

Amended AGENDA
CALIFORNIA TRAFFIC CONTROL DEVICES COMMITTEE (CTCDC)
July 20, 2011 Meeting (Start Time 9 a.m.)
The Main Library, 101 Pacific Avenue, Long Beach, CA 90802

Organization Items

- 1 Membership**
- 2 Introduction**
- 3 Approval of Minutes (February 2, 2011 Meetings)**
- 4 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

5 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
11-1	Adoption of National MUTCD 2009 in California and to be called CA MUTCD 2011 - Proposed by Caltrans (See update under Information Items- Deferred to the next meeting)	(Introduction) 86-87 (Henley)
11-2	Proposal to adopt revised text, tables, and figures in Part 6 of the CA MUTCD 2010 – Proposed by LA DOT	(Introduction) 5-29 (Fisher)
11-3a	NO PARKING VEHICLES FOR SALE, Amendment to Section 2B.39 and Figure 2B-16(CA) – Proposed by LA DOT	(Introduction) 30-33 (Fisher)
11-4a	FHWA’s Interim Approval for Optional Use of Green Colored Pavement for Bike Lanes (1A-14) - Proposed by Caltrans	(Introduction) 34-38 (Henley)
11-6	FHWA’s Interim Approval for Optional Use of an Alternative Electric Vehicle Charging General Service Symbol Sign - Caltrans	(Introduction) 39-43 (Henley)
11-7	Proposal to amend Section 6F.43 of CA MUTCD to create a new warning sign to warn motorcyclists of UNEVEN LANES - Proposed by Caltrans	(Introduction) 44-44 (Henley)
11-8	Amendment to Sections 6F.03 Sign Placement (Signs mounted on portable supports for longer than 3 days) - Proposed by Caltrans	(Introduction) 45-46 (Henley)
11-9	Section 2D.15, Enlarged fonts to be used on C20(CA) sign	(Introduction) 47-48

-Proposed by Caltrans

(Henley)

11-10 Proposal to amend Chapter 4I (Sections 4I.01, 4I.02 and 4I.03) of the National MUTCD 2009 and adopt amended Chapter in to CA MUTCD 2011- Proposed by Caltrans (Introduction) 49-52 (Henley)

11-11 Proposal to amend Sections 2B.39, 2B.40 and Figure 2B-16(CA) -Proposed by LA DOT (Introduction) 53-55 (Fisher)

6 Request for Experimentation

11-12 Request for Permission to Experiment with Circular Rapid Flashing Beacon and Rectangular Rapid Flashing Beacon – Proposed by City of Coachella (Introduction) 56-69 (Fisher)

08-20 Final Report on Experimentation with Flashing Yellow Arrow for Permissive Right Turn Movement – (Final Report by Marin Co.) (Continued) 70-79 (Mansourian)

11-13 Request to experiment with a Sign “RECKLESS DRIVING PROHIBITED”- Proposed by LA CO. (Introduction) 80-85 (Mansourian)

09-13 Experiment Request for the USAGE OF “HOV” IN LIEU OF “CARPOOL” Signage Related to the Los Angeles EXPRESS LANES – Caltrans request to remove from the agenda) (Continued) 86-86 (Henley)

7 Information Items

11-01 California MUTCD Revision (2011 Draft) to include National MUTCD 2009, CTCDC recommendations, errors/errata and editorial changes 86-87

Added 11-14 Proposed to expand the membership of the CTCDC by including two additional voting members representing nonmotorized highway users (Introduction) (Henley) 88-88

8. Tabled Items

11-5 Request to Experiment with New Bicycle Pavement Marking (Requested by the City of Palo Alto) (Introduction) (Knowles)

9 Next Meeting 89-89

10 Adjourn

ITEM UNDER EXPERIMENTATION

- 06-2 Experiment with Colored Bike Lane (Wong)
(Proposed by the City of San Francisco)
Status: San Francisco has completed material testing and determined that thermoplastic is the best colored pavement treatment material for the experimental installations based on durability, visibility, slip-resistance and estimated lifecycle costs. Beginning in April 2011, dashed retroreflective green thermoplastic was added to the dashed portion of bicycle lanes at six intersection approaches on Market Street. Photos can be viewed here:
<http://sf.streetsblog.org/2011/04/28/sfmta-crews-begin-filling-in-green-bikeway-gaps-on-market-street/>
- Data will be collected at the Market Street locations to determine if the treatment has any impact on merging behavior between motorists making right turns and bicyclists continuing straight through intersections. Market Street was selected as the first installation location to coordinate with ongoing improvements to bicycle facilities along Market Street, which is the highest-use bicycle facility in San Francisco.
- The revised schedule for the remainder of the experiment is as follows:
June-July 2011 – Collect "before" data prior to installation of green retroreflective thermoplastic (except for Market Street locations described above)
August -September 2011 - Install green retroreflective thermoplastic
October-November 2011 – Collect "after" data following installation of green retroreflective thermoplastic
January 2012 - Draft report
February 2012 - Final report
- 07-19 Wildlife Corridor Signage (Babico)
(Proposed by the County of San Bernardino)
Status: The applicant still searching for someone to do study for the Federal Highway folks. The type of study that they requested would cost many thousands of dollars. Applicant is looking for a college student that could make the study part of his curriculum.
- 08-7 Request for Experimentation with new Warning Sign for Bicyclists (Wong)
(Proposed by the City/Co of San Francisco)
Status: No change since their last report. The City and County of San Francisco would like to bring this experiment to a close and therefore will analyze collision data collected before and after the installation of this experimental warning sign and submit the results to the Committee within the next 12 months for its evaluation.
- 08-21 Proposal to Experiment with Regulatory Sign “BIKES IN LANE” with Bicycle Symbol (Originally submitted as “Bike May Use Full Lane”) (Henley)
Status: No New update. 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 (Fisher)
Status: See report on the following website under “Status Report – Ongoing Experiments”
<http://www.dot.ca.gov/hq/traffops/signtech/newtech/index.htm>
- 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 (Fisher)
On the Left Side of Two One-Way Streets in the City of Long Beach (Rte 9-112E)
Status: See report on the following website under “Status Report – Ongoing Experiments”
<http://www.dot.ca.gov/hq/traffops/signtech/newtech/index.htm>
- 10-3 Experiment with Second Train Warning Sign “Additional Train May (Fisher)
Approach” with a Symbol Sign (Submitted by City of Riverside)
Status: See report on the following website under “Status Report – Ongoing Experiments”
<http://www.dot.ca.gov/hq/traffops/signtech/newtech/index.htm>
- 10-10 Request for Permission to Experiment with modified SPEED HUMP (W17-1) Signs (Knowles)
- 11-3 Request to Experiment with Buffered Bicycle Lanes on 2nd St.between Bayshore (Fisher)
& PCH in Naples
- 11-4 Request for Permission to Experiment with Round Rapid Flashing Beacon (Fisher)

Pending Items for Caltrans Action

- 07-1 Proposal to revise the sizes for the Supplemental School Plaques (S4-3, W16-7p and W16-9p)
Status: No update received.

11-2 Proposal to adopt revised Text, Tables, and Figures in Part 6 of the CA MUTCD 2010

AMIR SEDADI
INTERIM GENERAL MANAGER

CITY OF LOS ANGELES
CALIFORNIA



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June 13, 2011

Mr. Devinder Singh
Executive Secretary, CTCDC
Caltrans
P.O. Box 942874
Sacramento, CA 94274-0001

Dear Mr. Singh:

Enclosed are proposed revisions relating to Part 6. They are submitted by the City of Los Angeles and I sponsor the proposed revisions. This matter was heard at the February 2, 2011 meeting of the CTCDC and the proposed revisions reflect the comments received at that meeting.

I request that this item again be scheduled for the July 20, 2011 meeting of the CTCDC. I further request that approved revisions, with any other appropriate technical corrections that may be discovered as necessary, be incorporated into the 2011 California MUTCD.

John E. Fisher, P.E., PTOE
Assistant General Manager

JEF:je

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Enclosures

Recommendation

That the CTCDC adopt revisions to text, tables, and figures in Part 6 for incorporation into the 2011 California MUTCD, as summarized in Table 1 and as shown in the enclosures.

Requesting Agency

City of Los Angeles Department of Transportation (John E. Fisher)

Sponsor

John E. Fisher, CTCDC Chair representing the League of California Cities, Southern counties

Background

The Work Area Traffic Control Handbook, commonly known as the WATCH manual, and its predecessors have been in existence for nearly 60 years. The 2009 version is its eleventh edition. The WATCH manual “ is intended to serve as a standard for control of traffic in work areas in public streets by cities, counties, and other agencies responsible for such work”

The WATCH manual has been used by local jurisdictions to identify work area traffic controls for short term detours that might not be adequately illustrated in the California MUTCD. In recent years, the differences between the WATCH manual and California MUTCD have narrowed. The WATCH manual has no legal standing, but it is still valued by local jurisdictions.

I convened a meeting of WATCH manual users and some WATCH Committee members to identify areas where it was believed that the California MUTCD could be improved. The meeting included among others: David Royer, who teaches “Traffic Control for Safe Work Zones” for the University of California, Berkeley Institute for Transportation Studies; and Don Schima who represents the Los Angeles Department of Transportation (LADOT) on the WATCH Committee.

As a result of those discussions, proposals for revisions to Part 6 were agendaized and discussed at the February 2, 2011 meeting of the CTCDC. Based on the discussion, this matter has been continued to the June 8, 2011 meeting. A summary of the proposed revisions is shown in Table 1 below. In addition, the proposed revised pages are enclosed.

Table 1: Summary of Proposed Revisions to Part 6

Number	Reference	Revision	Reason
1	Section 6F.58, Support	Editorial – Add the word “channelizers” as a channelizing device	Corrects a previous oversight
2	Section 6F.60	Revise to reflect 4” wide, 42” high tubular markers	42” tubular markers are the only size available and have become the <u>de facto</u> standard.
3	Section 6F.101(CA) Standard	Add the spacing requirement, shown in Table 6F-102(CA), as a Guidance statement. Also, add missing words to clarify the height requirement.	Corrects a previous oversight. It mirrors the same statement in Section 6 F.58.
4	Tables 6C-1 and 6H-3	Apply speeds for each roadway type	Promotes greater uniformity by agencies and contractors, due to specificity. Is consistent with

			Section 6C.04.
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Table 1: Summary of Proposed Revisions to Part 6 (Continued)

Number	Reference	Revision	Reason
5	Figure 6F-6	Editorial – Show the appropriate uses	Incorporates info in Section 6F.56, so that the Figure can be more useful
6	Figure 6F-7	See Number 2. Also, the bands are identified as retroreflection.	Figure 6F-7 would be consistent with revisions to Section 6F.60.
7	Figure 6F-101 (CA)	Restore the C20(CA) sign, indicating how the C20A(CA) and C20B(CA) sign panels can be applied.	The C20(CA) sign is mentioned in Section 6F.21, but is inadvertently, missing from Figure 6F-101(CA)
8	Figure 6F-102 (CA)	Editorial – The height is clarified for the speed threshold	The height requirement is consistent with the intent of the text in Section 6F.101(CA).
9	Add New Figure and Note for 6H-105(CA). (Notes are the same as for 6H-15).	Shows 2-way traffic coned around the obstruction on the side	This situation is common in urban areas.
10	Figures 6H-22, 6H-106(CA), 6H-107(CA) and Notes.	Revise and add figures to distinguish applications for: 1) short-term versus long-term use; and 2) turn bay versus entrapped right-turn lanes	There is a need for the added figures and the revision of figures, particularly in urban areas. Figure 6H-22 is intended for short-term use where right-turn movements are significant, as the Notes indicate. New Figure 6H-106(CA) is for long-term application. New Figure 6H-107(CA) is for situations where it is desirable not to entrap the right-hand lane.
11	Figures 6H-24, 6H-108(CA) and Notes	Revise and add a figure and related notes to apply the abrupt transition only to situations that are Stop controlled.	An abrupt, full-lane transition through the intersection can be accommodated only from a Stop condition.
12	Figures 6H-23, 24, 30 and 31 (Revisions not shown)	Revise to delete the word “Optional” below the Arrow Panels and replace with “See Note X”. (It would be Note 2 for Figure 6H-24). Note X would read, “Guidance: An arrow panel in the arrow or chevron mode should be used to advise approaching traffic of a lane closure along major multi-lane roadways in situations involving heavy	The FHWA MUTCD Section 6F.61, Paragraph 02, clarifies the application of Arrow Panels with lane closures. Note X would repeat that text.

		traffic volumes, high speeds, and/or limited sight distances, or at other locations and under other conditions where road users are less likely to expect such lane closures”.	
13	Figure 6H-25	Revise to shadow-out the left-turn lane.	Through traffic should be channelized to the available through lane, in order to avoid entrapment.
14	Figure 6H-21 (Revision not shown)	Revise figure to show an Arrow Panel instead of a Flag tree, with “(See Note X)”, as shown in Number 12 above.	See Number 12 above.

15	Figure 6H-32 (Revision not shown)	Revise to delete the word “Optional” below The Arrow Panels	The FHWA deletes the word “Optional”, since a multi-lane, high-speed street is depicted.
16	Notes for Figure 6H-46	Add language to clarify that flagger operation should be considered when the work activity is on a street parallel to the grade crossing. Next to each flagger symbol add an arrow and “(See Notes 1 and 2)”.	This situation is common in urban areas and should be clarified.

Section 6F.58 Channelizing Devices

Standard: Designs of various channelizing devices shall be as shown in Figure 6F-7.

Designs of various channelizing devices shall be as shown in Figure 6F-7.

Support:

The function of channelizing devices is to warn road users of conditions created by work activities in or near the roadway and to guide road users. Channelizing devices include cones, tubular markers, channelizers vertical panels, drums, barricades, and temporary raised islands.

Channelizing devices provide for smooth and gradual vehicular traffic flow from one lane to another, onto a bypass or detour, or into a narrower traveled way. They are also used to separate vehicular traffic from the work space, pavement drop-offs, pedestrian or shared-use paths, or opposing directions of vehicular traffic.

Section 6F.60 Tubular Markers Standard:

Tubular markers (see Figure 6F-7, Sheet 1 of 2) shall be predominantly orange and shall be not less than ~~450 mm (18 in)~~ **42 in** high and ~~50 mm (2 in)~~ **4 in** wide facing road users. They shall be made of a material that can be struck without causing damage to the impacting vehicle.

~~Tubular markers shall be a minimum of 700 mm (28 in) in height when they are used on freeways and other high-speed highways, on all highways during nighttime, or whenever more conspicuous guidance is needed.~~

For nighttime use, tubular markers shall be retroreflectorized. Retroreflectorization of 700 mm (28 in) or larger tubular markers shall be provided by two 75 mm (3 in) wide white bands placed a maximum of 50 mm (2 in) from the top with a maximum of 150 mm (6 in) between the bands.

Section 6F.101(CA) Channelizers (Permanent type, flexible post)**Support:**

Channelizers are implanted in the ground or affixed to the pavement, and are not susceptible to displacement, and are capable of normally withstanding numerous vehicular impacts.

Channelizers are generally used in series to create a visual fence/barrier, to provide additional guidance and/or restriction to traffic.

Option:

They also may be used in lieu of cones, portable delineators, or drums, to channelize traffic, divide opposing lanes of traffic, etc.

Guidance:

The spacing of channelizers should not exceed the maximum distances shown in Table 6F-102(CA).

Standard:

The design of a channelizer shall be as shown in Figure 6F-102(CA).

The height shall be ~~900 mm (36 in)~~ minimum **where speeds are greater than 40 mph and (700 mm (28 in) minimum where speeds are 65 km/h (40 mph) or less**);. †The width of the post shall be 56 mm (2 ¼ in) minimum and the color predominantly orange. The 75 x 300 mm (3 x 12 in) minimum retroreflective unit shall be visible at 300 m (1000 ft) at night under illumination of legal high beam headlights, by persons with vision of or corrected to 20/20.

The color of the channelizer retroreflective unit shall be white and posts shall be orange.

**Table 6C-1 ~~Suggested Advance Warning Sign Spacing~~
 Recommended ~~Suggested Minimum~~ Advance Warning Sign Spacing**

Road Type	Distance Between Signs** *		
	A	B	C
Urban (low speed) (25 mph or less) Urban (high speed) 30 mph or more	30 (100) feet	30 (100) feet	30 (100) feet
Urban (more than 25 mph to 40 mph)	250 feet	250 feet	250 feet
Urban (more than 40 mph)	400 feet	400 feet	400 feet
Rural	150 (500) feet	150 (500) feet	150 (500) feet
Expressway / Freeway	300 (1,000) feet	450 (1,500) feet	800 (2,640) feet

- ~~* Speed category to be determined by highway agency~~
- * ** Distances are shown in meters (feet). The column headings A, B, and C are the dimensions shown in Figures 6H-1 through 6H-46. The A dimension is the distance from the transition or point of restriction to the first sign. The B dimension is the distance between the first and second signs. The C dimension is the distance between the second and third signs. (The third sign is the first one in a three-sign series encountered by a driver approaching a TTC zone.)

Table 6C-2. Stopping Sight Distance as a Function of Speed

Speed* (km/h)	Distance (m)	Speed* (mph)	Distance (ft)
30	35	20	115
40	50	25	155
50	65	30	200
60	85	35	250
70	105	40	305
80	130	45	360
90	160	50	425
100	185	55	495
110	220	60	570
120	250	65	645
		70	730
		75	820

* Posted speed, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed

Table 6H-3. Meaning of Letter Codes on Typical Application Diagrams

Road Type	Distance Between Signs** *		
	A	B	C
Urban (low speed) (25 mph or less)	30 (100) feet	30 (100) feet	30 (100) feet
Urban (high speed) 30 mph or more	100 (350)	100 (350)	100 (350)
Urban (more than 25 mph to 40 mph)	250 feet	250 feet	250 feet
Urban (more than 40 mph)	400 feet	400 feet	400 feet
Rural	150 (500) feet	150 (500) feet	150 (500) feet
Expressway / Freeway	300 (1,000) feet	450 (1,500) feet	800 (2,640) feet

* Speed category to be determined by highway agency

** Distances are shown in meters (feet). The column headings A, B, and C are the dimensions shown in Figures 6H-1 through 6H-46. The A dimension is the distance from the transition or point of restriction to the first sign. The B dimension is the distance between the first and second signs. The C dimension is the distance between the second and third signs. (The third sign is the first one in a three-sign series encountered by a driver approaching a TTC zone.)

