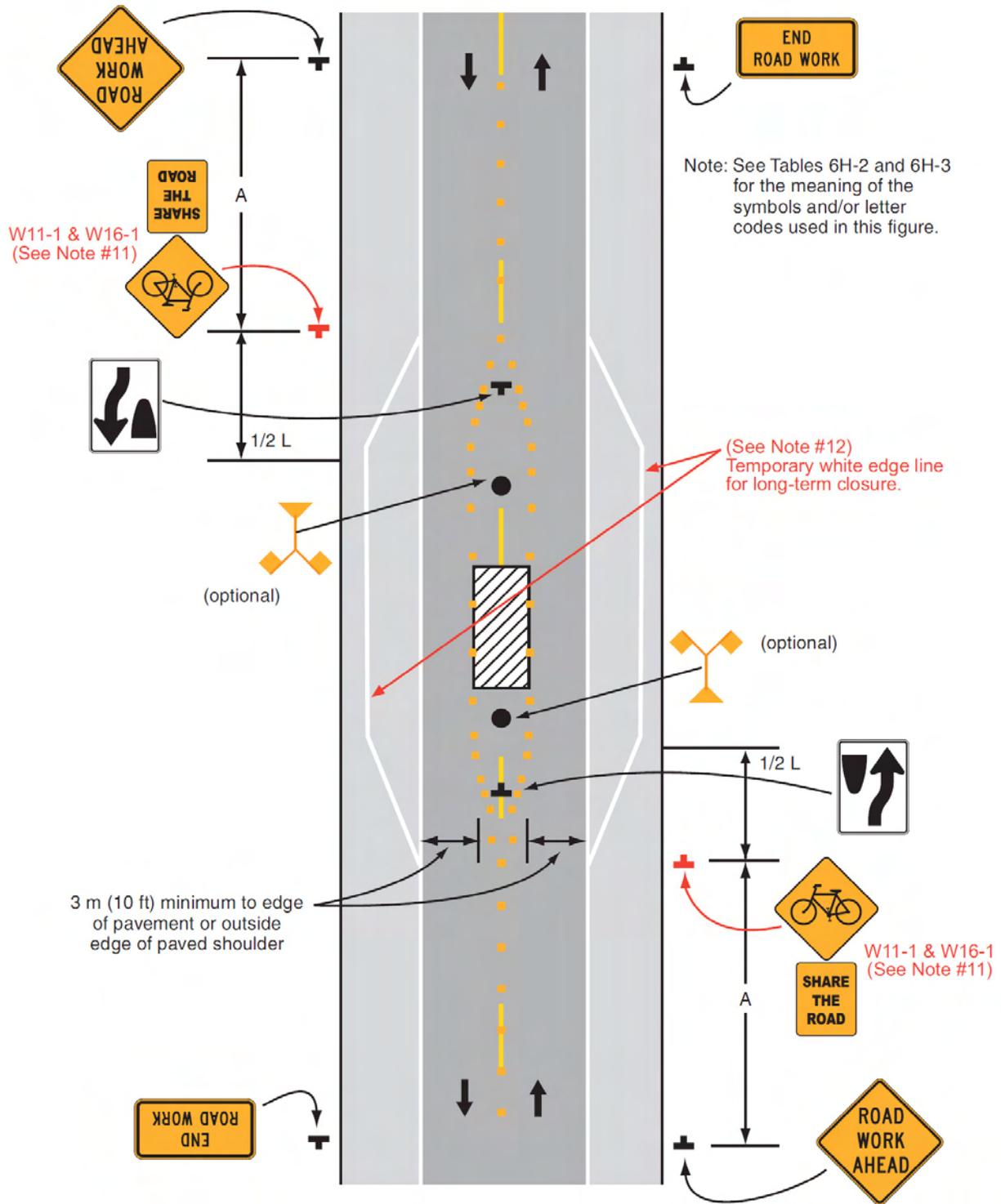
**Standard:**

**8. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.**

**Guidance:**

9. All advance warning signs should be placed so that the path for bicycles is not blocked while maintaining visibility for road users.
10. When existing bicycle facilities are disrupted or closed in a long-term duration project and the roadway width is inadequate for allowing bicyclists and motor vehicles to travel side by side, the Bicycle Crossing (W11-1) sign and the SHARE THE ROAD (W16-1) plaque should be used to advise motorists of the presence of bicyclists in the travel way lanes.
11. When existing bicycle facilities are disrupted or closed in a long-term duration project, the temporary white edge line should be used on the shoulder to indicate the use of a portion of the shoulder as a traveled way lane.

Figure 6H-15. Work in Center of Road with Low Traffic Volumes (TA-15)



Typical Application 15

**Notes for Figure 6H-30 – Typical Application 30****Interior Lane Closure on Multi-lane Street**

## Guidance:

1. This information applies to low-speed, low-volume urban streets. Where speed or volume is higher, additional signing such as LEFT LANE CLOSED XX ~~m~~(FT) should be used between the signs shown.

## Option:

2. The closure of the adjacent interior lane in the opposing direction may not be necessary, depending upon the activity being performed and the work space needed for the operation.
3. Shadow vehicles with a truck-mounted attenuator may be used.

## Guidance:

4. When a highway-rail grade crossing exists within or upstream of the transition area and it is anticipated that backups resulting from the lane closure might extend through the highway-rail grade crossing, the TTC zone should be extended so that the transition area precedes the highway-rail grade crossing.
5. Early coordination with the railroad company should occur before work starts.

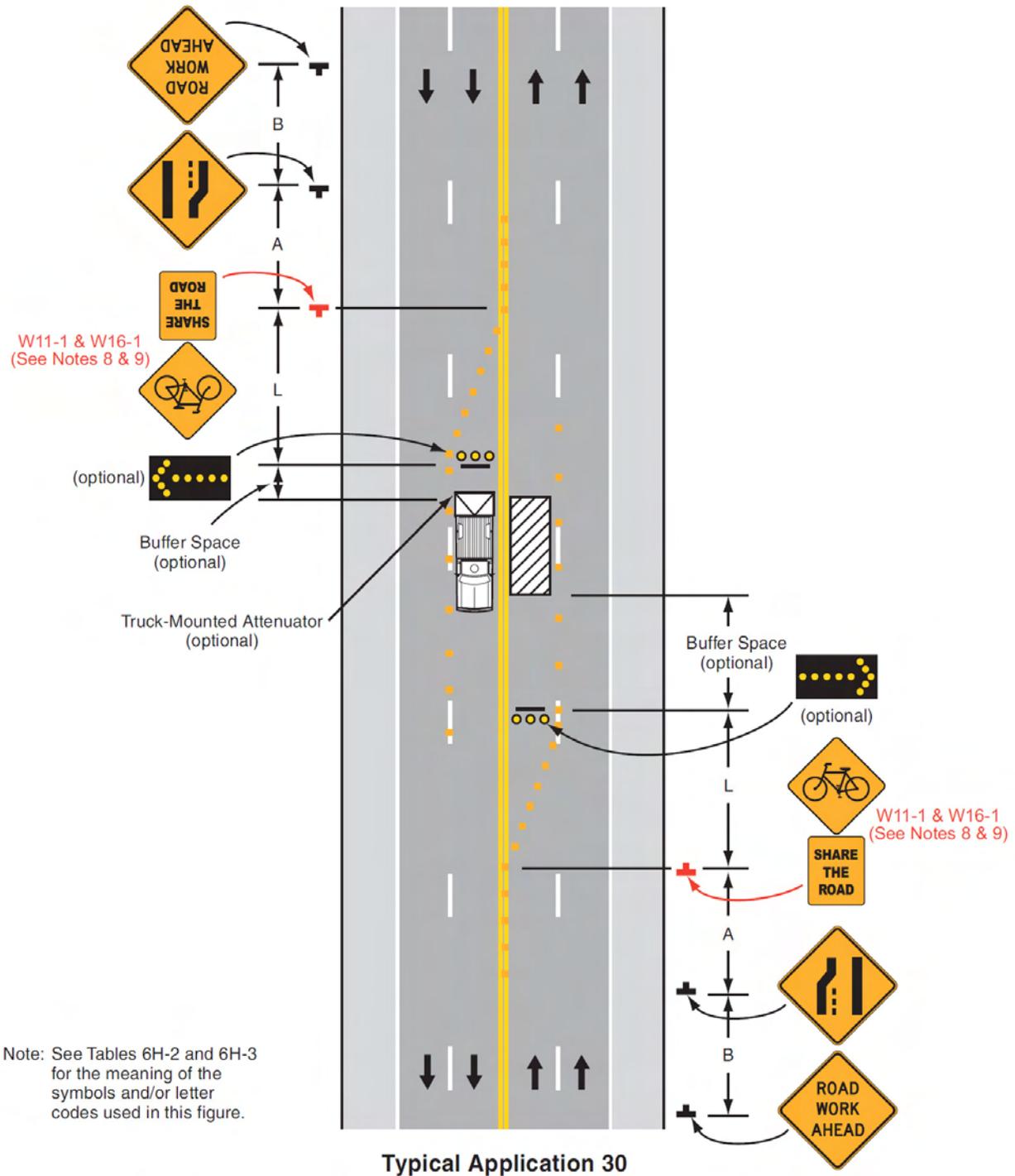
## Option:

6. The RIGHT (LEFT) LANE(S) CLOSED (W20-5) sign may be used instead of the Lane Reduction (W4-2) sign.

## Guidance:

7. All advance warning signs should be placed so that the path for bicycles is not blocked, while maintaining visibility for road users.
8. When existing bicycle facilities are disrupted or closed in a long-term duration project and the roadway width is inadequate for allowing bicyclists and motor vehicles to travel side by side, the Bicycle Crossing (W11-1) sign and the SHARE THE ROAD (W16-1) plaque should be used to advise motorists of the presence of bicyclists in the travel way lanes.
9. If bicyclists are able to use the shoulder throughout the TTC zone, SHARE THE ROAD (W16-1) plaque should be omitted and only the Bicycle Crossing (W11-1) sign should be used.

Figure 6H-30. Interior Lane Closure on Multi-lane Street (TA-30)



**Notes for Figure 6H-32(CA)—Typical Application 32****Half Road Closure on Multi-lane, High-Speed Highway****Standard:**

- 1. Pavement markings no longer applicable shall be removed or obliterated as soon as practical.**

**Except for intermediate-term and short-term situations, temporary markings shall be provided to clearly delineate the temporary travel path. For short-term and intermediate-term situations where it is not feasible to remove and restore pavement markings, channelization shall be made dominant by using a very close device spacing.**

**Guidance:**

2. When paved shoulders having a width of 2.4 m (8 ft) or more are closed, channelizing devices should be used to close the shoulder in advance of the merging taper to direct vehicular and bicycle traffic to remain within the traveled way.
3. Where channelizing devices are used instead of pavement markings, the maximum spacing should be  $0.1 S$  meters where  $S$  is the speed in km/h ( $0.5 S$  feet where  $S$  is the speed in mph). The spacing of channelizing devices should not exceed the maximum distances shown in Table 6F-102(CA). Refer to Section 6F.58 for spacing of channelizing devices.
4. If the tangent distance along the temporary diversion is more than 180 m (600 ft), a Reverse Curve sign, left first, should be used instead of the Double Reverse Curve sign, and a second Reverse Curve sign, right first, should be placed in advance of the second reverse curve back to the original alignment.

**Option:**

5. Warning lights may be used to supplement channelizing devices at night.

**Guidance:**

6. When a highway-rail grade crossing exists within or upstream of the merging taper and it is anticipated that backups resulting from the lane closure might extend through the highway-rail grade crossing, the TTC zone should be extended so that the merging taper precedes the highway-rail grade crossing.
7. When a highway-rail grade crossing exists within the activity area, provisions should be made to provide road users operating on the left side of the normal centerline with comparable warning devices as supplied for road users operating on the right side of the normal centerline.
8. When a highway-rail grade crossing exists within the activity area, early coordination with the railroad company should occur before work starts.