Table 6H-4. Formulas for Determining Taper Lengths

Speed Limit (S)	Taper Length (L) Meters	Speed Limit (S)	Taper Length (L) Feet
60 km/h or less	$L = \frac{WS^2}{155}$	40 mph or less	$L = \frac{WS^2}{60}$
70 km/h or more	$L = \frac{WS}{1.6}$	45 mph or more	$L = WS$

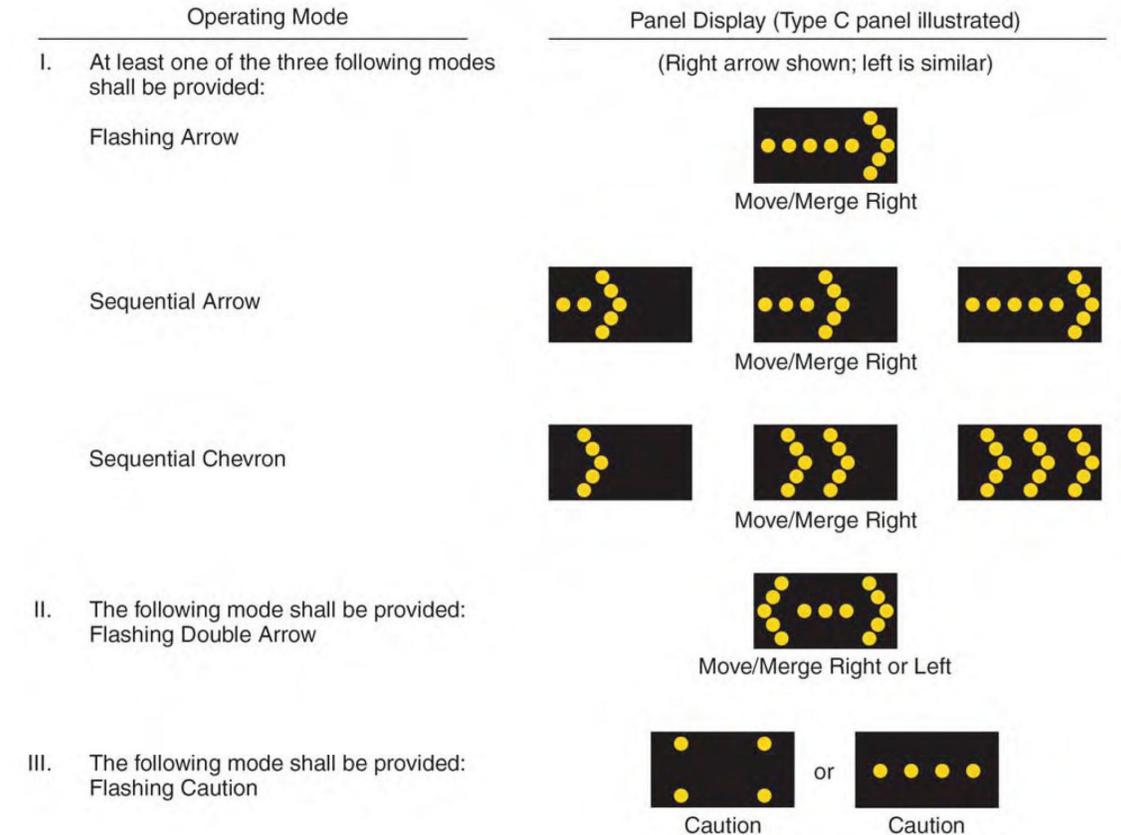
Where: L = taper length in meters (feet)

W = width of offset in meters (feet)

S = posted speed limit, or off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in km/h (mph)

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Figure 6F-6. Advance Warning Arrow Display Specifications



Panel Type	Minimum Size	Minimum Legibility Distance	Minimum Number of Elements	Appropriate Use
A	1200 x 600 mm (48 x 24 in)	0.8 km (1/2 mi)	12	Low-speed urban streets
B or II**	1500 x 750 mm (60 x 30 in) 1800 x 900 mm (72 x 36 in)*	1.2 km (3/4 mi)	13	Intermediate-speed facilities and maintenance or mobile operations on high-speed roadways
C or I**	2400 x 1200 mm (96 x 48 in)	1.6 km (1 mi)	15	High-speed, high volume roadways
D	None*	0.8 km (1/2 mi)	12	On authorized vehicles

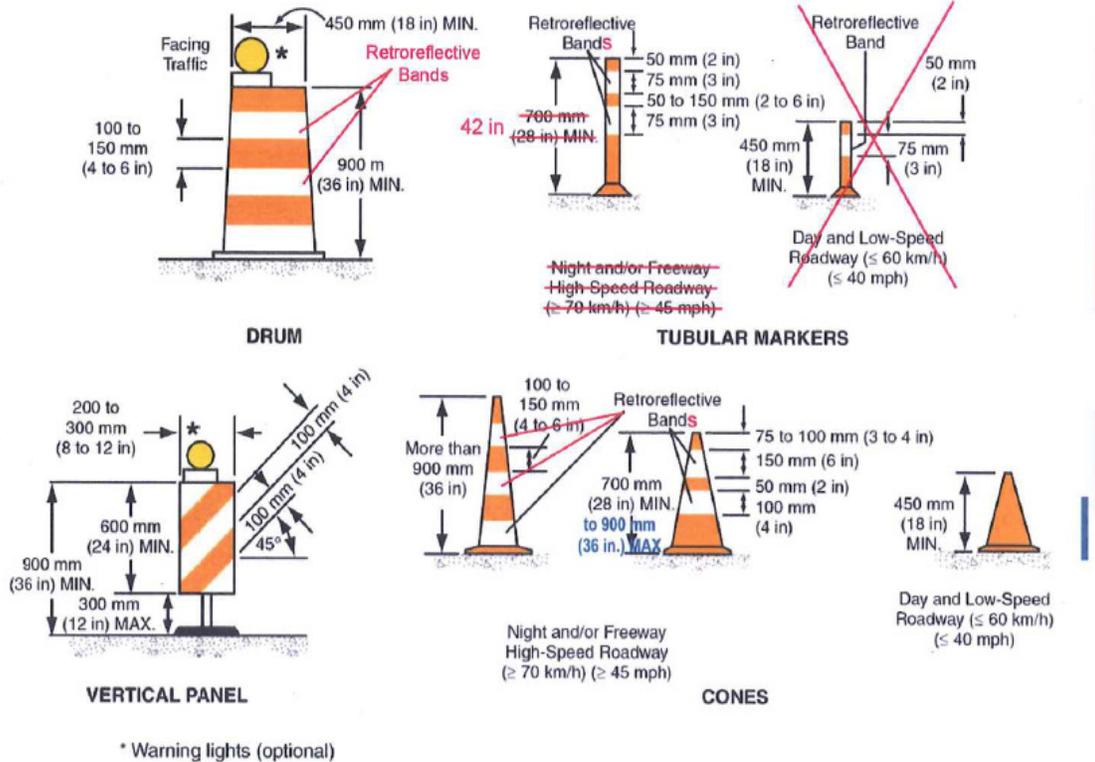
*Length of arrow equals 1200 mm (48 in), width of arrowhead equals 600 mm (24 in)

Standard:

* - For State highways, the panel type B (or type II) shall have a minimum size of 1800 x 900 mm (72 x 36 in).

** - For State highways, the panel type B shall mean type II and the panel type C shall mean type I.

Figure 6F-7. Channelizing Devices (Sheet 1 of 2)



Note: If drums, cones, or tubular markers are used to channelize pedestrians, they shall be located such that there are no gaps between the bases of the devices, in order to create a continuous bottom, and the height of each individual drum, cone, or tubular marker shall be no less than 900 mm (36 in) to be detectable to users of long canes.

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**Figure 6F-101 (CA). California Temporary Traffic Control Signs
 (Sheet 1 of 2)**



Figure 6F-101 (CA). California Temporary Traffic Control Signs (Sheet 2 of 2)

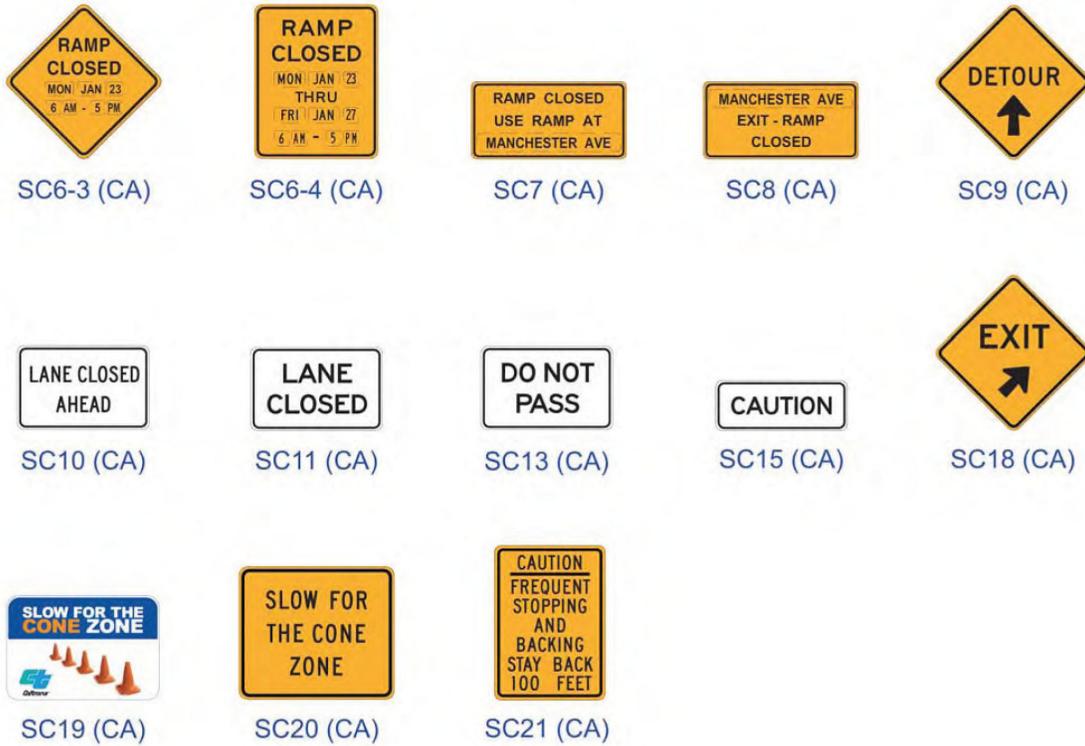
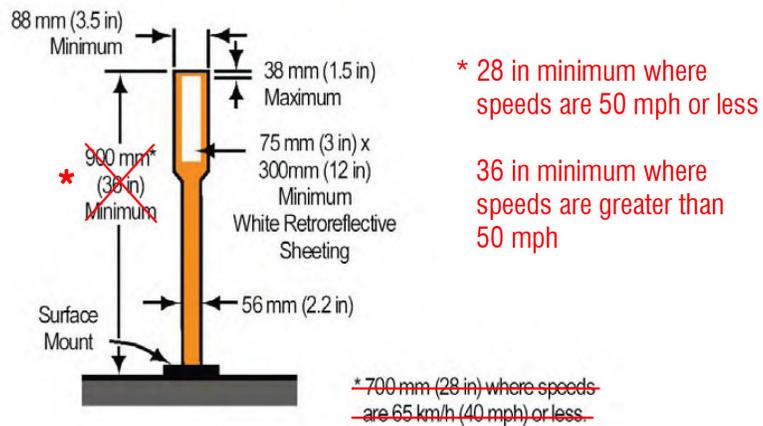


Figure 6F-102 (CA). Channelizer



Notes for Figure 6H-105(CA)—Typical Application 105(CA)**Work in Side 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. All advance warning signs should be placed so that the path of travel for bicycles is not blocked while maintaining visibility for road users

Standard:

3. **Workers in the roadway shall wear high-visibility safety apparel as described in Section 6D.03.**

Option:

4. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.
5. If the closure continues overnight, warning lights may be used on the channelizing devices.
6. 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.

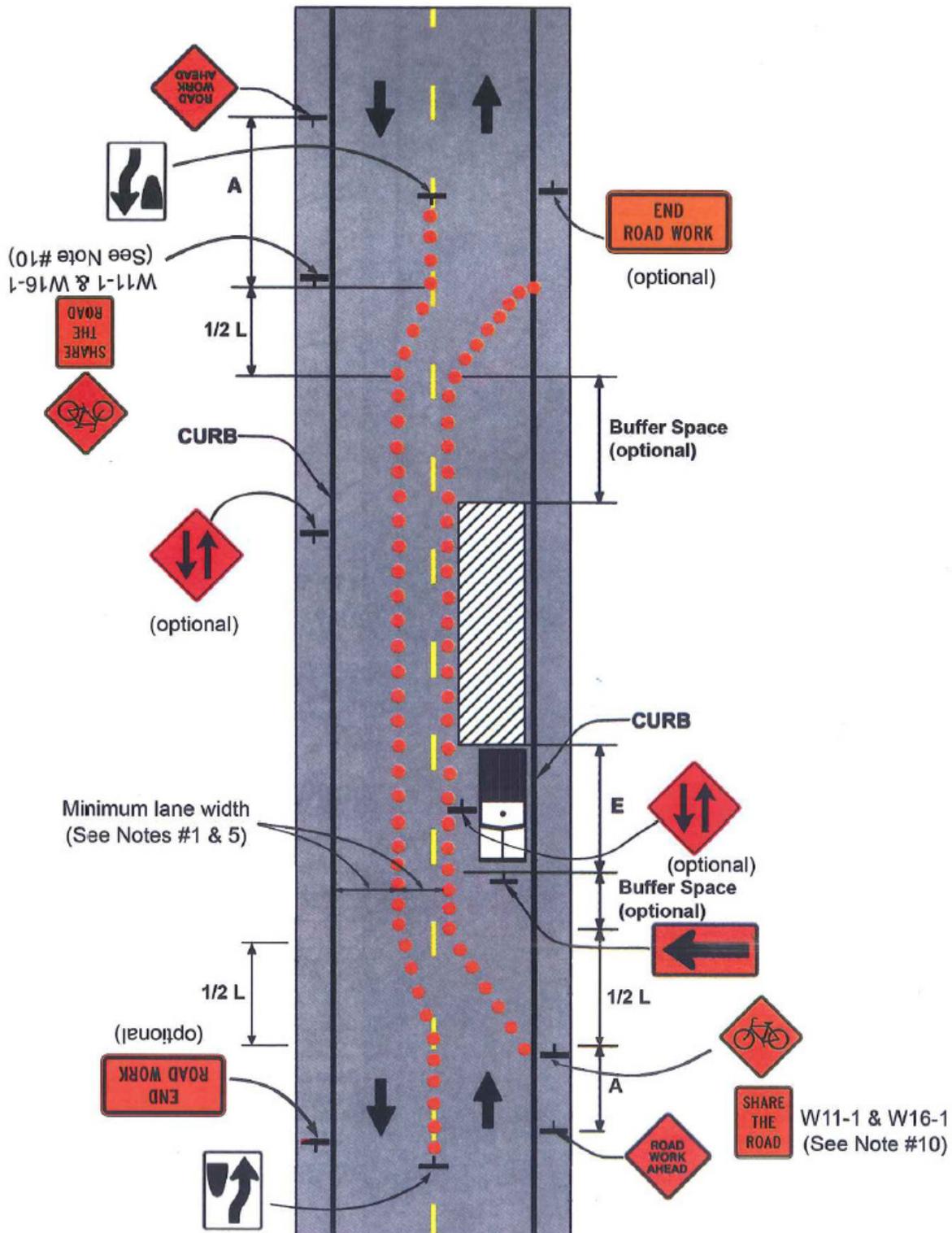
Option:

7. 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.
8. Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.

Standard:

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

Figure 6H-105(CA). Work on Side of Road with Low Traffic Volumes (TA-105(CA))



Typical Application 105 (CA)

Notes for Figure 6H-22—Typical Application 22**Right-Hand Lane Closure on Far Side of Intersection with Significant Right Turn Movements**

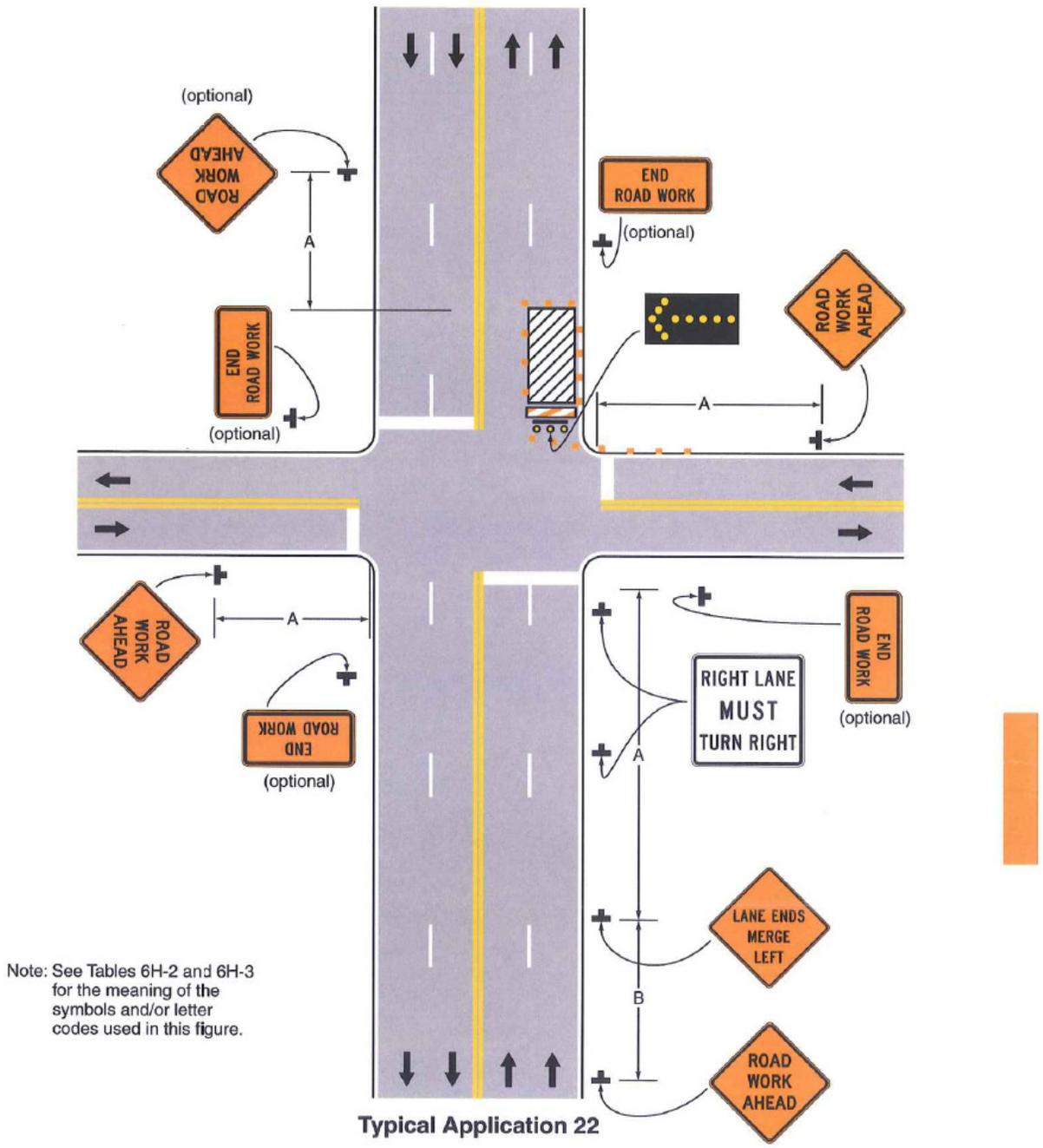
Guidance:

1. If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure 6H-29.

Option:

2. The normal procedure is to close on the near side of the intersection any lane that is not carried through the intersection as shown in Figure 6H-107(CA). However, when this results in the closure of a right-hand lane having significant right turning movements, then the right-hand 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.
- ~~3. For intersection approaches reduced to a single lane, left turning movements may be prohibited to maintain capacity for through vehicular traffic.~~
3. This treatment is appropriate for short-term and intermediate-term projects where it is not practical to install Detail 37B or 37C striping. See Figure 6H-106(CA) for long-term projects.
4. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.
5. Where the turning radius is large, it may be possible to create a right-turn island using channelizing devices or pavement markings.