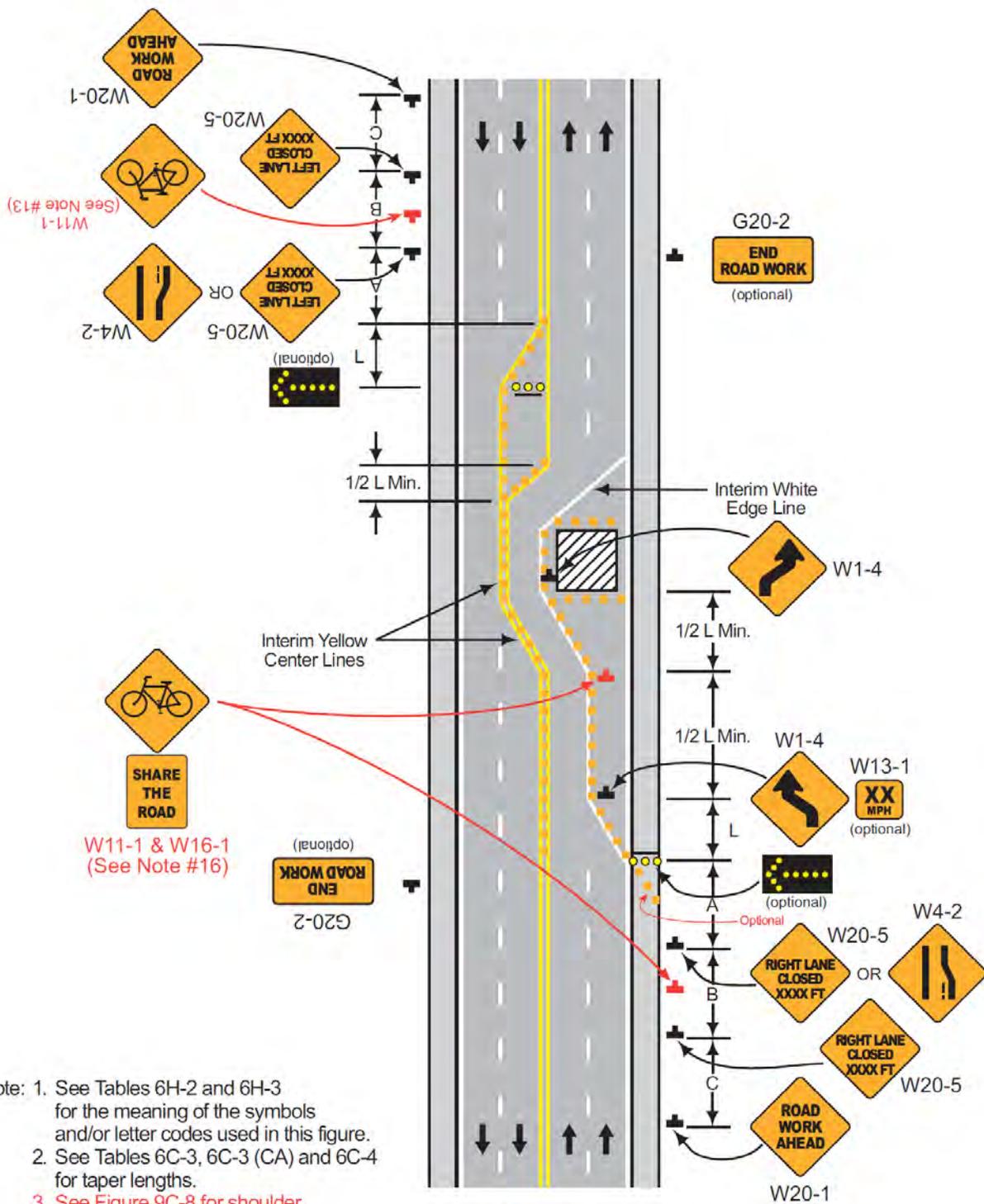
**Option:**

9. When a highway-rail grade crossing exists within the activity area, a flagger may be used at the highway-rail grade crossing to minimize the probability that vehicles are stopped within 4.6 m (15 ft) of the highway-rail grade crossing, measured from both sides of the outside rails.
10. A truck-mounted attenuator may be used on the work vehicle and/or the shadow vehicle.
11. On State highways a maximum channelizing device spacing of 3 m (10 ft) should be used for taper and tangent sections.
12. All advance warning signs should be placed so that the path for bicycles is not blocked, while maintaining visibility for road users.
13. If bicyclists are using the shoulder, SHARE THE ROAD (W16-1) plaque should be omitted and only the Bicycle Crossing (W11-1) sign should be used.
14. The speeds used for the shoulder taper calculations should be of bicyclists in the project vicinity or if a special event such as a bike race, the expected speed of bicyclists approaching the TTC zone.
15. If bicyclists are sharing the traveled way lanes with motorists, speed reduction countermeasures should be used to reduce traffic speeds in the TTC zone. Refer to Sections 6C.01 and 6D.03.
16. When existing bicycle facilities are disrupted or closed in a long-term duration project and the roadway width is inadequate for allowing bicyclists and motor vehicles to travel side by side, the Bicycle Crossing (W11-1) sign and

the SHARE THE ROAD (W16-1) plaque should be used to advise motorists of the presence of bicyclists in the travel way lanes.



Figure 6H-32 (CA). Half Road Closure on Multilane, High-Speed Highway (TA-32)



- Note: 1. See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.  
 2. See Tables 6C-3, 6C-3 (CA) and 6C-4 for taper lengths.  
 3. See Figure 9C-8 for shoulder taper lengths.

Typical Application 32

**Notes for Figure 6H-36—Typical Application 36****Lane Shift on Freeway****Guidance:**

1. The lane shift should be used when the work space extends into either the right or left lane of a divided highway and it is not practical, for capacity reasons, to reduce the number of available lanes.
2. When a lane shift is accomplished by using (1) geometry that meets the design speed at which the permanent highway was designed, (2) full normal cross-section (full lane width and full shoulders), and (3) complete pavement markings, then only the initial general work-zone warning sign is required.
3. When the conditions in Note 2 are not met, the information shown in the typical application should be employed and all the following notes apply.