Figure 6H-22. Right-Hand Lane Closure on the Far Side of an Intersection with Significant Right Turn Movements (TA-22)



Notes for Figure 6H-106(CA)—Typical Application 106(CA)

**Right-Hand Lane Closure on Far Side of Intersection with
Significant Right Turn Movements For Long-Term Projects**

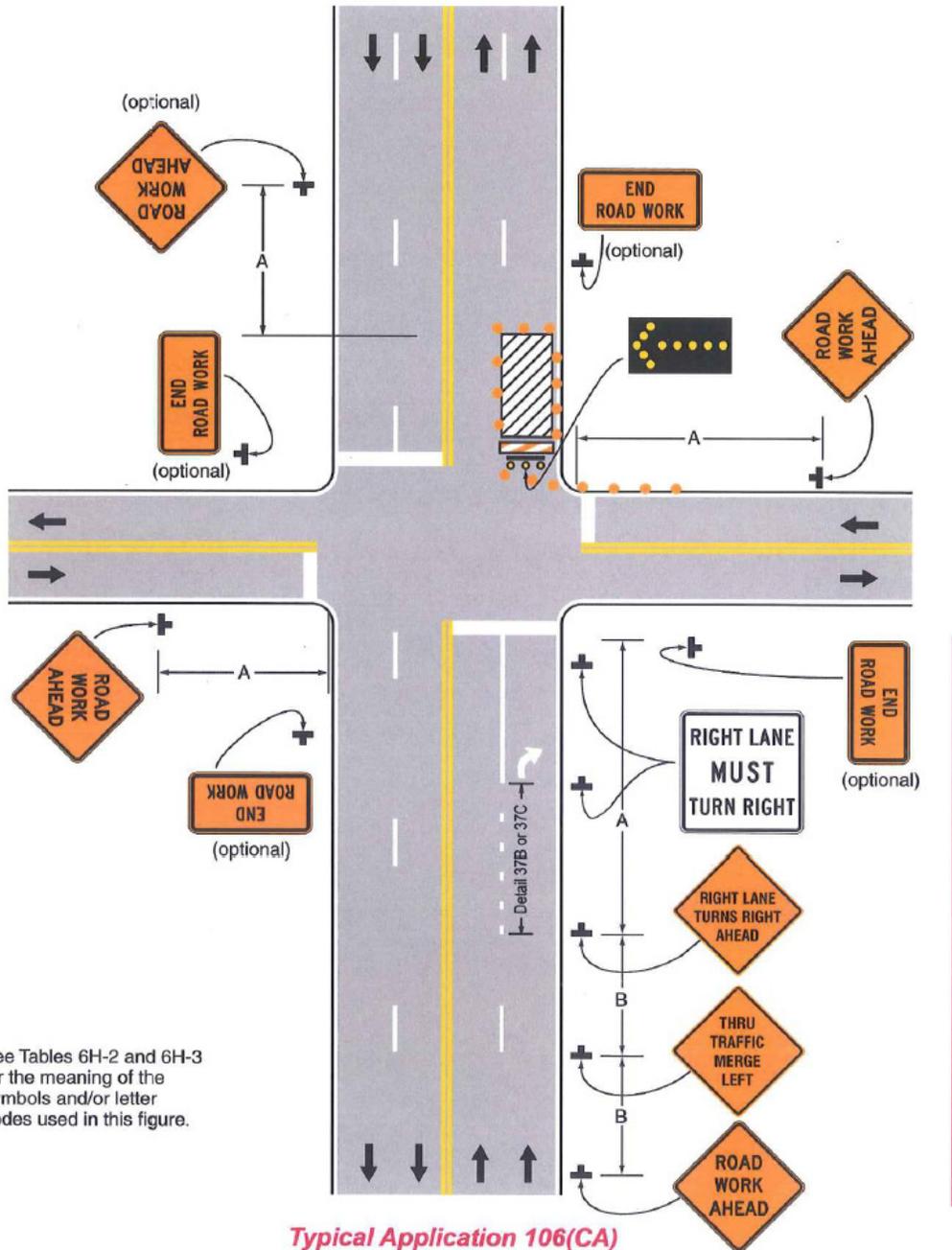
Guidance:

1. If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure 6H-29.

Option:

2. 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.
3. This treatment is appropriate for long-term projects where it is practical to install Detail 37B or 37C striping. See Figure 6H-22 for short-term or intermediate term projects.
4. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.
5. Where the turning radius is large, it may be possible to create a right-turn island using channelizing devices or pavement markings.

Figure 6H-106(CA). Right-Hand Lane Closure on the Far Side of an Intersection with Significant Right Turn Movements for Long-Term Projects 106(CA)



Note: See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.

Notes for Figure 6H-107(CA)—Typical Application 107(CA)**Right-Hand Lane Closure on Far Side of Intersection****Guidance:**

1. If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure 6H-29.
2. An arrow board in the arrow or chevron mode should be used to advise approaching traffic of a lane closure along major multi-lane roadways in situations involving heavy traffic volumes, high speeds, and/or limited sight distances, or at other locations and under other conditions where road users are less likely to expect such lane closures.

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 sufficient right turning movements, then the right lane may be reopened as a turn bay for right turns only. See Figures 6H-22 or 6H-106(CA) for situations where the right-turn movements are significant.
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.

Support:

7. By first closing off the right lane and then reopening it as a turn bay, through movements from the right-hand lane are avoided.

Notes for Figure 6H-24—Typical Application 24**Half Road Closure on Far Side of Intersection with Stop Control**

Guidance:

1. Due to the abrupt transition through the intersection, this treatment should be restricted to situations where the approach must first come to a stop, such as with Stop sign control or red flashing beacons. See Figure 6H-108(CA) for approaches that are uncontrolled or have traffic control signals.
2. An arrow board in the arrow or chevron mode should be used to advise approaching traffic of a lane closure along major multi-lane roadways in situations involving heavy traffic volumes, high speeds, and/or limited sight distances or at other locations and under other conditions where road users are less likely to expect such lane closures.
3. If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure 6H-29.
4. When turn prohibitions are implemented, two turn prohibition signs should be used, one on the near side and, space permitting, one on the far side of the intersection.

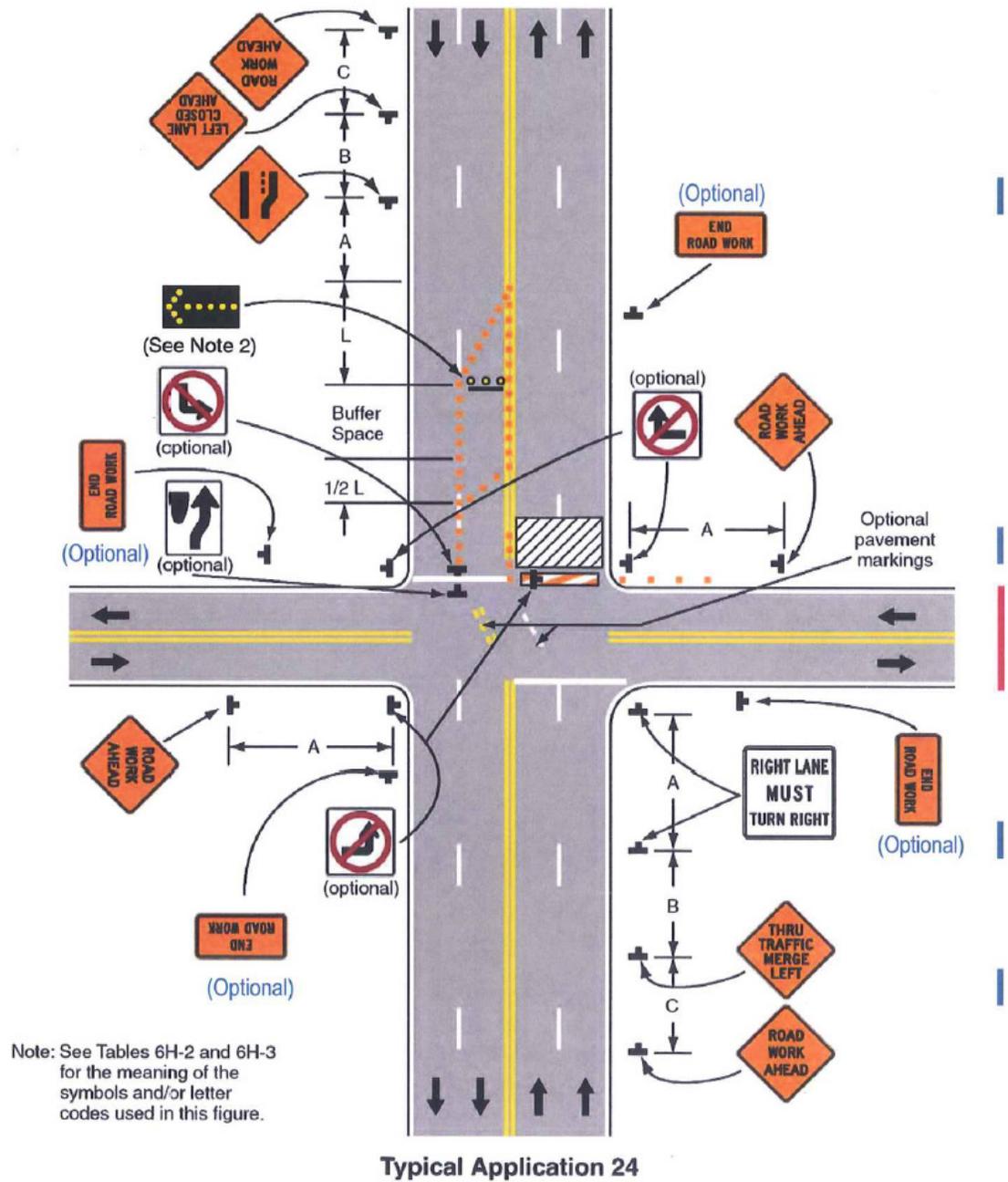
Option:

5. A buffer space may be used between opposing directions of vehicular traffic as shown in this application.
6. The normal procedure is to close on the near side of the intersection any lane that is not carried through the intersection. However, if there is a significant right-turning movement, then the right lane may be restricted to right turns only, as shown.
7. Where the turning radius is large, a right-turn island using channelizing devices or pavement markings may be used.
8. There may be insufficient space to place the back-to-back Keep Right sign and No Left Turn symbol signs at the end of the row of channelizing devices separating opposing vehicular traffic flows. In this situation, the No Left Turn symbol sign may be placed on the right and the Keep Right sign may be omitted.
9. For intersection approaches reduced to a single lane, left-turning movements may be prohibited to maintain capacity for through vehicular traffic.
10. Flashing warning lights and/or flags may be used to call attention to advance warning signs.
11. Temporary pavement markings may be used to delineate the travel path through the intersection.

Support:

12. Keeping the right lane open increases the through capacity by eliminating right turns from the open through lane.
13. A temporary turn island reinforces the nature of the temporary exclusive right-turn lane and enables a second RIGHT LANE MUST TURN RIGHT sign to be placed in the island.

Figure 6H-24. Half Road Closure on Far Side of Intersection with Stop Control (TA-24)



**Notes for Figure 6H-108(CA)—Typical Application 108(CA)
Half Road Closure on Far Side of Intersection**

Guidance:

1. If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure 6H-29.
2. An arrow board in the arrow or chevron mode should be used to advise approaching traffic of a lane closure along major multi-lane roadways in situations involving heavy traffic volumes, high speeds, and/or limited sight distances, or at other locations and under other conditions where road users are less likely to expect such lane closures.
3. When turn prohibitions are implemented, two turn prohibition signs should be used, one on the near side and, space permitting, one on the far side of the intersection.

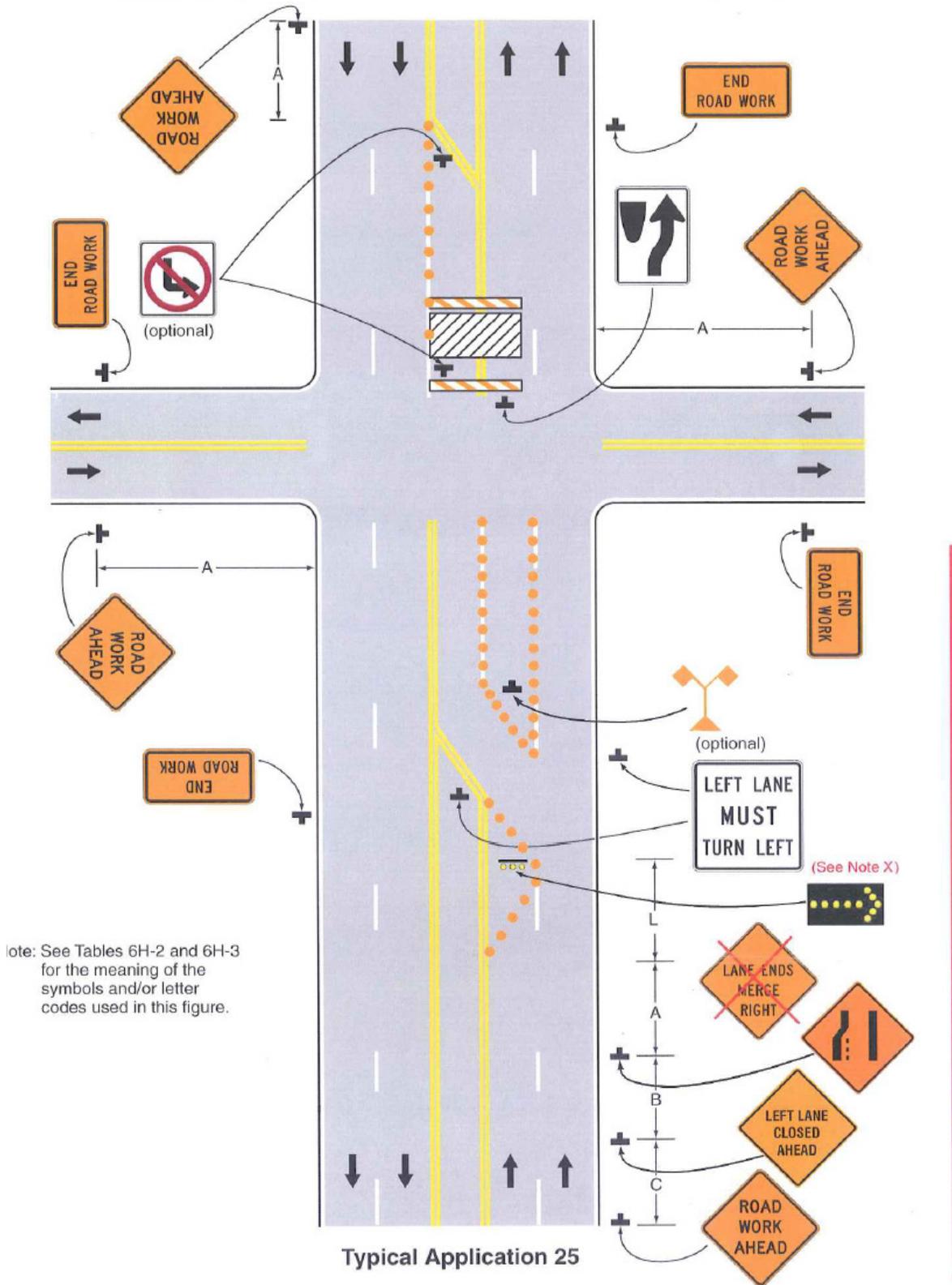
Option:

4. A buffer space may be used between opposing directions of vehicular traffic as shown in this application.
5. The normal procedure is to close on the near side of the intersection any lane that is not carried through the intersection. However, if there is a significant right-turning movement, then the right lane may be restricted to right turns only, as shown.
6. Where the turning radius is large, a right-turn island using channelizing devices or pavement markings may be used.
7. There may be insufficient space to place the back-to-back Keep Right sign and No Left Turn symbol signs at the end of the row of channelizing devices separating opposing vehicular traffic flows. In this situation, the No Left Turn symbol sign may be placed on the right and the Keep Right sign may be omitted.
8. For intersection approaches reduced to a single lane, left-turning movements may be prohibited to maintain capacity for through vehicular traffic.
9. Flashing warning lights and/or flags may be used to call attention to advance warning signs.
10. Temporary pavement markings may be used to delineate the travel path through the intersection.

Support:

11. Keeping the right lane open increases the through capacity by eliminating right turns from the open through lane.
12. A temporary turn island reinforces the nature of the temporary exclusive right-turn lane and enables a second RIGHT LANE MUST TURN RIGHT sign to be placed in the island.

Figure 6H-25. Multiple Lane Closures at an Intersection (TA-25)



Notes for Figure 6H-46—Typical Application 46**Work in Vicinity of Highway-Rail Grade Crossing**

Guidance:

1. When highway-rail grade crossings exist either within or in the vicinity of roadway work activities, extra care should be taken to minimize the probability of conditions being created, either by lane restrictions, flagging or other operations, where vehicles might be stopped within the highway-rail grade crossing, considered as being 4.6 m (15 ft) on either side of the closest and farthest rail. **This may include roadway work activities on a street parallel to a highway-rail grade crossing where right-hand turns or left-hand turns could be impacted.**

Standard:

2. **If the queuing of vehicles across active rail tracks cannot be avoided, a uniformed law enforcement officer or flagger shall be provided at the highway-rail grade crossing to prevent **through or turning** vehicles from stopping within the highway-rail grade crossing (as described in Note 1), even if automatic warning devices are in place.**

Guidance:

3. Early coordination with the railroad company should occur before work starts.
4. In the example depicted, the buffer space of the activity area should be extended upstream of the highway-rail grade crossing (as shown) so that a queue created by the flagging operation will not extend across the highway-rail grade crossing.
5. The DO NOT STOP ON TRACKS sign should be used on all approaches to a highway-rail grade crossing within the limits of a TTC zone.

Option:

6. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.
7. A BE PREPARED TO STOP sign may be added to the sign series. Guidance:
8. When used, the BE PREPARED TO STOP sign should be located ~~before~~ **after** the Flagger symbol sign.

Standard:

9. **At night, flagger stations shall be illuminated, except in emergencies.**

11-3a NO PARKING VEHICLES FOR SALE, Amendment to Section 2B.39 and Figure 2B-16(CA)

AMIR SEDADI
INTERIM GENERAL MANAGER

CITY OF LOS ANGELES
CALIFORNIA



ANTONIO R. VILLARAIGOSA
MAYOR

**DEPARTMENT OF
TRANSPORTATION**
100 S. Main St., 10th Floor
Los Angeles, CA 90012
(213) 972-8470
FAX (213) 972-8410

June 13, 2011

Mr. Devinder Singh
Executive Secretary, CTCDC
Caltrans
P.O. Box 942874
Sacramento, CA 94274-0001

Dear Mr. Singh:

Enclosed is a proposal for a new parking-series sign, due to a change in the California Vehicle Code. I request that this matter be scheduled for the July 20, 2011 meeting of the CTCDC. I further request that the proposed sign and text be incorporated into the 2011 California MUTCD.

John E. Fisher, P.E., PTOE
Assistant General Manager

JEF:je

C:\Documents and Settings\48432\My Documents\Fisher\6-9-11 Parking Signs-Devinder\Devinder-Parking Signs 6-9-11.doc

Enclosures

Recommendation

That the CTCDC adopt the attached sign and text for incorporation into the 2011 California MUTCD as follows:

1. Include the sign in Figure 2B-16(CA);
2. Include the following text in Section 2B.39

Option:

“The No Parking Vehicles for Sale (RXX-X(CA)) sign may be used to inform motorists that the parking of vehicles for sale is prohibited and that the vehicles may be impounded. Refer to CVC 22651”.

3. In addition, to the first Guidance statement, in Section 2B-40, add:
“G. The phone number to call to recover a towed or impounded vehicle”.

Requesting Agency

City of Los Angeles Department of Transportation (John E. Fisher).

Sponsor

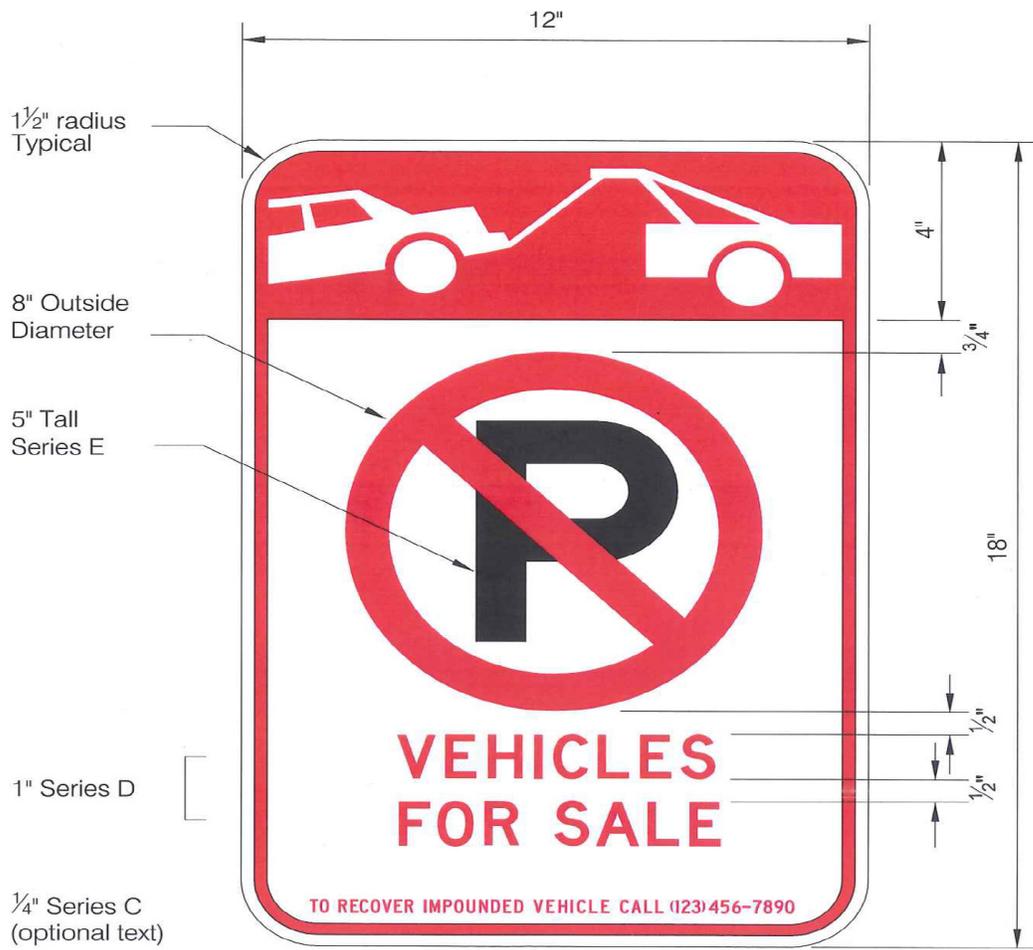
John E. Fisher, CTCDC Chair representing the League of California Cities, Southern counties.

Background

Section 22651.9 was recently added to the California Vehicle Code (CVC). It is attached. This section allows a vehicle to be impounded when it is advertised for sale, under specified conditions, pursuant to an ordinance or resolution listing the applicable streets.

Some cities would find it necessary to post signs to advise of the streets affected by the restriction. The City Attorney of Los Angeles has opined that signing is necessary for effective enforcement.

Accordingly, a proposed sign has been developed for optional use by jurisdictions in California who may adopt an ordinance or resolution, pursuant to CVC Section 22651.9. The proposed sign uses standard symbols with clarifying text.



C Section 22651.9 Removal of Vehicles for Sale**Removal of Vehicles for Sale**

22651.9. (a) Any peace officer, as defined in Chapter 4.5 (commencing with Section 830) of Title 3 of Part 2 of the Penal Code, or any regularly employed and salaried employee, who is engaged in directing traffic or enforcing parking laws and regulations, of a city, county, or city and county in which a vehicle is located, may remove a vehicle located within the territorial limits in which the officer or employee may act when the vehicle is found upon a street or any public lands, if all of the following requirements are satisfied:

(1) Because of a sign or placard on the vehicle, it appears that the primary purpose of parking the vehicle at that location is to advertise to the public the private sale of that vehicle.

(2) Within the past 30 days, the vehicle is known to have been previously issued a notice of parking violation, under local ordinance, which was accompanied by a notice containing all of the following:

(A) A warning that an additional parking violation may result in the impoundment of the vehicle.

(B) A warning that the vehicle may be impounded pursuant to this section, even if moved to another street, so long as the signs or placards offering the vehicle for sale remain on the vehicle.

(C) A listing of the streets or public lands subject to the resolution or ordinance adopted pursuant to paragraph (4), or if all streets are covered, a statement to that effect.

(3) The notice of parking violation was issued at least 24 hours prior to the removal of the vehicle.

(4) The local authority of the city, county, or city and county has, by resolution or ordinance, authorized the removal of vehicles pursuant to this section from the street or public lands on which the vehicle is located.

(b) Section 22852 applies to the removal of any vehicle pursuant to this section.

Added Ch. 481, Stats. 1993. Effective September 27, 1993.

11-4a FHWA's Interim Approval for Optional Use of Green Colored Pavement for Bike Lanes (1A-14)

Recommendation: Caltrans requesting CTCDC make recommendation that Caltrans seek statewide blanket Approval for Optional Use of Green Colored Pavement for Bike Lanes from the FHWA .

Agency Requesting/Sponsor: Caltrans

Background:



Memorandum

Subject: **INFORMATION:** MUTCD – Interim Approval for Optional Use of Green Colored Pavement for Bike Lanes (IA-14)

Date: APR 15 2011

From: Jeffrey A. Lindsey
Associate Administrator for Operations

In Reply Refer To:
HOTO-1

To: Federal Lands Highway Division Engineers
Division Administrators

Purpose: The purpose of this memorandum is to issue an Interim Approval for the optional use of green colored pavement in marked bicycle lanes and in extensions of bicycle lanes through intersections and other traffic conflict areas. Interim Approval allows interim use, pending official rulemaking, of a new traffic control device, a revision to the application or manner of use of an existing traffic control device, or a provision not specifically described in the Manual on Uniform Traffic Control Devices (MUTCD).

Background: Chapter 3G of the 2009 MUTCD contains provisions regarding the use of colored pavements. Paragraph 1 of Section 3G.01 describes colored pavement as consisting of differently colored road paving materials, such as colored asphalt or concrete, or paint or other marking materials applied to the surface of a road or island to simulate a colored pavement.

If colored pavement is used to regulate, warn, or guide traffic, the colored pavement is considered to be a traffic control device. Paragraph 3 of Section 3G.01 limits the use of colored pavement used as a traffic control device to the colors yellow and white. Paragraph 2 of Section 3G.01 discusses the use of colored pavement as a purely aesthetic treatment that is not intended to regulate, warn, or guide traffic and is therefore not considered to be a traffic control device. Part 9, Traffic Control for Bicycle Facilities, of the 2009 MUTCD does not mention colored pavement.

A number of experiments have been conducted in the United States and in other countries around the world to determine the value of designating a particular pavement color to communicate to road users that a portion of the roadway has been set aside for exclusive or preferential use by bicyclists and to enhance the conspicuity of a bicycle lane or a bicycle lane extension. Green, blue, and red are among the colors that have been tested for this purpose. Because these colored pavements are intended to regulate, warn, or guide traffic (motorists and bicyclists) and thus are serving as more than just an aesthetic treatment, they are considered to be traffic control devices.

For the past 10 years in the United States, green has been the only color that has received official FHWA approval for colored pavement experiments on bicycle facilities. Blue colored pavement cannot be designated for exclusive or preferential use in bicycle facilities because it is already the primary color of the international symbol of accessibility parking symbol (see Figure 3B-22 of the 2009 MUTCD) and it is also used for the lines that are adjacent to parking spaces that are reserved for use only by persons with disabilities. The use of red colored pavement has not been approved for any bicycle-related experiments in the United States because it is currently being tested for a different potential use.

Research on Green Colored Pavement for Bike Lanes: Agencies across the United States are showing an increased interest in using colored pavement specifically for bicycle facilities, and many of them have submitted requests to the FHWA to experiment with colored pavement. During the past 10 years, the FHWA has approved experiments with green colored pavement for a variety of State and local governmental agencies, including the following: the Vermont Agency of Transportation; the City of Chicago, IL; the City of New York, NY; the City of St. Petersburg, FL; the City of San Francisco, CA; the City of Portland, OR; the City of Columbia, MO; the City of Long Beach, CA; the City of Austin, TX; the City of Nashville, TN; the City of Missoula, MT; the City of Golden, CO; the Minnesota DOT (for Minneapolis); and the Pennsylvania DOT (for Philadelphia). In these experiments, green colored pavement is being used as a traffic control device to designate locations where bicyclists are expected to operate, and areas where bicyclists and other roadway traffic might have potentially conflicting weaving or crossing movements.

FHWA Evaluation of Results: The Office of Transportation Operations has reviewed the available data and considers the experimental green colored pavement to be satisfactorily successful for the bicycle applications that were tested. Positive operational effects have been noted in the experiments, such as bicyclists positioning themselves more accurately as they travel across intersections and through conflict areas, and no notable negative operational effects have been observed. The research has also shown that bicyclists and motorists both have a positive impression of the effect of the green colored pavement, with bicyclists saying that they feel safer when the green colored pavement is present, and motorists saying that the green colored pavement gives them an increased awareness that bicyclists might be present and where those bicyclists are likely to be positioned within the traveled way.

The design of the experimental green colored pavement is not proprietary and can be used by any jurisdiction that requests and obtains interim approval from the FHWA to use green colored pavement. The FHWA believes that the experimental green colored pavement has a low risk of safety or operational concerns.

This Interim Approval does not create a new mandate compelling the use of green colored pavement, but will allow agencies to install green colored pavement, pending official MUTCD rulemaking, to enhance the conspicuity of a bicycle lane or a bicycle lane extension.

Conditions of Interim Approval: The FHWA will grant Interim Approval for the optional use of green colored pavement in marked bicycle lanes and in extensions of bicycle lanes through intersections and traffic conflict areas to any jurisdiction that submits a written request to the Office of Transportation Operations. A State may request Interim

Approval for all jurisdictions in that State. Jurisdictions using green colored pavement under this Interim Approval must agree to comply with the technical conditions detailed below, to maintain an inventory list of all locations where green colored pavement is installed, and to comply with Item D in Paragraph 18 of Section 1A.10 of the 2009 MUTCD, which requires:

“An agreement to restore the site(s) of the Interim Approval to a condition that complies with the provisions in this Manual within 3 months following the issuance of a Final Rule on this traffic control device; and terminate use of the device or application installed under the interim approval at any time that it determines significant safety concerns are directly or indirectly attributable to the device or application. The FHWA’s Office of Transportation Operations has the right to terminate the interim approval at any time if there is an indication of safety concerns.”

1. General Conditions:

The use of green colored pavement is optional. However, if an agency opts to use green colored pavement under this Interim Approval, the following design and installation requirements shall apply, and shall take precedence over any conflicting provisions of the MUTCD.

2. Allowable Uses:

Green colored pavement may be used within a bicycle lane or within an extension of a bicycle lane to enhance the conspicuity of the bicycle lane or extension.

The use of green colored pavement under this Interim Approval is limited to the following applications:

- a. Green colored pavement may be installed within bicycle lanes as a supplement to the other pavement markings that are required for the designation of a bicycle lane. Green colored pavement shall not be used instead of the longitudinal line required by Paragraph 2 of Section 9C.04 of the 2009 MUTCD or instead of the word, symbol, and arrow pavement markings illustrated in Figure 9C-3 of the 2009 MUTCD and required by Item C in Paragraph 6 of Section 3D.01 of the 2009 MUTCD. The green colored pavement may be installed for the entire length of the bicycle lane or for only a portion (or portions) of the bicycle lane. Green colored pavement may be installed as a rectangular background behind the word, symbol, and arrow pavement markings in a bicycle lane as a means of enhancing the conspicuity of these word, symbol, and arrow pavement markings.
- b. If a pair of dotted lines is used to extend a bicycle lane across an intersection or driveway (see Section 3B.08 of the 2009 MUTCD) or a ramp, green colored pavement may be installed between these lines as a supplement to the lines. Green colored pavement shall not be used instead of these dotted lines to extend a bicycle lane across an intersection, driveway, or ramp. The green colored pavement may be installed for the entire length of the bicycle lane extension or for only a portion (or portions) of the bicycle lane extension. The pattern of the green colored pavement may be dotted in a manner that matches the pattern of the

dotted lines, thus filling in only the areas that are directly between a pair of dotted line segments that are on opposite sides of the bicycle lane extension.

- c. If a pair of dotted lines is used to extend a bicycle lane across the beginning of a turn bay where drivers who desire to turn must cross the bicycle lane when moving out of the through lane in order to turn (see Figures 9C-1, 9C-4, and 9C-5 of the 2009 MUTCD), green colored pavement may be installed between these lines as a supplement to the lines. Green colored pavement shall not be used instead of these dotted lines to extend a bicycle lane across the beginning of a turn bay. The green colored pavement may be installed for the entire length of the bicycle lane extension or for only a portion (or portions) of the bicycle lane extension. The pattern of the green colored pavement may be dotted in a manner that matches the pattern of the dotted lines, thus filling in only the areas that are directly between a pair of dotted line segments that are on opposite sides of the bicycle lane extension.

3. Design of Green Colored Pavement:

- a. The daytime chromaticity coordinates for the color used for green colored pavement shall be as follows:

1		2		3		4	
x	y	x	y	x	y	x	y
0.230	0.754	0.266	0.500	0.367	0.500	0.444	0.555

The daytime luminance factor (Y) shall be at least 7, but no more than 35.

- b. The nighttime chromaticity coordinates for the color used for green colored pavement shall be as follows:

1		2		3		4	
x	y	x	y	x	y	x	y
0.230	0.754	0.336	0.540	0.450	0.500	0.479	0.520

- c. Green colored pavement may be retroreflective, but there is no requirement or recommendation that it be retroreflective.
- d. If green paint or other marking materials applied to the roadway surface are used to simulate a green colored pavement, consideration should be given to selecting pavement marking materials that will minimize loss of traction for bicyclists (see Paragraph 4 of Section 3A.04 of the 2009 MUTCD).

4. Other:

Except as otherwise provided above, all other provisions of the MUTCD that are applicable to colored pavements shall apply to green colored pavement.

Any questions concerning this Interim Approval should be directed to Mr. Bruce Friedman at bruce.friedman@dot.gov.

cc:

Associate Administrators
Chief Counsel
Chief Financial Officer
Directors of Field Services
Director of Technical Services

11-6 FHWA's Interim Approval for Optional Use of an Alternative Electric Vehicle Charging General Service Symbol Sign

Recommendation: Caltrans requesting CTCDC make recommendation that Caltrans seek statewide blanket Interim Approval for Optional Use of an Alternative Electric Vehicle Charging General Service Symbol Sign from the FHWA.

Agency Requesting/Sponsor: Caltrans

Background:



Memorandum

Subject: **INFORMATION:** MUTCD – Interim Approval for Optional Use of an Alternative Electric Vehicle Charging General Service Symbol Sign

Date: APR 1 - 2011

From: Jeffrey A. Lindley
Associate Administrator for Operations

In Reply Refer To:
HOTO-1

To: Federal Lands Highway Division Engineers
Division Administrators

Purpose: The purpose of this memorandum is to issue an Interim Approval for the optional use of a General Service symbol sign that provides road users direction to electric vehicle charging facilities that are open to the public. Interim Approval allows interim use, pending official rulemaking, of a new traffic control device, a revision to the application or manner of use of an existing traffic control device, or a provision not specifically described in the *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD).