**Standard:**

4. **Where temporary traffic barriers are installed, the ends of the barrier shall be treated in accordance with the provisions of Section 6F.81.**
5. **A warning sign shall be used to show the changed alignment.**

**Guidance:**

6. Where the shifted section is longer than 180 m (600 ft), one set of Reverse Curve signs should be used to show the initial shift and a second set should be used to show the return to the normal alignment. If the tangent distance along the temporary diversion is less than 180 m (600 ft), the Double Reverse Curve sign should be used instead of the first Reverse Curve sign. The second Reverse Curve sign should be omitted. [Use the Reverse Curve \(W1-4\) signs for both locations instead of the Double Reverse Curve \(W24-1\) sign.](#)
7. If a STAY IN LANE sign is used, then solid white lane lines should be used.

**Standard:**

8. **The minimum width of the shoulder lane shall be 3 m (10 ft).**
9. **For long-term stationary work, existing conflicting pavement markings shall be removed and temporary markings shall be installed before traffic patterns are changed.**

**Option:**

10. For short-term stationary work, lanes may be delineated by channelizing devices or removable pavement markings instead of temporary pavement markings.
11. ~~Three Lane Reverse Curve signs may be used in place of the Reverse Curve signs.~~ ALL LANES THRU supplemental plaques may be used to emphasize the point that all lanes shift and no lanes are closed. [Use the Reverse Curve \(W1-4\) signs instead of the Reverse Curve \(W1-4a & W1-4b\) signs which show the number of lanes or ALL LANES THRU Plaque.](#)
12. If the shoulder cannot adequately accommodate trucks, trucks may be directed to use the travel lanes.
13. The barrier shown in this typical application is one method that may be used to close a lane for a long-term project.

**Guidance:**

14. The use of a barrier should be based on engineering judgment.

**Option:**

15. Type C Steady-Burn warning lights may be placed on channelizing devices and the barrier parallel to the edge of pavement for nighttime lane closures.
16. [Detail 11 \(see Figure 3A-102\(CA\)\) may be used instead of the temporary solid white lane line, which is shown in Figure 6H-36.](#)

**Guidance:**

17. [All advance warning signs should be placed so that the path for bicycles is not blocked, while maintaining visibility for road users.](#)
18. [When existing bicycle facilities are disrupted or closed in a long-term duration project and the roadway width is inadequate for allowing bicyclists and motor vehicles to travel side by side, the Bicycle Crossing \(W11-1\) sign and](#)

the SHARE THE ROAD (W16-1) plaque should be used to advise motorists of the presence of bicyclists in the travel way lanes.

19. If bicyclists are sharing the traveled way lanes with motorists, speed reduction countermeasures should be used to reduce traffic speeds in the TTC zone. Refer to Sections 6C.01 and 6D.03.
20. If bicyclists are sharing the traveled way lanes with motorists, the outside shoulder should be widened to allow bicyclists and motor vehicles to travel side by side through the TTC zone.
21. If traffic volumes make it feasible, the two left lanes should be merged into one lane to avoid using the shoulder as a traveled way lane and allowing continued use for emergency purposes and bicycle travel.
22. When existing bicycle facilities are disrupted or closed in a long-term duration project and the roadway width is inadequate for allowing bicyclists and motor vehicles to travel side by side, a separate path should be considered for bicyclists.



**Notes for Figure 6H-101CA) – Typical Application 101(CA)****Shoulder Closure on Urban (Low Speed) locations to accommodate bicyclists****Guidance:**

1. When existing bicycle facilities are disrupted or closed, information and devices contained in Figures 6H-101(CA) through 6H-104(CA), as appropriate per situation encountered, should be used to consider the needs and control of bicyclists through a TTC zone.
2. SHOULDER CLOSED signs should be used on limited-access roadways where there is no opportunity for disabled vehicles to pull off the roadway.
3. If drivers cannot see a pull-off area beyond the closed shoulder, information regarding the length of the shoulder closure should be provided in feet or miles, as appropriate.
4. The use of a temporary traffic barrier should be based on engineering judgment.

**Standard:**

- 5. Where temporary traffic barriers are installed, the ends of the barrier shall be treated in accordance with the provisions of Section 6F.81.**

**Option:**

6. The barrier shown in this typical application is an example of one method that may be used to close a shoulder of a long-term project.
7. The warning lights shown on the barrier may be used.