Background: The Oregon and Washington departments of transportation have requested that the Federal Highway Administration (FHWA) consider alternative symbols for the current Electric Vehicle Charging General Service symbol (D9-11b) sign shown in Figure 2I-1 of the 2009 Edition of the MUTCD in anticipation of deploying electric vehicle charging facilities in these and four other states. The current symbol is a modification of the existing Gas General Service symbol (D9-7), into which the legend EV has been incorporated, similar to Alternative Fuel symbols such as diesel (D), compressed natural gas (CNG), and ethanol (E85). The request was predicated on the presumption that, for electric vehicle charging facilities, the fuel pump and hose of the Alternative Fuel symbols do not apply or could be confusing. Instead, the representation of an electrical cord was thought to be more appropriate. A new symbol was evaluated and subsequently recommended by a Traffic Control Devices Pooled-Fund Study report. However, the requesting agencies believe that the presence of a lightning bolt within this symbol suggests a risk of electrical shock, which would discourage the use of electric vehicles.

Research on the Alternative Electric Vehicle Charging Symbol Sign: In November 2010, a report of the Traffic Control Devices Pooled-Fund Study that evaluated several alternative symbols for electric vehicle charging was released. The symbol that had the greatest comprehension and legibility distance was a modification of the symbol used on the Electric Vehicle Charging (D9-11b) sign in the 2009 MUTCD, with the hose replaced by a power cord and plug and the addition of a lightning bolt within the pump window to convey an electrical charge. A similar version without the lightning bolt element was not

evaluated in the subject study. In March 2011, a comprehension evaluation was completed that evaluated the 2010 Pooled-Fund Study recommended symbol and a modified version that deleted the lightning bolt element. Comprehension was found to be similar both with and without the lightning bolt. Additional questions were asked of the test subjects regarding their perception of the relative risk of electrical shock for the new symbols with and without the lightning bolt. The responses indicated that the presence of the lightning bolt did not increase the perceived risk of electrical shock. In addition, overall, the perceived risk of electric shock at an electric vehicle charging facility was relatively low when compared with other items that could pose risks of electric shock.

The results included in the Final Report for this evaluation showed that the correct meaning of the alternative sign was identified by a sufficient percentage of the survey participants for this application. The removal of the lightning bolt element from the symbol reduces its visual complexity and this modification is expected to provide at least comparable recognition and legibility.

FHWA Evaluation of Results: The Office of Transportation Operations has reviewed the available data and considers the alternative sign (see attachment, p. IA-13-1) to be satisfactorily successful for the application of providing direction to an electric vehicle charging station. The alternative sign provides agencies with a means of directing road users to an electric vehicle charging station without the use of a word legend sign or supplemental plaque, thus reducing the informational load presented to the observer and promoting a uniform symbol for this general service.

The design of the alternative Electric Vehicle Charging symbol sign is not proprietary and can be used by any jurisdiction that requests and obtains interim approval from the FHWA to use the sign. The FHWA believes that the alternative Electric Vehicle Charging symbol sign has a low risk of safety or operational concerns.

This Interim Approval does not create a new mandate compelling the use of this new sign, but will allow agencies to install this sign, pending official MUTCD rulemaking, to provide direction to road users to electric vehicle charging stations.

Agencies may also continue to use the ELECTRIC VEHICLE CHARGING (D9-11bP) plaque as an educational message mounted below the alternative Electric Vehicle Charging symbol sign in a Directional Assembly.

Agencies may use the alternative Electric Vehicle Charging symbol in General Services (D9-18 Series) guide signs.

Conditions of Interim Approval: The FHWA will grant Interim Approval for the optional use of an alternative Electric Vehicle Charging symbol sign (see attachment, p. IA-13-1) to any jurisdiction that submits a written request to the Office of Transportation Operations. A State may request Interim Approval for all jurisdictions in that State. Jurisdictions using the sign under this Interim Approval must agree to comply with the technical conditions detailed below, to maintain an inventory list of all locations where the signs are installed, and to comply with Item D in Paragraph 18 of Section 1A.10 of the 2009 MUTCD, which requires:

“An agreement to restore the site(s) of the Interim Approval to a condition that complies with the provisions in this Manual within 3 months following the issuance of a Final Rule on this traffic control device; and terminate use of the device or application installed under the interim approval at any time that it determines significant safety concerns are directly or indirectly attributable to the device or application. The FHWA’s Office of Transportation Operations has the right to terminate the interim approval at any time if there is an indication of safety concerns.”

1. General Conditions:

The use of the alternative Electric Vehicle Charging symbol sign is optional. However, if an agency opts to use this sign under this Interim Approval, the following design and installation requirements shall apply and shall take precedence over any conflicting provisions of the MUTCD.

2. Allowable Uses:

Installation and use of the alternative Electric Vehicle Charging symbol sign shall conform to the general provisions for General Services signs in accordance with MUTCD Chapter 2I.

3. Sign Design and Size:

- a. The design of the alternative Electric Vehicle Charging symbol sign shall be as shown in the attached sign detail.
- b. The minimum size of the alternative Electric Vehicle Charging symbol sign shall be 24 inches in width by 24 inches in height.
- c. The size of the alternative Electric Vehicle Charging symbol sign shall otherwise be in accordance with those of other D9-11 series signs.

4. Other:

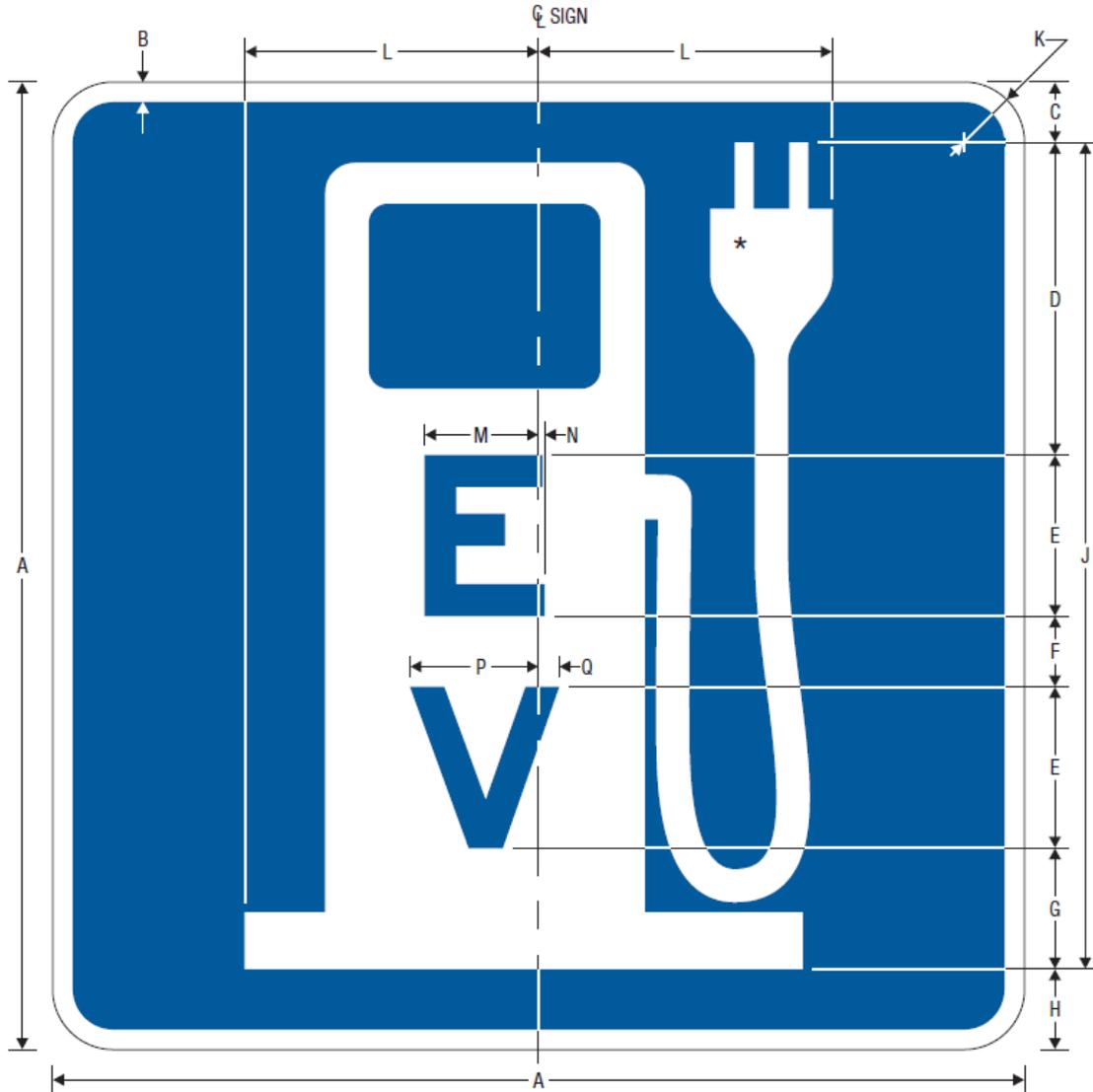
Except as otherwise provided above, all other provisions of the MUTCD applicable to signs shall apply to the alternative Electric Vehicle Charging General Service symbol sign.

Any questions concerning this Interim Approval should be directed to Mr. Kevin Sylvester at Kevin.Sylvester@dot.gov.

Attachment

cc:

Associate Administrators
Chief Counsel
Chief Financial Officer
Directors of Field Services
Director of Technical Services



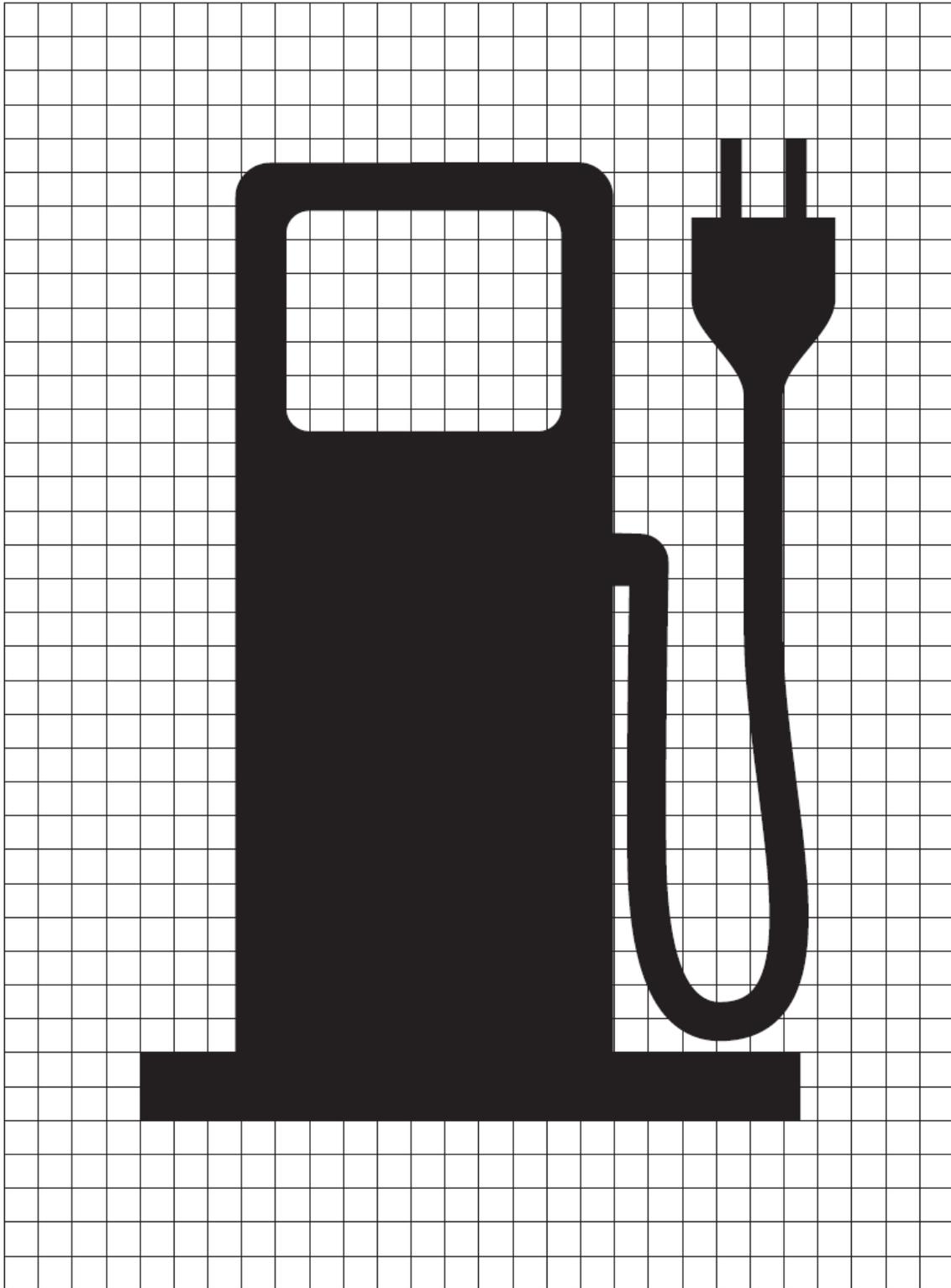
D9-11b (Alternate)
Electric Vehicle Charging (Alternate Symbol)

	A	B	C	D	E	F	G	H	J	K	L	M
C	24	0.5	1.5	7.75	4 E(m)	1.75	3	2	20.5	1.5	7.25	2.814
	30	0.75	1.875	9.625	5 E(m)	2	4	2.5	25.625	1.875	9.063	3.518

N	P	Q
0.148	3.174	0.507
0.185	3.968	0.635

* See page IA-13-2 for symbol design

COLORS: LEGEND, BACKGROUND — BLUE (RETROREFLECTIVE)
SYMBOL, BORDER — WHITE (RETROREFLECTIVE)



IA-13-2

11-7 Proposal to amend Section 6 F. 43 of CA MUTCD to create a new warning sign to warn motorcyclists of UNEVEN LANES

Recommendation:

The UNEVEN LANES (W8-11) sign should be used with a Motorcycle (W8-15P) plaque when elevation difference between two lanes are lesser than 2 inches.

Agency Making Request/Sponsor: Caltrans

Background:

SHSP Challenge Area: CA-12 – Improve Motorcycle Safety group wants to improve work zone signing for motorcycle safety. They approached Gordon Wang of Caltrans and suggested to make changes to CA MUTCD. Based on CHP suggestion the motorcycle plaque (W8-15P) should be used with an Uneven Lanes (W8-11) sign when needed.



Proposal: (Black text is from CA MUTCD 2010 and red text is proposed)

Section 6F.43 UNEVEN LANES Sign (W8-11)

Guidance:

The UNEVEN LANES (W8-11) sign (see Figure 6F-4, Sheet 2 of 4) should be used during operations that create a difference in elevation between adjacent lanes that are open to travel of 50 mm (2 in) or more.

Option:

When elevation difference is less than 2 inch but will affect motorcycle operation, use of the UNEVEN LANES (W8-11) sign with motorcycle plaque (W8-15P) should be considered.

11-8 Amendment to Section 6F.03 Sign Placement (Signs mounted on portable supports for longer than 3 day)**Recommendation:**

Modify Option in Section 6F.03 Sign Placement to remove the sign mounting height requirement conflict within the CA MUTCD.

Agency Making Request/Sponsor: Caltrans

Background:

A Caltrans traffic engineer, Peter Caruso made a public comment in the September 2010 CTCDC meeting regards to sign mounting height requirement conflict within the CA MUTCD.

CA MUTCD Section 6F.03 Sign Placement states:

Standard:

Signs mounted on barricades, or other portable supports, shall be no less than 0.3 m (1 ft) above the traveled way.

Guidance:

Except as noted in the Option, signs mounted on portable supports should not be used for a duration of more than 3 days.

Option:

The R9-8 through R9-11a series, R11 series, W1-6 through W1-8 series, M4-10, E5-1, or other similar type signs (see Figures 6F-3, 6F-4, and 6F-5) may be used on portable supports for longer than 3 days.

The option above allow all the signs shown on Figures 6F-3, 6F-4, and 6F-5 to be mounted just 1 ft above the traveled way and with no limit to the amount of time they can be displayed. This option gives a unlimited allowable modification to the standard where all signs shall be mounted no less than 5 ft above the traveled way. This option should be clarified so not every sign can be mounted just 1 ft above the traveled way for forever.

With the proposed modification discourages people from using signs on portable supports for more than 3 days.

Proposal:**Section 6F.03 Sign Placement****Guidance:**

Except as noted in the Option, signs (see Figures 6F-3, 6F-4, and 6F-5) mounted on portable supports should not be used for a duration of more than 3 days.

Option:

The R9-8 through R9-11a series, R11 series, W1-6 through W1-8 series, M4-10, E5-1, ~~or other similar type signs (see Figures 6F-3, 6F-4, and 6F-5)~~ may be used on portable supports for longer than 3 days.

Support:

Methods of mounting signs other than on posts are illustrated in Figure 6F-2.

Guidance:

Signs mounted on Type III barricades should not cover more than 50 percent of the top two rails or 33 percent of the total area of the three rails.

Standard:

Sign supports shall be crashworthy. Large signs having an area exceeding 5 square meters (50 square feet) that are installed on multiple breakaway posts shall be mounted a minimum of 2.1 m (7 ft) above the ground.

Signs mounted on barricades, or other portable supports, shall be no less than 0.3 m (1 ft) above the traveled way.

11-9 Section 2D.15, Enlarged fronts to be used on C20(CA) signs**Recommendation:**

SHSP Challenge Area: CA-14 – Improve Work Zone Safety group recommend to enlarge the front on C20(CA) sign and C20A(CA) & C20B(CA) Plaque when they are used with C20(CA) sign to increase legibility for older drivers.

Agency Making Request/Sponsor: Caltrans

Background:

A Caltrans traffic safety staff showed SHSP Challenge Area: CA-14 – Improve Work Zone Safety group a sample C20(CA) “RIGHT LANE CLOSED AHEAD” sign with the word “RIGHT” enlarged. The group thinks it improved the legibility of the sign and wants to see this change reflected in sign spec.

Section 2D.15 of the CA MUTCD does allow first letter of the Cardinal Direction Auxiliary signs to be bigger than the rest.

Section 2D.15 Cardinal Direction Auxiliary Signs (M3-1 through M3-4)

Guidance:

Cardinal Direction auxiliary signs (see Figure 2D-4) carrying the legend NORTH, EAST, SOUTH, or WEST should be used to indicate the general direction of the entire route.

Standard:

To improve the readability, the first letter of the cardinal direction words shall be ten percent larger, rounded up to the nearest whole number size.

If used, the Cardinal Direction auxiliary sign shall be mounted directly above a route sign or an auxiliary sign for an alternative route.

Current Sign:



Proposal:

Option #1



Option #2



11-10 Proposal to amend Chapter 4I, Sections 4I.01, 4I.02 and 4I.03 of the National MUTCD 2009 and adopted amended Chapter in CA MUTCD 2011

Recommendation:

That the CTCDC adopt revisions to text in Part 4 for incorporation into the 2011 California MUTCD, as summarized in Table 1 and as shown in the enclosures.

Requesting Agency:

California Department of Transportation (Zhongren Wang 916-654-6133 Senior Engineer, Ramp Metering Branch, Office of System Management Operations, Division of Traffic Operations, California Department of Transportation)

Sponsor:

Wayne Henley

Background

The ramp metering portion contains ambiguous and erroneous descriptions and standards that are not applicable to California. California has been implementing ramp meters since the late 1960s. Currently, Caltrans owns and operates more than 2000 ramp meters, which is more than 60% of the nation's inventory. CA MUTCD should and must reflect the practical knowledge of ramp metering operations in California.

Table 1: Summary of Proposed Revisions to Part 4

Number	Reference	Revision	Reason
1	Section 4I.01, Support	Rewrite the 2 nd sentence in paragraph 1.	“This” in the sentence is very ambiguous, and need clarification.
2	Section 4I.02, Standard	In paragraph 02, delete the 2-section head portion.	The statewide ramp metering group agreed that the standard should be 3-section head only. This standard is being incorporated into the Ramp Metering Design Manual which is under revision. 2-section head is only used as lower head in one-vehicle-per-green type of operations. Use 3-section head as lower head gives the flexibility of operating in one- or two-vehicle-per-green.
3	Section 4I.02, Standard	Rewrite the last part of paragraph 3.	Ambiguity and erroneous standard that have to be clarified and corrected. There are two types of entering traffic: approaching and stopped, which have different needs for signal visibility. So entering traffic must be clearly specified and accommodated separately. A minimum of two faces per ramp may be insufficient if lower heads are counted in. Also, if there are three lanes, two faces are apparently insufficient.
4	Section 4I.02, Standard	Rewrite the last part of paragraph 4.	Clarify ambiguous information, and incorporate the memo issued by FHWA on Jan. 5, 2011: “4(09)-6 (I) – Freeway Entrance Ramp Control Signals.”
5	Section 4I.02 Guidance	Paragraph 05: Rewrite later part of the sentence.	Additional signal faces should be considered when existing faces are overhead mounted. Number of lanes is not sufficient justification

			for considering additional signal faces. For example, for two lane onramps with side-mounted signal faces, additional side-mounted signal faces are unnecessary.
6	Section 4I.02, Option	Paragraph 07: "HOV bypass lanes" should be changed to HOV preferential lanes."	DD-35-R1 uses HOV preferential lanes, because ramp meters should not be bypassed; HOVs are only being given preferential treatment.
7	Section 4I.02 Option	Paragraph 10: delete "on a single pole"	There may be special cases if pole is mounted on a bridge rail, the upper and lower heads may not fit on a single pole with the ramp metering signage. Multiple poles may be needed.
8	Section 4I.03 Guidance	Paragraph 02: Replace "operated only during certain periods of the day" by "in operation"	Ramp meters may be operating full time, or 24/7. In this case, advance warning is still an indispensable component of ramp metering.
9	Section 4I.03 Guidance	Paragraph 02: Add "or an internally illuminated "METER ON" indication, or an extinguishable PREPARE TO STOP message sign"	To reflect California experience in installation advance warning signs. METER ON advance warning has been successfully used in California for years. In freeway-to-freeway connector metering, EMS are typically used as advance warning devices in California.

2009 Edition Chapter 4I. Traffic Control Signals for Freeway Entrance Ramps

Section 4I.01 Application of Freeway Entrance Ramp Control Signals

Support:

01 Ramp control signals are traffic control signals that control the flow of traffic entering the freeway facility. ~~This is~~ These signals are often referred to as "ramp metersing."

02 Freeway entrance ramp control signals are sometimes used if controlling traffic entering the freeway could reduce the total expected delay to traffic in the freeway corridor, including freeway ramps and local streets.

Guidance:

03 *The installation of ramp control signals should be preceded by an engineering study of the physical and traffic conditions on the highway facilities likely to be affected. The study should include the ramps and ramp connections and the surface streets that would be affected by the ramp control, as well as the freeway section concerned.*

Support:

04 Information on conditions that might justify freeway entrance ramp control signals, factors to be evaluated in traffic engineering studies for ramp control signals, design of ramp control signals, and operation of ramp control signals can be found in the FHWA's "Ramp Management and Control Handbook" (see [Section 1A.11](#)).

Section 4I.02 Design of Freeway Entrance Ramp Control Signals

Standard:

01 Ramp control signals shall meet all of the standard design specifications for traffic control signals, except as otherwise provided in this Section.

02 The signal face for freeway entrance ramp control signals shall be ~~either a two-section signal face containing red and green signal indications or~~ a three-section signal face containing red, yellow, and green signal indications.

03 If only one lane is present on an entrance ramp or if more than one lane is present on an entrance ramp and the ramp control signals are operated such that green signal indications are always displayed simultaneously to all of the lanes on the ramp, ~~then a minimum of two signal faces per ramp shall face entering traffic.~~ then the minimum number of upper signal heads per ramp shall not be less than the total number of lanes at the limit line for viewing by approaching motorists. For side-mounted signals, the same number of lower signal heads shall also be provided for viewing by stopped motorists at the limit line.

04 If more than one lane is present on an entrance ramp and the ramp control signals are operated such that green signal indications are not always displayed simultaneously to all of the lanes on the ramp, then one upper signal face shall be provided for each separately controlled lane over the approximate center of each separately-controlled lane if the signal face is overhead mounted. If there are only two separately-controlled lanes on a ramp, the lanes can be satisfactorily controlled with two side-mounted upper signal heads and two side-mounted lower signal heads adjacent to each of the two lanes. If there is only one lane on a ramp, the lane can be satisfactorily controlled with one side-mounted upper signal head and one side-mounted lower signal head on the left-hand-side of travel direction.

Guidance:

05 *Additional side-mounted signal faces should be considered for ramps with overhead mounted upper signal faces, two or more separately-controlled lanes.*

Standard:

06 Ramp control signals shall be located and designed to minimize their viewing by mainline freeway traffic.

Option:

07 Ramp control signals may be placed in the dark mode (no indications displayed) when not in use.

08 Ramp control signals may be used to control some, but not all, lanes on a ramp, such as when non-metered HOV bypass preferential lanes are provided on a ramp.

09 The required signal faces, if located at the side of the ramp roadway, may be mounted such that the height above the pavement grade at the center of the ramp roadway to the bottom of the signal housing of the lowest signal face is between 4.5 and 6 feet.

10 For entrance ramps with only one controlled lane, the two required signal faces may both be mounted at the side of the roadway ~~on a single pole~~, with one face at the normal mounting height and one face mounted lower as provided in [Paragraph 9](#), as a specific exception to the normal 8-foot minimum lateral separation of signal faces required by [Section 4D.13](#).

Guidance:

11 *Regulatory signs with legends appropriate to the control, such as XX Vehicle(S) Per Green or XX VEHICLE(S) PER GREEN Each Lane (see [Section 2B.56](#)), should be installed adjacent to the ramp control signal faces. When ramp control signals are installed on a freeway-to-freeway ramp, special consideration should be given to assuring adequate visibility of the ramp control signals, and multiple advance warning signs with flashing warning beacons should be installed to warn road users of the metered operation.*

Section 4L.03 Operation of Freeway Entrance Ramp Control Signals*Guidance:*

01 *Operational strategies for ramp control signals, such as periods of operation, metering rates and algorithms, and queue management, should be determined by the operating agency prior to the installation of the ramp control signals and should be closely monitored and adjusted as needed thereafter.*

02 *When the ramp control signals are in operation, only during certain periods of the day a RAMP METERED WHEN FLASHING (W3-8) sign (see [Section 2C.37](#)), or an internally illuminated “METER ON” indication, or an extinguishable “PREPARE TO STOP” message sign should be installed in advance of the ramp control signal near the entrance to the ramp, or on the arterial on the approach to the ramp, to alert road users to the presence and operation of ramp meters.*

Standard:

03 **The RAMP METERED WHEN FLASHING sign shall be supplemented with a warning beacon (see [Section 4L.03](#)) that flashes when the ramp control signal is in operation.**

11-11 Proposal to amend Sections 2B.40, 2B.39 and Figure 2B-16(CA)

CITY OF LOS ANGELES
CALIFORNIA

AMIR SEDADI
INTERIM GENERAL MANAGER



ANTONIO R. VILLARAIGOSA
MAYOR

DEPARTMENT OF
TRANSPORTATION
100 S. Main St., 10th Floor
Los Angeles, CA 90012
(213) 972-8470
FAX (213) 972-8410

June 13, 2011

Mr. Devinder Singh
Executive Secretary, CTCDC
Caltrans
P.O. Box 942874
Sacramento, CA 94274-0001

Dear Mr. Singh:

Enclosed is a proposal for a new parking series sign, due to the need to delineate the tow-away symbol in an 18-inch wide format. I request that this matter be scheduled for the July 20, 2011 meeting of the CTCDC. I further request that the proposed sign and text be incorporated into the 2011 California MUTCD.

John E. Fisher, P.E., PTOE
Assistant General Manager

JEF:je

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Enclosures

Recommendation

That the CTCDC adopt the attached sign and tow-away symbol for incorporation into the 2011 California MUTCD, as follows:

1. Include the sign in Figure 2B-16(CA)
2. Include the following Standard statement text in Section 2B.39:
“The symbol Tow-Away No Stopping 4 to 6 PM (RYY(CA)) sign shall be used to inform motorists of a stopping restriction in a tow-away zone at a specific location during specific hours”.
3. Add another statement in Section 2B.40 at the end of the first Standard statement as follows:
“Where the “Tow-Away” symbol is used in a 12-inch width format it shall be as shown in the R26K(CA) sign. When it is used in an 18-inch width format it shall be as shown in the RYY(CA) sign”.

Requesting Agency

City of Los Angeles Department of Transportation (John E. Fisher)

Sponsor

John E. Fisher, CTCDC Chair representing the League of California Cities, Southern counties.

Background

The Tow-Away symbols shown in the federal and California MUTCDs only display a 12-inch width format. The R37(CA), R38(CA), R38(S)(CA) and R38A(CA) signs have an 18-inch width where a symbol is allowed, but it is unclear how the 12-inch width format would apply to the 18-inch width signs. The 18-inch width format would allow the full lengths of the tow truck and the towed vehicle to be shown and thus be well understood. The proposed RYY(CA) sign shows the format for the Tow-Away symbol in an 18-inch width format. Also, the proposed text indicates the symbols to be used in the 12-inch width and 18-inch width formats.



5. Request for Experimentation:

11-12 Request to Experiment with Circular LED Flashing Beacon and Rectangular Rapid Flashing Beacon

Proposal: The City of Coachella request authorization to conduct an experiment with Circular LED Flashing Beacon and with Rectangular Rapid Flashing Beacon

Agency Making Request: City of Coachella

Sponsor: John Fisher, CTCDC member representing Southern CA Cities



CITY OF COACHELLA

1515 SIXTH STREET, COACHELLA, CALIFORNIA 92236

PHONE (760) 398-3502 • FAX (760) 398-8117 • WWW.COACHELLA.ORG

June 01, 2011

Director of the Office of Transportation Operations
U.S. Department of Transportation
Federal Highway Administration
Office of Transportation Operations, HOTO-1
1200 New Jersey Avenue, S.E., E84-477
Washington, D.C. 20590

Subject: Optional Use of Rectangular Rapid Flashing Beacons (IA-11)

Dear Sir or Madam:

The City of Coachella, California, requests blanket approval to use the Rectangular Rapid Flashing Beacons (IA-11) (RRFB) to supplement standard pedestrian crossing signs at uncontrolled crosswalk locations.

The City also requests approval to experiment with circular LED indications in place of rectangular indications, as part of an experimentation process submitted to the California Traffic Control Devices Committee (CTCDC) and as outlined in the following request for authorization of experimentation.

Subject to your approval to use the RRFB, the City of Coachella agrees to comply with the following items in paragraph 18 of Section 1A.10 of the 2009 Edition of the Manual on Uniform Traffic Control Devices (MUTCD):

- B. The City agrees to abide by the specific conditions for the use of this device as contained in FHWA's interim approval document IA-14;
- C. The City agrees to maintain and continually update a list of locations where this device has been installed;
- D. The City agrees to restore the sites of the interim approval to a condition that complies with the provisions in the MUTCD within three months following the issuance of a final rule on this traffic control device. The City also agrees to terminate the use of this device installed under the interim approval at any time that it is determined to cause significant safety concerns that are directly or indirectly attributable to the device.

Implementation will follow the Conditions of Interim Approval as outlined in Mr. Furst's, Acting Associate Administrator for Operations, memorandum dated July 16, 2008.

An Affirmative Action/Equal Opportunity Employer

We thank you in advance for your consideration in allowing us to implement this traffic control device to enhance pedestrian safety within the City of Coachella. Please call or email with any further questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "Mark Chappell", written over a horizontal line.

Mark Chappell, P.E. – Senior Civil Engineer (City of Coachella)



CITY OF COACHELLA

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June 01, 2011

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

RE: Request to experiment with Rectangular Rapid Flash Beacons and Circular Rapid Flash Beacons

Dear Mr. Singh:

The City of Coachella hereby submits this application to the California Traffic Control Devices Committee to experiment with Rectangular Rapid Flash Beacons (RRFB), a device which received interim approval from the Federal Highway Administration. We will also experiment with Circular Rapid Flash Beacons (CRFB) per a prior CTCDC decision for the City of Santa Monica. We include the following below:

1. A statement indicating the nature of the problem
2. A description of the proposed change, how it was developed, the manner in which it deviates from the standard, and how it is expected to be in improvement over existing standards.
3. Illustrations that help explain the use of this experimental device.
4. Supporting data as to how the experimental 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.
5. A legally binding statement certifying that the concept of the traffic control device is not protected by a patent or copyright.
6. The time and location of the experiment.
7. A detailed evaluation plan.
8. An agreement to restore the site of the experiment to a condition that complies with the provisions of the California MUTCD within 3 months following the end of the time period of the experiment. An agreement that the City will terminate the experiment at any time that it is determined that significant safety concerns are directly or indirectly attributable to the experimentation. If the experiment is successful, we may apply to have the California MUTCD changed to include it, and we will keep the device in place until an official rulemaking decision has been made.

9. An agreement to provide semiannual progress reports for the duration of the experiment, and an agreement to provide a copy of the final results of the experimentation to the FHWA's Office of Transportation Operations within 3 months following completion of the experimentation.

Please be aware that we are also applying to the Federal Highway Administration (FHWA) to conduct this experiment. This should be a relatively simple approval since rectangular rapid flash beacons have already received Interim Approval for use, and the City of Santa Monica was able to obtain approval for Circular Rapid Flash Beacons.

Thank you very much for your prompt attention to this matter.
Respectfully,



Mark Chappell, P.E. – Senior Civil Engineer (City of Coachella)

1. BACKGROUND AND NATURE OF THE PROBLEM

The City of Coachella is seeking a solution to increase driver awareness and crosswalk compliance at uncontrolled marked crosswalk locations. Like many jurisdictions throughout the state and nation, Coachella is concerned with crosswalk compliance and ensuring that motorists yield right-of-way to pedestrians in uncontrolled marked crosswalk locations. Our specific concern is around Coachella's schools, where there are numerous students crossing at uncontrolled locations each day.

Crosswalk compliance is especially important on multi-lane roadways where "multiple threat" situations exist. To address crosswalk compliance, the City has pursued a number of available treatments and traffic control devices designed to bring attention to the crosswalk from the motorist's perspective. The treatments currently employed by Coachella include signage treatments, high visibility crosswalk striping, advanced warning signs, advanced yield markings, pedestrian refuge islands, curb extensions, median noses, overhead crosswalk illumination, and others.

The locations we have selected for these have a real safety issue. The Coral Mt. Elementary School Access Road at Van Buren Street location has 85th percentile speeds of 58 mph where children cross the road to go to school. The Bagdad Avenue at Harrison Street location has 85th percentile speeds of 44 mph over 4 lanes with many people crossing there and about 18,000 ADT. Both locations are along critical routes to school. Neither of these locations meet warrants for traffic signals.

2. A DESCRIPTION OF THE PROPOSED CHANGE

To increase driver awareness at uncontrolled crosswalks, and increase crosswalk compliance rates, the use of the Rectangular Rapid Flash Beacons and Circular Rapid Flash Beacons are proposed to supplement standard pedestrian crossing warning signs. The device will be installed on roadside poles, and will only illuminate until a pedestrian activates them by pressing a pushbutton. The RRFB will use a rectangular-shaped high-intensity LED based lights that flash rapidly in a wig-wag "flickering" flash pattern, and are mounted immediately between the crosswalk sign and the sign's supplemental arrow plaque. The device employs yellow LED RRFBs similar to those emergency flashers on police vehicles.

For the purpose of this experiment, the Circular Rapid Flash Beacons will consist of a standard flashing 8" round beacon as defined in the CA MUTCD will be modified with high intensity lights that operate using the RRFB rapid flash pattern for comparative analysis.

The two alternatives will be tested independently at the same locations.

3. ILLUSTRATIONS OF THIS EXPERIMENTAL DEVICE

The City of St. Petersburg, Florida in conjunction with a vendor developed the RRFB. The device employs yellow LED RRFBs that are similar in operation to emergency flashers on emergency vehicles. The RRFB operates in a similar fashion to in-roadway warning lights. The RRFB does not illuminate until a pedestrian activates the system by pressing a pushbutton. Once activated, the RRFB uses LED-based indications that flash rapidly in a wig-wag pattern. A picture of a rectangular rapid flashing beacon follows below (from "An Analysis of the Efficacy of Rectangular-shaped Rapid-Flash LED Beacons to Increase Yielding to Pedestrians Using Crosswalks on Multilane Roadways in the City of St. Petersburg, FL" by Dr. Ron Van Houten and Dr. J.E. Louis Malenfant).



A picture of the beacon itself that is mounted follows below.



FHWA approved the RRFB for interim use in 2008. The Signals Technical Committee voted to endorse the future inclusion of the RRFB for uncontrolled crosswalks into the MUTCD and recommended that FHWA issue an interim approval for the RRFB. The interim approval includes a number of provisions for the design and use of the RRFB. We list the provisions below, and they will guide the use of the device for the experimentation process.