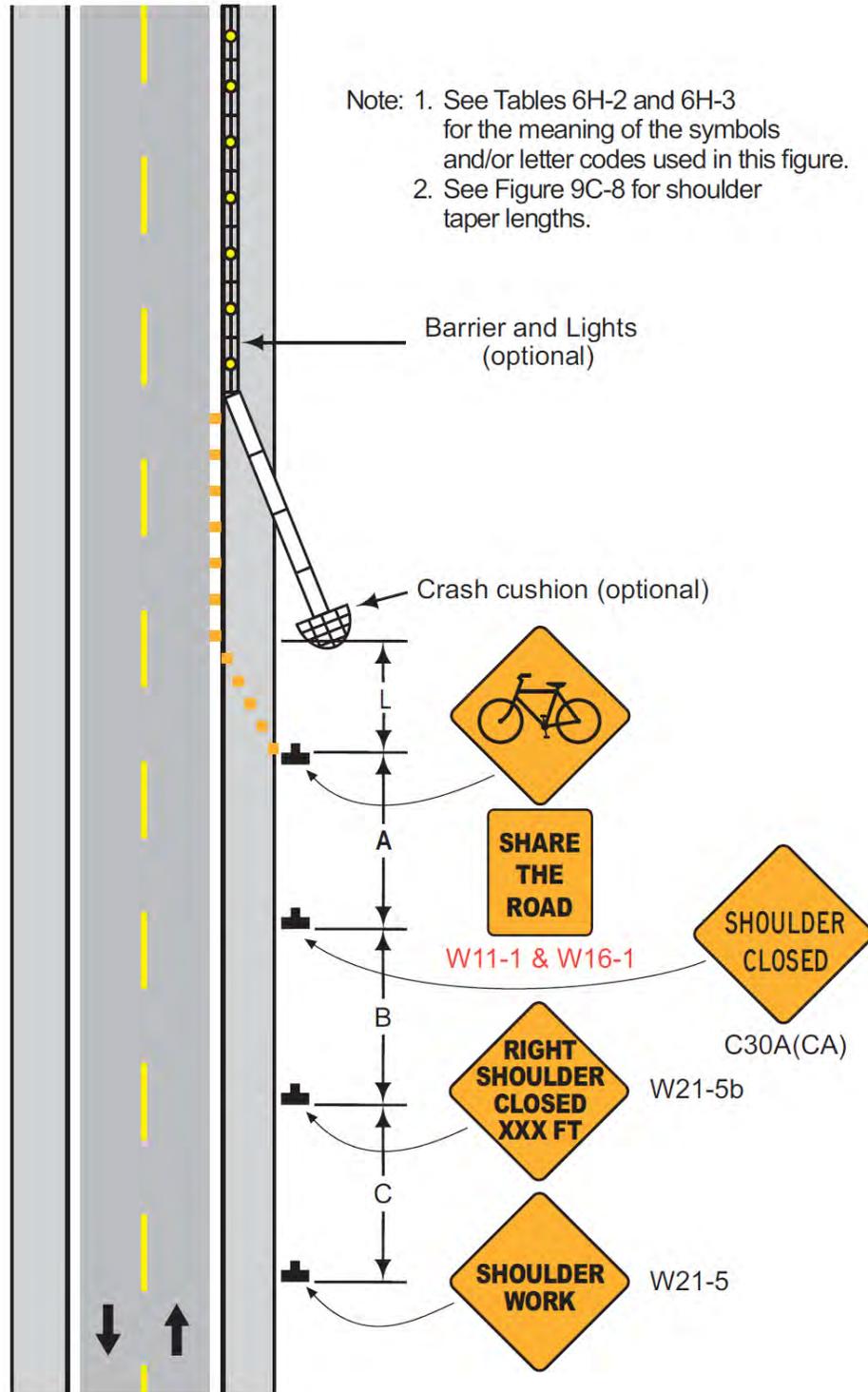
**Standard:**

- 8. The minimum offset from the upstream end of the barrier to the edge of the traveled way shall be at least 4.6 m (15 ft) unless shielded by a crash cushion.**

**Guidance:**

9. This typical application should only be used in urban areas where posted speed is 25 mph or less. For applications on roadway with a posted speed of 30 mph or more use typical application TA-102(CA).
10. All advance warning signs should be placed so that the path for bicycles is not blocked, while maintaining visibility for road users.
11. Adequate roadway lane width should be provided to allow bicyclists and motor vehicles to travel side by side through the TTC zone.
12. The speeds used for the shoulder taper calculations should be of bicyclists in the project vicinity or if a special event such as a bike race, the expected speed of bicyclists approaching the TTC zone.

**Figure 6H-101 (CA). Shoulder Closure on Urban (Low Speed) locations to accommodate bicyclists (TA-101 (CA))**



Typical Application 101 (CA)

**Notes for Figure 6H-102(CA) – Typical Application 102(CA)****Lane Closure on Freeway, Expressway, Rural and Urban (High Speed) locations to accommodate bicyclists**

## Guidance:

1. When existing bicycle facilities are disrupted or closed, information and devices contained in Figures 6H-101(CA) through 6H-104(CA), as appropriate per situation encountered, should be used to consider the needs and control of bicyclists through a TTC zone.
2. SHOULDER CLOSED signs should be used on limited-access highways where there is no opportunity for disabled vehicles to pull off the roadway.
3. If drivers cannot see a pull-off area beyond the closed shoulder, information regarding the length of the shoulder closure should be provided in feet or miles, as appropriate.
4. The use of a temporary traffic barrier should be based on engineering judgment.

**Standard:**

5. **Where temporary traffic barriers are installed, the ends of the barrier shall be treated in accordance with the provisions of Section 6F.81.**

## Option:

6. The barrier shown in this typical application is an example of one method that may be used to close a shoulder of a long-term project.
7. The warning lights shown on the barrier may be used.

**Standard:**

8. **The minimum offset from the upstream end of the barrier to the edge of the traveled way shall be at least 4.6 m (15 ft) unless shielded by a crash cushion.**

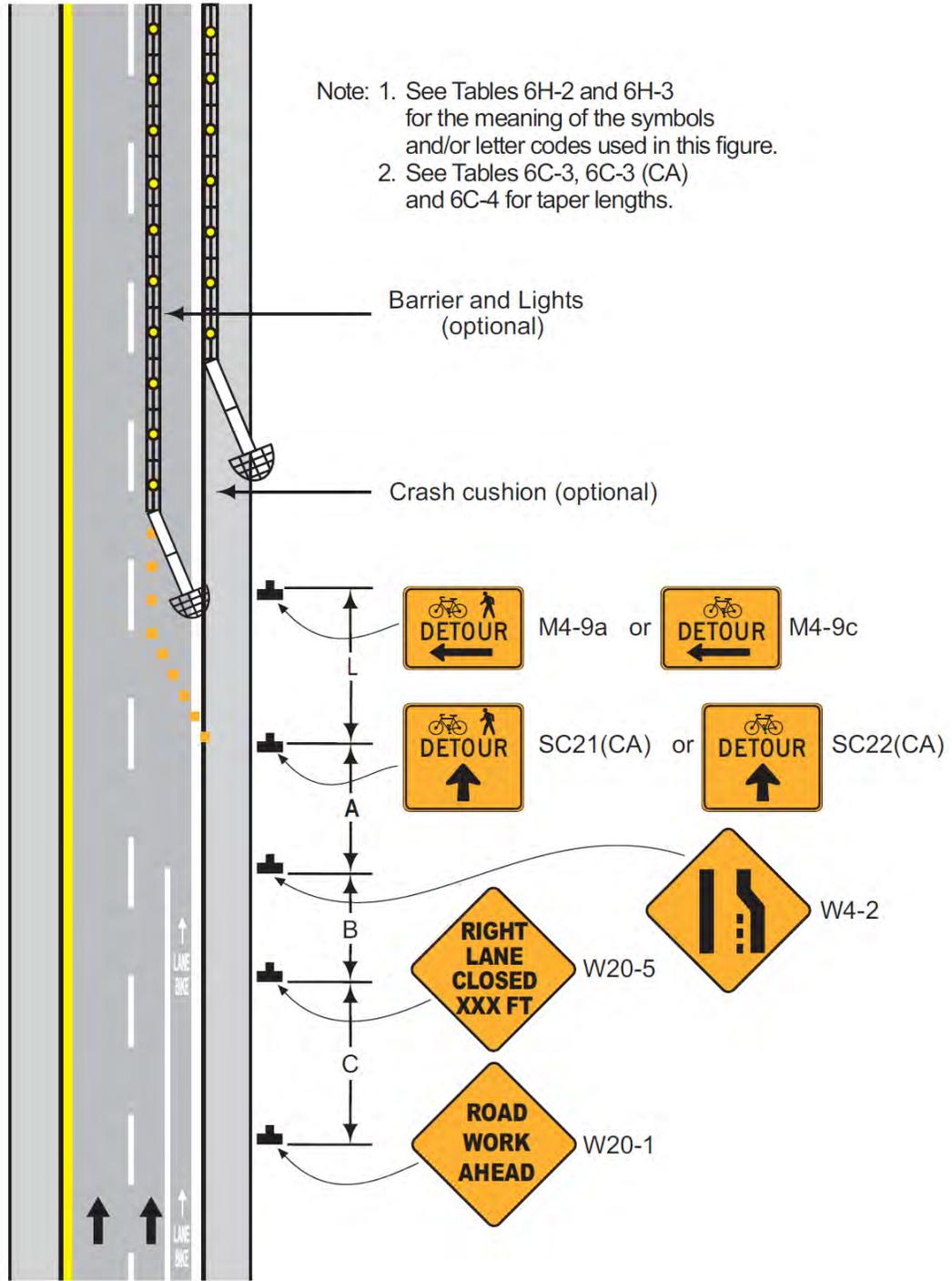
## Guidance:

9. All advance warning signs should be placed so that the path for bicycles is not blocked, while maintaining visibility for road users.
10. The width of the existing pedestrian facility should be provided for the temporary facility, if practical. When it is not possible to maintain a minimum width of 60 in. throughout the entire length of the pedestrian pathway, a 60 x 60 in. passing space should be provided at least every 200 ft. to allow individuals in wheelchairs to pass.

**Standard:**

11. **When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.**

**Figure 6H-102 (CA). Lane Closure on Freeway, Expressway, Rural and Urban (High Speed) locations to accommodate bicyclists (TA-102 (CA))**



Typical Application 102 (CA)

**Notes for Figure 6H-103(CA)—Typical Application 103(CA)****Detour for One Travel Direction on Bike Lane Roadway Closure**

## Guidance:

1. When existing bicycle facilities are disrupted or closed, information and devices contained in Figures 6H-101(CA) through 6H-104(CA), as appropriate per situation encountered, should be used to consider the needs and control of bicyclists through a TTC zone.
2. This plan should be used for streets without posted route numbers.
3. On multi-lane streets, Detour signs with an Advance Turn Arrow should be used in advance of a turn.

## Option:

4. The STREET CLOSED legend may be used in place of ROAD CLOSED.
5. Additional DO NOT ENTER signs may be used at intersections with intervening streets.
6. Warning lights may be used on Type III Barricades.
7. Detour signs may be located on the far side of intersections.
8. A Street Name sign may be mounted with the Detour sign. The Street Name sign may be either white on green or black on orange.

**Standard:**

- 9. When used, the Street Name sign shall be placed above the Detour sign.**

## Guidance:

10. The DETOUR (M4-8) sign should be placed on tangent sections at intervals not to exceed 1300 ft and at major intersections.

## Option:

11. In urban areas, the M4-8 signs may be placed at every intersection.

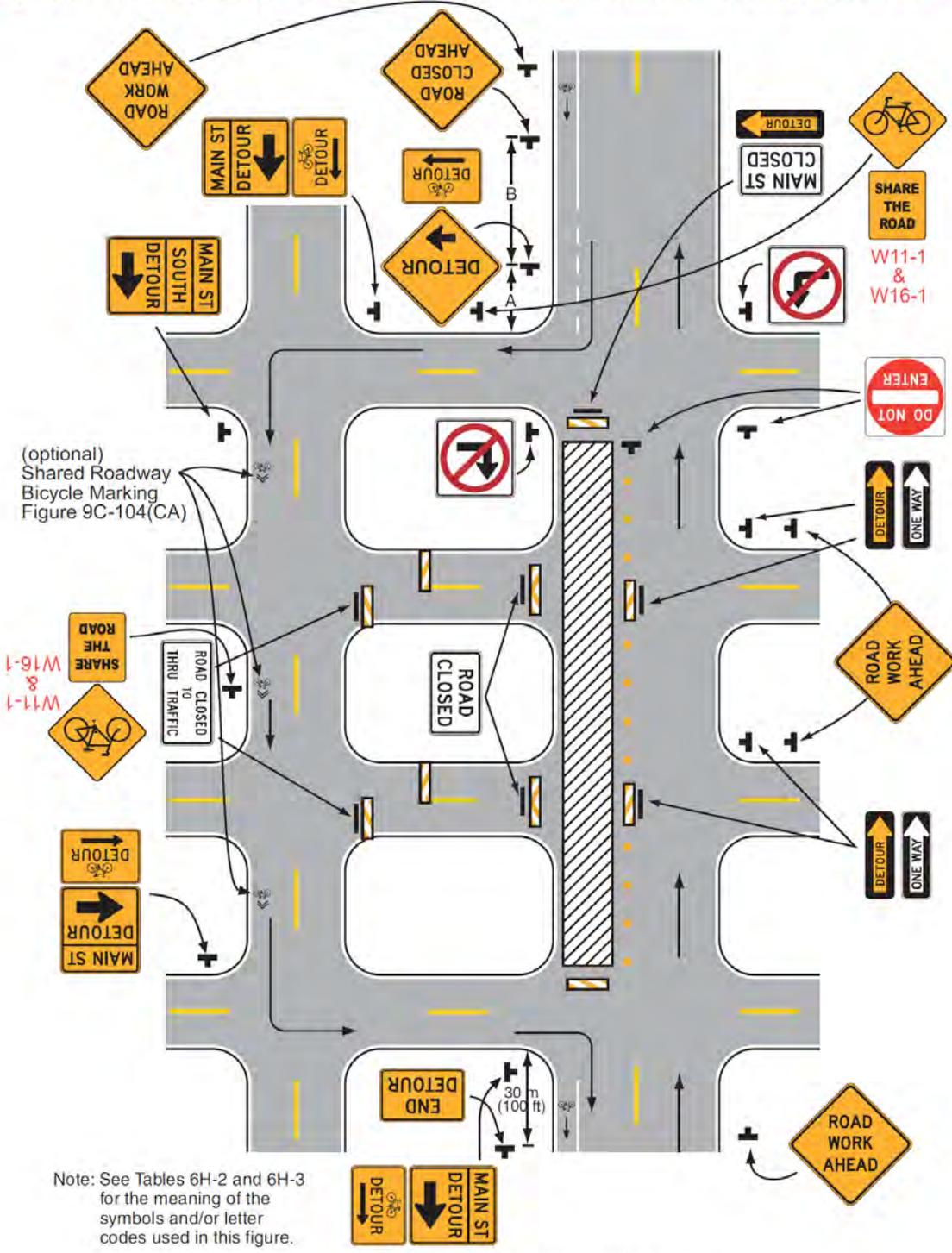
## Guidance:

12. When the detour is applicable to bicyclists and not pedestrians, the Bicycle Detour (M4-9c) sign should be used instead of the Pedestrian/Bicycle Detour (M4-9a) sign.
13. All advance warning signs should be placed so that the path for bicycles is not blocked, while maintaining visibility for road users.

## Option:

14. For long-term duration projects, the shared roadway bicycle marking may be used along detours with on-street parking and inadequate lane width.

Figure 6H-103 (CA). Detour for One Travel Direction on Bike Lane Roadway Closure (TA-103 (CA))



Typical Application 103 (CA)

**Notes for Figure 6H-104(CA)—Typical Application 104(CA)****Right Lane Closure on Bike Lane at Far Side of Intersection**

## Guidance:

1. When existing bicycle facilities are disrupted or closed, information and devices contained in Figures 6H-101(CA) through 6H-104(CA), as appropriate per situation encountered, should be used to consider the needs and control of bicyclists through a TTC zone.
2. If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure 6H-29.

## Option:

3. The normal procedure is to close on the near side of the intersection any lane that is not carried through the intersection. However, when this results in the closure of a right lane having significant right turning movements, then the right lane may be restricted to right turns only, as shown. This procedure increases the through capacity by eliminating right turns from the open through lane.
4. For intersection approaches reduced to a single lane, left-turning movements may be prohibited to maintain capacity for through vehicular traffic.
5. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.
6. Where the turning radius is large, it may be possible to create a right-turn island using channelizing devices or pavement markings.

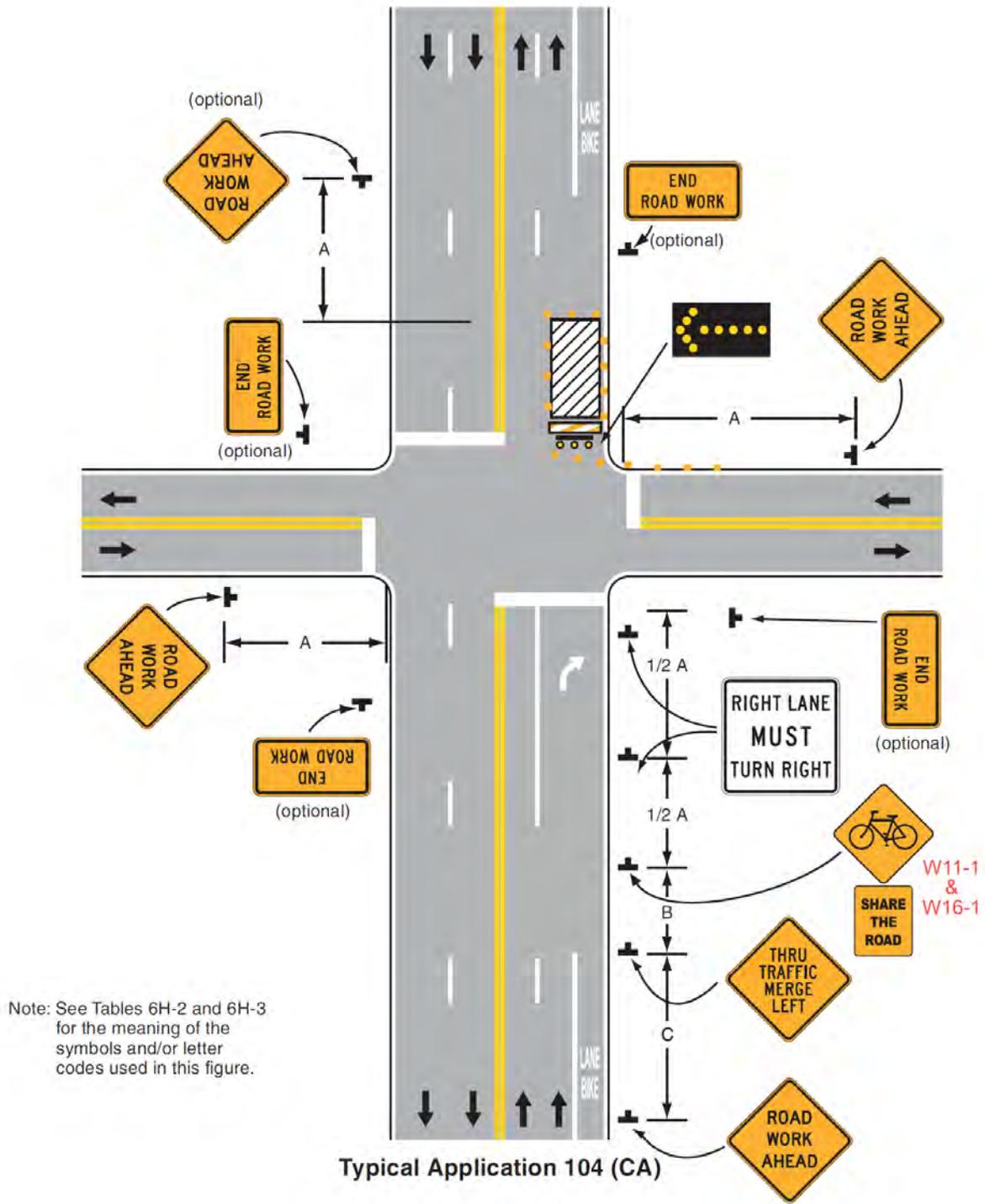
## Guidance:

7. All advance warning signs should be placed so that the path for bicycles is not blocked, while maintaining visibility for road users.
8. For long-term duration projects, consideration should be given to installing signs in an overhead location.