A) General Conditions:

- a. An RRFB shall consist of two rapidly and alternately flashed rectangular yellow indications having LED-array based pulsing light sources, and shall be designed, located, and operated in accordance with the detailed requirements specified below.
- b. The use of the RRFBs is optional. However, if an agency opts to use an RRFB under this Interim Approval, the following design and operational requirements shall apply, and shall take precedence over any conflicting provisions of the MUTCD for the approach on which RRFBs are used:

B) Allowable Uses:

- a. An RRFB shall only be installed to function as a Warning Beacon (see 2003 MUTCD Section 4K.03).
- b. An RRFB shall only be used to supplement a W11-2 (Pedestrian) or S1-1 (School) crossing warning sign with a diagonal downward arrow (W16-7p) plaque, located at or immediately adjacent to a marked crosswalk.
- c. An RRFB shall not be used for crosswalks across approaches controlled by YIELD signs, STOP signs, or traffic control signals. This prohibition is not applicable to a crosswalk across the approach to and/or egress from a roundabout.
- d. In the event sight distance approaching the crosswalk at which RRFBs are used is less than deemed necessary by the engineer, an additional RRFB may be installed on that approach in advance of the crosswalk, as a Warning Beacon to supplement a W11-2 (Pedestrian) or S1-1 (School) crossing warning sign with an

AHEAD: (W16-9p) plaque. This additional RRFB shall be supplemental to and not a replacement for RRFBs at the crosswalk itself.

C) Sign/Beacon Assembly Locations:

- a. For any approach on which RRFBs are used, two W11-2 or S1-1 crossing warning signs (each with RRFB and W16-7p plaque) shall be installed at the crosswalk, one on the right-hand side of the roadway and one on the left-hand side of the roadway. On a divided highway, the left-hand side assembly should be installed on the median, if practical, rather than on the far left side of the highway.
- b. An RRFB shall not be installed independent of the crossing signs for the approach the RRFB faces. The RRFB shall be installed on the same support as the associated W11-2 (Pedestrian) or S1-1 (School) crossing warning sign and plaque.

D) Beacon Dimensions and Placement in Sign Assembly:

- a. Each RRFB shall consist of two rectangular-shaped yellow indications, each with an LED-array based light source. Each RRFB indication shall be a minimum of approximately 5 inches wide by approximately 2 inches high.
- b. The two RRFB indications shall be aligned horizontally, with the longer dimension horizontal and with a minimum space between the two indications of approximately seven inches (7 in), measured from inside edge of one indication to inside edge of the other indication.
- c. The outside edges of the RRFB indications, including any housings, shall not project beyond the outside edges of the W11-2 or S1-1 sign.
- d. As a specific exception to 2003 MUTCD Section 4K.01 guidance, the RRFB shall be located between the bottom of the crossing warning sign and the top of the supplemental downward diagonal arrow plaque (or, in the case of a supplemental advance sign, the AHEAD plaque), rather than 12 inches above or below the sign assembly.

E) Beacon Flashing Requirements:

- a. When activated, the two yellow indications in each RRFB shall flash in a rapidly alternating "wig-wag" flashing sequence (left light on, then right light on).
- b. As a specific exception to 2003 MUTCD Section 4K.01 requirements for the flash rate of beacons, RRFBs shall use a much faster flash rate. Each of the two yellow indications of an RRFB shall have 70 to 80 periods of flashing per minute and shall have alternating but approximately equal periods of rapid pulsing light emissions and dark operation. During each of its 70 to 80 flashing periods per minute, one of the yellow indications shall emit two rapid pulses of light and the other yellow indication shall emit three rapid pulses of light.
- c. The flash rate of each individual yellow indication, as applied over the full on-off sequence of a flashing period of the indication, shall not be between 5 and 30 flashes per second, to avoid frequencies that might cause seizures.
- d. The light intensity of the yellow indications shall meet the minimum specifications of Society of Automotive Engineers (SAE) standard J595 (Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles) dated January 2005.

F) Beacon Operation:

- a. The RRFB shall be normally dark, shall initiate operation only upon pedestrian actuation, and shall cease operation at a predetermined time after the pedestrian actuation or, with passive detection, after the pedestrian clears the crosswalk.
- b. All RRFBs associated with a given crosswalk (including those with an advance crossing sign, if used) shall, when activated, simultaneously commence operation of their alternating rapid flashing indications and shall cease operation simultaneously.
- c. If pedestrian pushbuttons (rather than passive detection) are used to actuate the RRFBs, a pedestrian instruction sign with the legend PUSH BUTTON TO TURN ON WARNING LIGHTS should be mounted adjacent to or integral with each pedestrian pushbutton.
- d. The duration of a predetermined period of operation of the RRFBs following each actuation should be based on the MUTCD procedures for timing of pedestrian clearance times for pedestrian signals.
- e. A small light directed at and visible to pedestrians in the crosswalk may be installed integral to the RRFB or push button to give confirmation that the RRFB is in operation.

While the FHWA has issued an interim approval allowing blanket use of the device, the RRFB does not meet the current standards for flashing warning beacons as contained in the 2009 edition of the CA MUTCD, Chapter 4L which requires a warning beacon to be round in shape and either 8 or 12 inches in diameter, to flash at a rate of approximately once per second, and to be located no less than 12 inches outside the nearest edge of the warning sign it supplements. The RRFB uses rectangular-shaped high-intensity LED-based indications, flashes rapidly in a wig-wag "flickering" flash pattern, and is mounted immediately between the crossing sign and the sign's supplemental arrow plaque.

The interim approval was brought before the California Traffic Control Devices Committee (CTCDC) at its September 2008 meeting, agenda item # 08-25. The CTCDC recommended not adopting the FHWA interim approval in California, instead the Committee encouraged agencies to seek approval from the CTCDC and test multiple devices based on the premise that "if other devices are equally effective, then why limit to a particular shape and size as issued in the interim approval by the FHWA"

In this experiment with Circular Rapid Flash Beacons, we will modify a standard side mounted flashing 8" beacon as defined in the CA MUTCD with high intensity lights and a rapid flash pattern. We will follow the same guidelines as described above when installing the device.

4. SUPPORTING DATA AND HOW THIS DEVICE WAS CHOSEN

A 2010 Transportation Research Board Report, Effects of Yellow Rectangular Rapid-Flashing Beacons on Yielding at Multilane Uncontrolled Crosswalks examined the effects of the RRFB

at uncontrolled marked crosswalks. The report noted that several methods have been examined through national testing to increase driver yield response rates to pedestrians at multilane crosswalks at uncontrolled marked locations along arterials with relatively high average daily traffic, and that “previously, only treatments that employed a red phase have consistently produced sustained high levels of yielding at high-volume multilane crosswalks.”

The report examined a series of five experiments that evaluated the efficacy of RRFBs. These studies found that RRFBs produced an increase in yielding behavior at all 22 sites located in 3 cities in the United States. Further, data collected over a 2-year follow-up period at 18 of these sites also documented the long-term maintenance of yielding produced by RRFBs. A comparison of RRFBs to a traditional overhead yellow flashing beacon and a sidemounted traditional yellow flashing beacon documented higher driver yielding associated with RRFBs that was not only statistically significant, but also practically important. Data from other experiments demonstrated that mounting additional beacons on pedestrian refuge islands, or medians, and aiming the beacons to maximize its salience at the dilemma zone increased the efficacy of the system, while two other variants were not found to influence the effectiveness of the system.¹

Further, the FHWA’s Office of Transportation Operations has reviewed the available data and considers the RRFB to be highly successful for the applications tested (uncontrolled marked crosswalks). “The RRFB offers significant potential safety and cost benefits; because it achieves very high rates of compliance at a very low relative cost in comparison to other more restrictive devices that provide comparable results, such as full midblock signalization.” The FHWA believes that the RRFB has a low risk of safety or operational concerns. However, because proliferation of RRFBs in the roadway environment to the point that they become ubiquitous could decrease their effectiveness, use of RRFBs should be limited to locations with the most critical safety concerns, such as pedestrian and school crosswalks across uncontrolled approaches, as tested in the experimentation.

The City of Coachella understands the CTCDC’s decision in September 2008, agenda item #08-25 to not adopt the FHWA interim approval, and encourage jurisdictions to try other devices. There are jurisdictions in California, such as the City of Santa Monica, that are currently experimenting with Circular Rapid Flash Beacons. This experiment will test the efficacy of the side-mounted, LED retrofitted Circular Rapid Flash Beacon to that of the Rectangular Rapid Flash Beacon.

¹ Transportation Research Board. (2010) *Effects of Yellow Rectangular Rapid Flashing Beacons on Yielding at Multilane Uncontrolled Crosswalks*, Publication No. FHWA-HRT-10-043, United States Department of Transportation, Turner-Fairbank Highway Research Center, McLean, VA.

5. CERTIFICATION THAT THE CONCEPT OF THE TRAFFIC CONTROL DEVICE IS NOT PROTECTED BY A PATENT OR COPYRIGHT

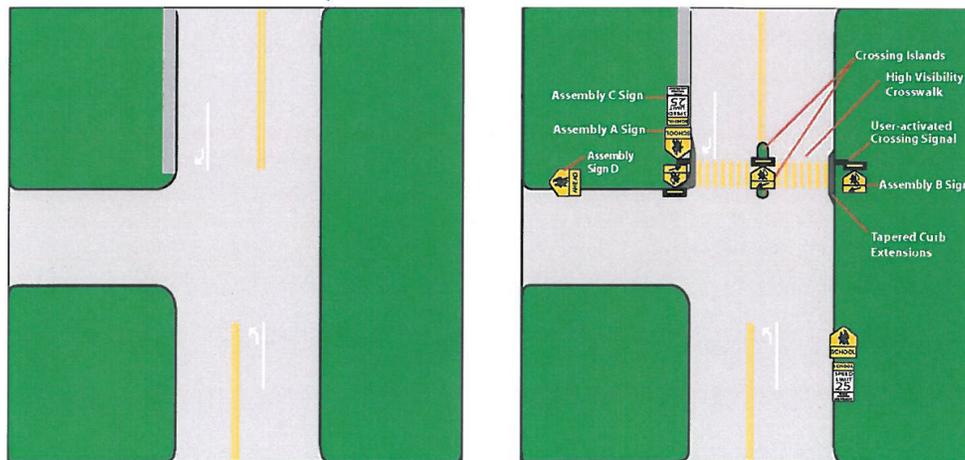
To the best of our knowledge, these traffic control devices are not protected by a patent of copyright.

6. TIME AND LOCATION OF THE EXPERIMENT

The City of Coachella will install RRFBs at two locations in the City: Coral Mt. Elementary School Access Road at Van Buren Street; and Bagdad Avenue at Harrison Street.

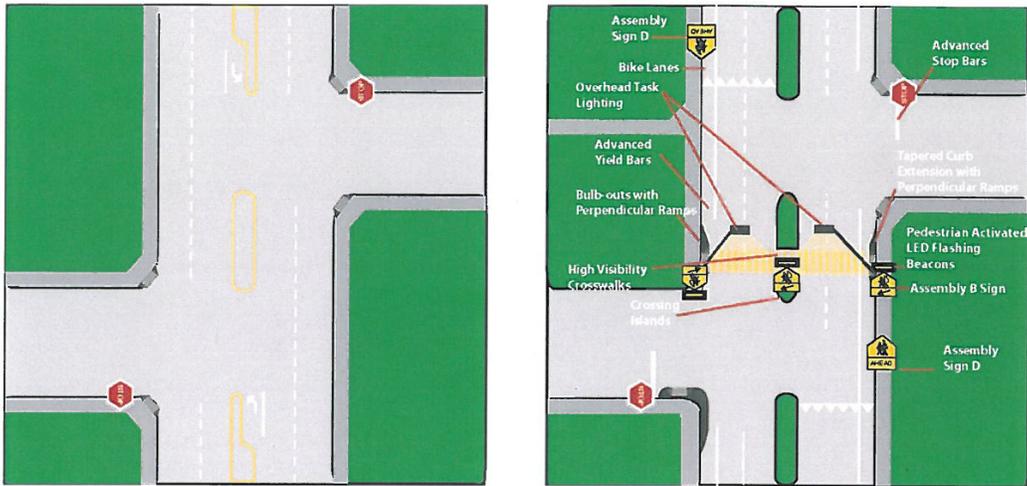
1) Coral Mt. Elementary School Access Road at Van Buren Street

The existing configuration is an unmarked crossing of Van Buren Street, which has 2 lanes and right-turn lane. The City plans to mark the crossing with a continental-style crosswalk and use RRFBs, in addition to pedestrian crossing signs, tapered curb extensions, crossing islands, and speed limit signs.



2) Bagdad Avenue at Harrison Street

The existing configuration is an unmarked crossing of Harrison Street, which has four lanes and center islands. The City plans to mark this crossing with a yellow continental-style crosswalk and use RRFBs, in addition to pedestrian crossing signs, overhead lighting, advanced yield bars, and curb extensions to shorten the crossing distance. A graphic shows the plan below.



This experiment will be conducted for a two-year period: one-year with the use of RRFBs, and the second year with the use of CRFBs at each location. We will start the experiment in the fall of 2011.

7. EVALUATION PLAN

- A) Evaluate existing conditions: Existing conditions at the crossing location will be documented.
- B) Pre-installation evaluation: The City will evaluate the following and record the results in an "existing conditions memo." These variables are those that were collected in the St. Petersburg, Florida example referenced above. The City of Coachella will use the same methodology.
 - a. The number of drivers who yield to pedestrians in crosswalks
 - b. The number of drivers who did not yield to pedestrians in crosswalks
 - c. The percentage of drivers who yielded at <10', 10' to 20', 20' to 30', 30' to 50', 50' to 70', 70' to 100' and > 100'
 - d. The number of cars that passed or attempted to pass a stopped/yielding vehicle
 - e. The number of cars that demonstrated a sudden and heavy use of brakes behind a stopped car.
- C) RRFB Experiment: Driver behavior to pedestrian crossing conditions will be measured as described in (B). We will document these conditions 45 days following installation, 90 days, and one year following installation. We will prepare a report documenting the results on a semi-annual basis for the CTCDC.
- D) CRFB Experiment: Driver behavior to pedestrian crossing conditions will be measured as described in (B). We will document these conditions 45 days following installation, 90 days, and one year following installation. We will prepare a report documenting the results on a semi-annual basis for the CTCDC.

- E) Evaluation: We will prepare a final Technical Report for submission to the CTCDC that compares the effectiveness of the Rapid Rectangular Flashing Beacon versus the Circular Rapid Flashing Beacon. The document will include images of the crossing and data collection conditions. It will be rich in graphics, graphs, texts, pictures, and tables summarizing the results.

8. APPLICATION RESTORATION

Within 3 months of completion of this experiment we will restore the site to a condition that complies with the California MUTCD, unless our experiment is successful, at which time the City will apply for this device to become a standard feature of the California MUTCD. If this application is rejected we will restore the site to a condition that complies with the California MUTCD. We will also restore the site to a condition that complies with the California MUTCD if at any time it is determined that significant safety concerns are directly or indirectly attributable to the experimentation.

9. SEMIANNUAL PROGRESS REPORTS

The City agrees to provide semiannual progress reports for the duration of the experiment. We also agree to provide a copy of the final results of the experimentation to the FHWA's Office of Transportation Operations within 3 months following completion of the experimentation.

08-20 Final Report on the Experimentation with Flashing Yellow Arrow for Permissive Right Turn Movement

Marin County requests that the Committee adopt Final Report on the experiment. County will develop a language for the CA MUTCD 2010 and bring back to the Committee as an Action Item.



DEPARTMENT OF PUBLIC WORKS

P. O. Box 4186, San Rafael, CA 94913-4186 • 415/499-6528 • FAX 415/499-3799 • TTY 415/473-3232

Farhad Mansourian, RCE
Director

April 25, 2011

California Traffic Control Devices Committee
Department of Transportation, Division of Traffic Operations MS 36,
P.O. Box 942874,
Sacramento, CA 94274-0001

**RE: Experimentation Progress Report
Flashing yellow arrow for permissive right turn movement
Intersection of Sir Francis Drake Blvd and Wolfe Grade,
Kentfield, CA**

Attn: Devinder Singh
CTCDC Executive Secretary

Dear Mr. Singh

On August 18, 2008 the proposed change was accomplished by modifying the traffic signal at the intersection of Sir Francis Drake Blvd and Wolfe Grade. Additional pedestrian indications were installed on both of the north corners and both of the right turn islands. The full crossing between the north corners was then controlled as one pedestrian phase. New three section vehicle heads were installed to control the westbound right turn movement. The new three section heads consisted of a steady right red arrow, a steady right yellow arrow and a flashing right yellow arrow (FYA). The new three section head were programmed to display a FYA, to create a permissive right turn phase, when westbound through traffic has the green unless there is a pedestrian call for the north crosswalk, in which case the right turn indications continue to display the solid red arrow. This was accomplished by using an overlap phase with pedestrian phase omit. An R10-17a sign was installed to allow westbound right turns on red during the steady red arrow. The free right turn from southbound Wolfe Grade to westbound Sir Francis Drake Boulevard received a similar design treatment for essentially the same reasons.

Purpose

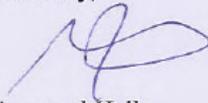
The purpose of the proposal use of FYA is to evaluate the effects of such displays on intersection crashes involving permissive mode right turning vehicles. We have determined that, with the circular green signal indications that currently/used to control the two permissive right turn movements in question, the level of right turn movements are insufficient. The use of FYA

for these right turn movements better communicates to drivers that the permissive turns are to be made with caution and appropriate yielding behavior.

One Year Collision Evaluation

According to CHP Collision report, there were no reported collisions between August 2008 and August 2009 for the intersection of Sir Francis Drake Blvd and Wolfe Grade. Compared this to the 12 collisions (7 yrs period), due to the permissive right turning vehicles conflicting with protected left turn vehicles that happen before the experimentation, there is a significant accident reduction. In addition pedestrians were able to use the crosswalk without the right turning vehicles encroaching and or violating their right of way. We will continue to monitor traffic conditions and submit to CTCDC a final report on June 2011. Attached is the CTCDC status of experiment progress report form and a few photos of the intersection.

Sincerely,



Amanuel Haile
Assistant Engineer

Attachments:

CTCDC Status of experiment progress report form
Photos of intersection

C: Farhad Mansourian

**CTCDC
STATUS OF EXPERIMENT**

Date June 9, 2011

Item 08-20

Experiment: Flashing yellow arrow for permissive right turn movement

Sponsor Mr. Farhad Mansourian

Supporting Agency & Contact County of Marin, Amanuel Haile

Next Appearance before the CTCDC TBD

Milestones Flashing yellow arrow installed August 18, 2008
1 year collision (08/2008-08/2009) data collected and analyzed

Status: The primary measure of effectiveness for the change as previously reported is crash data. The County of Marin has compiled a crash data for the test location for a period of two years prior to installation of the experimental design. The County has now compiled and is reporting as a progress report a one year crash data to evaluate the effectiveness of the change. The crash data is analyzed below to determine if the number of crashes involving westbound right turn vehicles declined as a result of the experimental design.

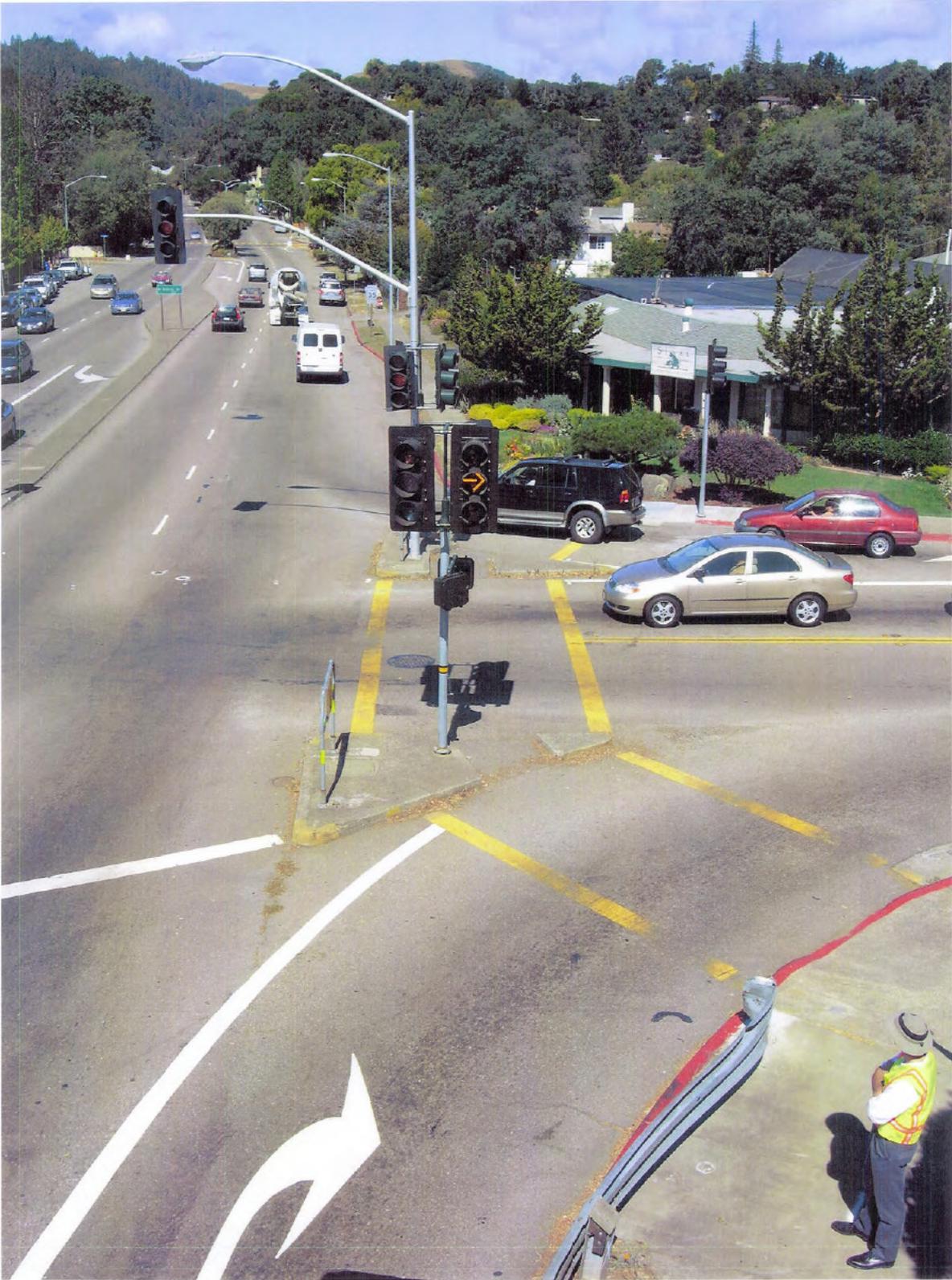
According to CHP Collision report, there were no reported collisions between August 2008 and August 2009 for the intersection of Sir Francis Drake Blvd and Wolfe Grade. Compared this to the two year before the experimentation (August 2006- August 2008, 6 collisions) there is a significant accident reduction.

Applicant's Signature 

Applicant's Name Amanuel Haile

Address P.O.Box 4186, Room 304, San Rafael, CA 94913-4186

Phone 415-499-7137 FAX 415-499-7847













11-13 Request to experiment with a sign “RECKLESS DRIVING PROHIBITED”

Proposal: County of Los Angeles request authorization to conduct an experiment with a sign “RECKLESS DRIVING PROHIBITED”

Agency Making Request: County of Los Angeles

Sponsor: Farhad Mansourian, CTCDC member representing California State Association of Counties



GAIL FARBER, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

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<http://dpw.lacounty.gov>

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE REFER TO FILE: **T-3**

February 1, 2011

Mr. Devinder Singh, Executive Secretary
California Department of Transportation
California Traffic Control Devices Committee
P.O. Box 942873
Sacramento, CA 94273-0001

Dear Mr. Singh:

REQUEST FOR TRAFFIC CONTROL DEVICE EXPERIMENTATION RECKLESS DRIVING PROHIBITED SIGN

Nature of Problem

The Department of Public Works is requesting permission to experiment with a sign to address reckless driving on its mountain and canyon roads.

Proposal

We propose to create a regulatory type sign with black lettering on a white background that states:

**RECKLESS DRIVING PROHIBITED
PUNISHABLE BY ARREST AND VEHICLE IMPOUNDMENT
C.V.C. 23103 AND 23109.2**

This will be a new device since there are no current standards in the California Manual on Uniform Traffic Control Devices for the use of this sign. The intent of this device is to enhance safety and remind motorists that any type of reckless driving is prohibited, as well as the consequences of being caught in violation.

Mr. Devinder Singh
February 1, 2011
Page 2

Illustration

Please see the enclosed Exhibit A.

Development

This sign was developed in consultation with the California Highway Patrol.

Time-Period and Location

We anticipate this experiment to last 3 years. This will give sufficient time to coordinate with the law enforcement agencies, gather before and after data, and prepare the final report.

The location for this experiment will be on two mountain roads where racing is known to occur on a regular basis. They are Glendora Mountain Road and Glendora Ridge Road. Please see the enclosed Exhibit B for the location of these highways.

Evaluation Plan

We will coordinate our efforts closely with the United States Forest Service, the Los Angeles County Sheriff's Department, and the California Highway Patrol. The plan is to have law enforcement regularly patrol and document activity for a period of 12 months without the signs in place, and then repeat the same with the signs in place. We will then compare the data to determine if there was a reduction in collisions and citations attributed to reckless driving.

Restoration Agreement

Public Works agrees to restore the site of the experiment to a condition that complies with the provisions of this Manual within 3 months following the end of the time-period of the experiment. Public Works also agrees to terminate the experimentation at any time that it determines significant safety concerns are directly or indirectly attributable to the experiment. We understand that the Federal Highway Administration Office of Transportation Operations has the right to terminate approval of the experimentation at any time if there is an indication of safety concerns.

If the sign results in a reduction of collisions and citations, we anticipate requesting that the Manual be changed to include this new device.

Mr. Devinder Singh
February 1, 2011
Page 3

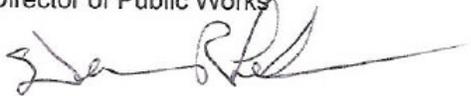
Progress Reports

Public Works agrees to provide semiannual progress reports for the duration of the experimentation, and an agreement to provide a copy of the results of the experimentation to the Federal Highway Administration Office of Transportation Operations within 3 months following completion of the experimentation. We understand that the Federal Highway Administrations Office of Transportation Operations has the right to terminate approval of the experiment if reports are not provided in accordance with this schedule.

Thank you for your consideration of the request for experimentation. If you have any questions, please contact Mr. James Chon of our Traffic Investigations Section at (626) 300-4708.

Very truly yours,

GAIL FARBER
Director of Public Works

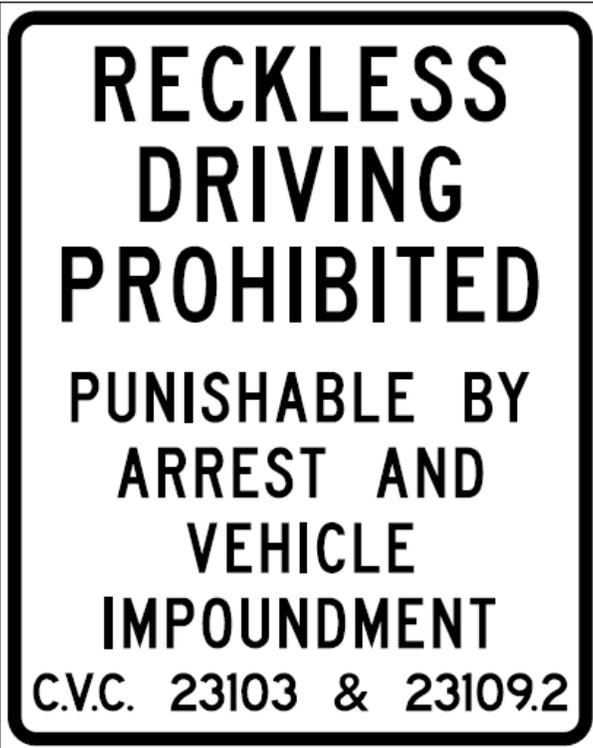


DEAN R. LEHMAN
Assistant Deputy Director
Traffic and Lighting Division

PJB:kw
P:\pub\wpfiles\files\pjb\CTCDC Reckless Experiment

Enc.

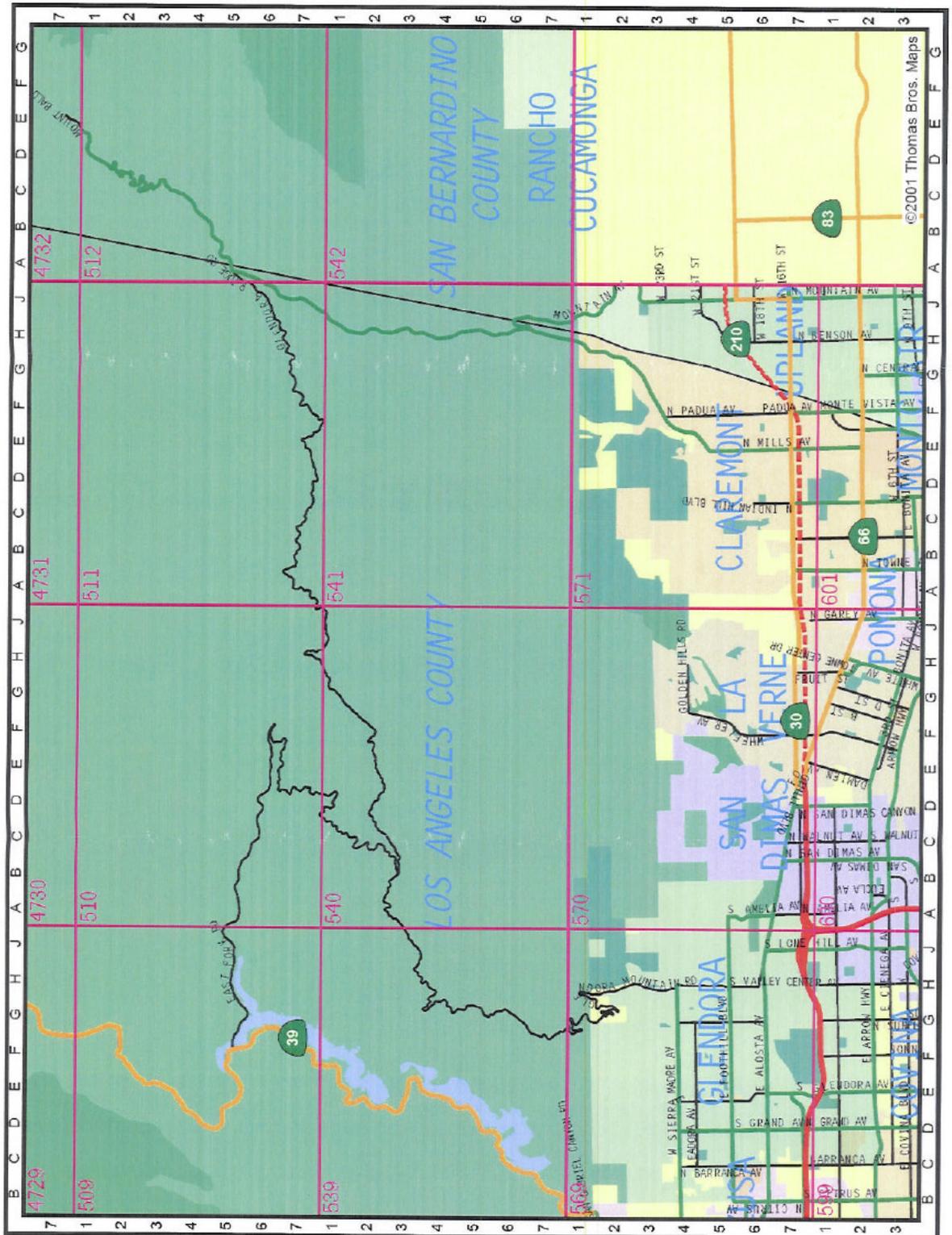
24x30 - A



24x18 - B



EXHIBIT B



09-13 Experiment Request for the USAGE OF “HOV” IN LIEU OF “CARPOOL” Signage Related to the Los Angeles EXPRESS LANES

Caltrans request to remove Experiment 09-13 from the CTCDC experiment update listings. The CTCDC and the Department have agreed to move forward with the adoption of the term "HOV" on all associated preferential lane signing as part of the adoption of the 2009 federal MUTCD. As a result, an experiment will not be necessary.

6. Information Item:**11-1 Up date on California MUTCD Revision (2011 Draft) to include National MUTCD 2009, CTCDC recommendations, errors/errata and editorial changes.****Background:**

Caltrans has completed initial revisions to the current California MUTCD in response to discussions of four CTCDC workshops in 2010 while reviewing the National MUTCD 2009 edition.

In addition to the adoption of National MUTCD 2009, Caltrans has included the following topics in this revision:

- All traffic control device policies that have been made official since January 21, 2010 and posted on the CA MUTCD web site at the following web link as “New Policy Directives”:
<http://www.dot.ca.gov/hq/traffops/signtech/signdel/policy.htm>
- All errors/errata and editorial changes that have been submitted for the California MUTCD since its issuance on January 21, 2010. These changes are minor and correct existing current policy. They do not constitute any change to current policy.

The National MUTCD 2009 was not effective immediately in California, California had a maximum of 2 years from the January 15, 2010 effective date to incorporate these changes into the California MUTCD. The revised California MUTCD (2011 Draft) incorporating the National MUTCD 2009 needs to be issued on or before January 15, 2012.

Caltrans held four workshops to discuss this revision and changes incorporating the National MUTCD 2009 per topics and locations as per below:

- WORKSHOP #1: [April 14, 2010 \(Sacramento\)](#) – Part 1 (General), Part 5 (Low-Volume Roads), Part 7 (Schools) & Part 9 (Bicycles)
- WORKSHOP #2: [June 9 -10, 2010 \(Costa Mesa\)](#)- Part 2 (Signs)
- WORKSHOP #3: [August 31 & September 1, 2010 \(Santa Ana\)](#) - Parts 3 (Markings) & 6 (TTC Work Zones)
- WORKSHOP #4: [October 19-20, 2010 \(Sacramento\)](#) - Parts 4 (Traffic Signals) & 8 (Railroad Xing)

Caltrans has completed the draft of CA MUTCD 2011 revision. It is available for public review and comment and was posted online beginning August 9, 2010. It is available at the following web link:

http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/ca_mutcd2011_draftrevisions.htm

FHWA California Division office is reviewing the California MUTCD (2011 Draft) revisions to ensure these revisions are in substantial conformance with the National MUTCD. Caltrans and FHWA will issue a joint letter to make the revised California MUTCD (2011 Draft) the official

traffic control device manual for California pending final CTCDC recommendation in a future meeting.

Due to the enormity of the changes, the plan is to have another workshop on July 21 & 22 (after the regular CTCDC meeting of July 20, 2011) to review the large number of comments that are being received through the public comment process. After this workshop, the California MUTCD 2011 Draft will be revised per workshop discussion and a Final Draft of California MUTCD 2011 will be posted on the website and made available again to the public for review and comment. It is anticipated that the Final draft could be posted by end of August 2011 with the public comment period closing by end of September 2011.

Caltrans would then seek recommendation from the CTCDC to formally adopt this revised California MUTCD 2011 as the official traffic control device manual for California in an October 2011 CTCDC public meeting. It is anticipated that pursuant to receiving this recommendation from CTCDC, Caltrans will make any last changes recommended by CTCDC and issue the official California MUTCD 2011 sometime by end of October or early November 2011. The deadline for adopting the National MUTCD 2009 is January 15, 2012.

11-14 Proposed to expand the membership of the California Traffic Control Devices Committee (CTCDC) by including two additional voting members representing nonmotorized highway users.

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION

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July 13, 2011

Mr. John E. Fisher
Chairman, California Traffic Control Devices Committee
Assistant General Manager, Transportation Operations
Los Angeles Department of Transportation
100 South Main Street, Tenth Floor
Los Angeles, CA 90012

Dear Mr. Fisher:

The California Department of Transportation (Caltrans) is firmly committed to the implementation of Complete Streets. Caltrans has the authority, after consulting with local agencies and conducting public hearings, to develop traffic control device standards for public roadways in California. To ensure that nonmotorized traffic control issues are recognized and addressed while developing traffic control device standards, Caltrans would like to expand the membership of the California Traffic Control Devices Committee (CTCDC) by including two additional voting members representing nonmotorized highway users. Caltrans requests that the CTCDC review and modify its bylaws and operating procedures to reflect this change. Caltrans will present this proposal, as well as suggested modifications to the bylaws, in an information item at the CTCDC meeting on July 20, 2011. It is our intent to appoint the two new members after consulting with the CTCDC and the nonmotorized highway user community.

Thank you for your cooperation and support in this matter.

Sincerely,


FOR MALCOLM DOUGHERTY
Acting Director

c: Devinder Singh, Executive Secretary, CTCDC

7 Next Meeting

8 Adjourn