## Option:

9. A high-level warning device (flag tree) may supplement the advance warning signs. Refer to Section 6F.57.

Figure 6H-104(CA). Right Lane Closure on Bike Lane at Far Side of Intersection (TA-104 (CA))



**10-7 National MUTCD 2009**

Even though, FHWA has released the new 2009 MUTCD but it is not effective in California until Caltrans and CTCDC review it and incorporate the changes into California MUTCD through formal efforts. California has until January 15, 2012 to accomplish this task although it is anticipated that it would be done sooner.

The following dates are scheduled to hold CTCDC Technical Workshops to review National MUTCD for the adoption in CA:

- WORKSHOP #2: June 9 -10, 2010 - Part 2 (Signs)**
- WORKSHOP #3: September 1-2, 2010 - Parts 3 (Markings) & 6 (TTC Work Zones)**
- WORKSHOP #4: November 2-3 (with CTCDC meeting in Sac. on 4th), 2010 - Parts 4 (Traffic Signals) & 8 (Railroad Xing)**

**List of Signs included into the CA MUTC 2010**

CA Standard Sign Specifications Update - 1/21/2010

Page 2 of 4

CA Code	MUTCD Code	Title of Sign	Notes	Date
R25B	None	Passenger Loading ONLY 5 MINUTE LIMIT w/ Double Arrow	New sign.	2/17/09
R25C	None	PASSENGER LOADING ONLY 5 MINUTE LIMIT w/ Double Arrow	New sign.	2/17/09
R25D	None	School Passenger Loading ONLY 7AM TO 4PM SCHOOL DAYS 5 MINUTE LIMIT w/ Double Arrow	New sign.	2/17/09
R25E	None	PASSENGER LOADING ONLY 7AM TO 4PM SCHOOL DAYS 5 MINUTE LIMIT w/ Double Arrow	New sign.	2/17/09
R25F	None	School Bus Passenger Loading ONLY w/ Double Arrow	New sign.	2/17/09
R25H	None	Tour Bus Passenger Loading ONLY w/ Double Arrow	New sign.	2/17/09
R25J	None	CAR SHARE PARKING ONLY PERMIT REQUIRED w/ Double Arrow	New sign.	2/17/09
R26K	None	Tow-Away No Parking	New sign.	2/17/09
R26L	None	Tow-Away NO STOPPING ANY TIME	New sign.	2/17/09
R28C	None	NO STOPPING BUS ONLY w/ Arrow	New sign.	2/17/09
R28D	None	NO PARKING VEHICLES OVER 6' HIGH w/ Double Arrow	New sign.	2/17/09
R28D(S)	None	NO STOPPING VEHICLES OVER 6' HIGH w/ Double Arrow	New sign.	2/17/09
R28E	None	NO PUBLIC PARKING SUBJECT TO CITATION AND REMOVAL AT OWNER'S EXPENSE	New sign.	2/17/09
R28F	None	No Parking VEHICLES OVER 5 TONS	New sign.	2/17/09
R30B	None	No Parking 10AM TO 12PM WEDNESDAY STREET SWEEPING	New sign.	2/17/09
R30C	None	No Parking 2AM TO 6AM EXCEPT BY PERMIT	New sign.	2/17/09
R30D	None	No Parking 2AM TO 6AM CITYWIDE EXCEPT BY PERMIT	New sign.	2/17/09
R30E	None	No Parking w/ Double Arrow	New sign.	1/21/10
R30F	None	NO STOPPING 7 TO 8 AM 2 TO 3 PM SCHOOL DAYS	New sign.	1/21/10
R32C	None	2 HOUR PARKING 8AM TO 6PM DISTRICT 7 PERMITS EXEMPT	New sign.	2/17/09
R32D	None	30 MINUTE PARKING 2AM TO 6AM DISTRICT 3 PERMITS EXEMPT	New sign.	2/17/09
R32E	None	2 HOUR PARKING 8AM TO 4PM - PASSENGER LOADING ONLY 4PM TO MIDNIGHT 5 MINUTE LIMIT w/ Double Arrow	New sign.	2/17/09
R32F	None	2 HOUR PARKING 8AM TO 6PM MOTORCYCLE PARKING ONLY w/ Double Arrow	New sign.	2/17/09
R38A	None	TOW-AWAY NO STOPPING 7AM TO 9AM - PASSENGER LOADING ONLY ALL OTHER TIMES 5 MINUTE LIMIT w/ Double Arrow	New sign.	2/17/09
R39	None	NO PARKING OF COMMERCIAL VEHICLES EXCEPT BY PERMIT	New sign.	9/12/08
R39-1	None	NO DOUBLE PARKING ANYTIME COMMERCIAL VEHICLES INCLUDED	New sign.	11/21/10
R39-2	None	NO DOUBLE PARKING ANYTIME COMMERCIAL VEHICLES INCLUDED	New sign.	11/21/10
R99	None	Accessible Parking Only	Spec format updated, design/dimensions unchanged.	7/1/08
R99B	None	MINIMUM FINE \$250 (plaque)	New supplemental plate.	7/1/08
R99C	None	Accessible Parking Only Minimum Fine \$250	New combination sign, combines R99 and R99B signs.	7/1/08
R100B	None	Disabled Tow-Away	Revised sign, per AB 1531 (DeSaulnier).	7/1/08
S22-1	None	VEHICLE INSPECTION ONLY, NO LOITERING OR CAMPING	New sign.	9/12/08
S32	None	Adopt-A-Highway	Bolt holes info revised.	3/23/09
S32A	None	Adopt-A-Highway Symbol	Bolt holes info revised.	3/23/09
S32B	None	Adopt-A-Highway Recognition Panel	Bolt holes info revised.	3/23/09

**7 Next Meeting**

**8 Adjourn**