CALIFORNIA TRAFFIC CONTROL DEVICES COMMITTEE
2013 ANNUAL REPORT

This report is prepared in compliance with Article V of the Bylaws of the California Traffic Control Devices Committee (CTCDC).

2013 Voting Memebrs

Michael Robinson- Chairman LOCC (Retired July 2013)	Deputy Director of Public Works County of San Diego, 5510 Overland Ave San Diego, CA 92123
Hamid Bahadori ACSC-Vice Chairman	Principal Transportation Engineer Auto Club of Southern California, 3333 Fairview Road Costa Mesa, CA 92626
William Winter CSAC	Deputy Director of Public Works, Los Angeles County PO Box 1460, Alhambra, CA 91802
Larry Patterson LOCC	Director of Public Works City of San Mateo 3330 W. 20th Ave., San Mateo, CA 94403
Rick Marshall CSAC	Deputy Director of Public Works Napa County, 1195 3rd St, Napa, CA 94559
Duper Tong Caltrans	Office Chief, Traffic Engineering Division of Traffic Operations California Department of Transportation 1120 N Street, MS36, Sacramento, CA 95814
Robert Brown AAA NCNU	Director, Public Affairs, AAA Northern CA, NV & UT 1900 Powell Street, Suite 1200, Emeryville, CA 94608
Lt. David Ricks CHP	California Highway Patrol 601 N. 7th Streets, Sacramento, CA 95811
John Ciccarelli, Caltrans - Non-motorized	Bicycle Solutions 511 Anderson Street, San Francisco, CA 94110
Bryan D. Jones Caltrans – Non-motorized	Deputy Director, DOT, City of Carlsbad 1635 Faraday Avenue, Carlsbad, CA 92008
Mark Greenwood LOCC (July 2012)	Director of Public Works, City of Palm Desert 73510 Fred Waring Dr., Palm Desert, CA 92260

The following alternate members were designated by the parent organizations to act in the absence of their appointed voting members:

2013 Alternate Members

Michael Kenny CSAC	Deputy Director Public Works County of San Diego 5510 Overland Ave., Suite 410, San Diego, CA 92123
Sam Morrissey LOCC	City Traffic Engineer City of Santa Monica, Room 115 1685 Main Street, Santa Monica, CA 90401
Emma Olenberger AAA NCNU	AAA Northern CA, NV & UT, 1900 Powell Street, Suite 1200, Emeryville, CA 94608
Devinder Singh Caltrans	Division of Traffic Operations 1120 N Street, MS36, Sacramento, CA 95814
Chuck Gunter CHP	California Highway Patrol 601 N. 7th Streets, Sacramento, CA 95811
Marianne Kim ACSC	Auto Club of Southern California 3333 Fairview Road Costa Mesa, CA 92626
Robert W. Bronkall CSAC	Deputy Director of Public Works, Humboldt County 3033 H St., Eureka, CA 95501
Daniel Anthony Gutierrez Caltrans, Non-motorized	1910 Vuelta Grande Ave. Long Beach, CA 90815
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Executive Secretary

Devinder Singh	Senior Transportation Engineer, Caltrans - MS36 1120 N Street, Sacramento, CA 95814

ACSC – Automobile Club of Southern California
CSAC – California State Association of Counties
AAA NCNU – AAA Northern CA, NV & UT
LOCC – League of California Cities
CHP- California Highway Patrol

2013 Meeting Locations

Date	Location
March 21, 2013	Palm Desert
July 25, 2013	Napa
October 17, 2013	Marina del Ray

Workshops to Discuss comments on CA MUTCD 2010 and National MUTCD 2009

March 20, 2013	Palm Desert

2013 CTCDC AGENDA ITEMS

Item No.	Title
Public Hearing	
12-20	FHWA's 2009 MUTCD Revisions 1 and 2 –Engineering Judgment & Compliance dates
13-03	Proposal to amend Section 2I.10 Travel Call 511 Sign of the CA MUTCD
13-05	Proposal to amend Sections 2C.37and 4I.03 of the CA MUTCD to add Activated Blankout METER ON & PREPARE TO STOP sign
13-06	Proposal to amend Section 3F.04, Delineator Placement and Spacing
13-10	Reduced Speed Limits in Temporary Traffic Control Zones, Proposal to amend various Sections & Figures in Part 6 of the CA MUTCD
Requests for Experimentation	
13-01	Request to Experiment with Green & Shared Roadway Bicycle Markings
13-02	Request to Experiment with Bike Boxes and Wide Bike Stripe
13-07	Request to Experiment with Bike Boxes
12-19	Amendment to Item 12-19 Highlighted Shared Lane Marking
06-02	Experiment with Colored Bike Lane
08-07	Experimentation with new Warning Sign for Bicyclists
11-04	Experiment with Rectangular Rapid Flashing Beacon (RRFB) vs. Existing Circular Rapid Flashing Beacon (CRFB)
Discussion Items	
13-08	Minimum Yellow Light Change Interval Timing for signalized Intersections
13-09	Blank-out Stop or Yield Signs for mid block crosswalks
Information Items	
13-04	Option of splitting the material in the MUTCD into two separate Documents Proposed by FHWA

Committee Accomplishment in 2013

12-20 FHWA's 2009 MUTCD Revisions 1 and 2 –Engineering Judgment & Compliance dates

Discussion: This item was continued from the December 2012 meeting. Some Committee members suggested that there is a need to add a standard statement in the CA MUTCD which states: "if an agency deviates from the standards, the agency must document the reasons to deviate from standards." Some of the public speakers also supported the need to have a standard statement in the CA MUTCD which requires documentation when agency/agencies deviate from the standards.

However, other members argued that agencies already document when they deviate from standards, and there is no need to add another standard into the CA MUTCD. For reader's clarification, the national MUTCD does not have this requirement.

Action: The Committee recommended Caltrans adopt the proposed language as was included in the agenda packet and adopt Option 2 instead of Option1, as Option 2 would be consistent with the national MUTCD.

OPTION 1

Option:

~~02b~~ 03a When an engineering study or the application of engineering judgment determines that unusual site-specific conditions at a particular location make compliance with a Standard statement in this Manual impossible or impractical, an agency may deviate from that Standard statement at that location.

OPTION 2

Option:

02b When an engineering study or the application of engineering judgment determines that unusual site-specific conditions at a particular location make compliance with a Standard statement in this Manual impossible or impractical, an agency may deviate from that Standard statement at that location.

13-03 Proposal to amend Section 2I.10, TRAVEL INFO CALL 511 Signs of the CA MUTCD

Action: The Committee recommended adoption of the amended Section as was proposed by the MTC.

Discussion: Sze Lei Leong from the Metropolitan Transportation Commission (MTC) stated that the Operations Committee of MTC approved a Call Box Evaluation Report which called for reducing the number of call boxes throughout the 9 County Bay Area due to reduced call volumes. To offset the negative impact of a reduced call box system, MTC proposed to amend CA MUTCD 2012 Section 2I.10 to add a Freeway Assist Sign in addition to the current sign Travel Info Call 511. The Committee agreed with the MTC proposal.

The addition is shown in red color:

FREEWAY ASSIST CALL ### Sign (SG49B(CA))

Travel Info Signs

Option:

01 A TRAVEL INFO CALL 511 (D12-5 or SG 49A(CA)) sign (see Figure 2I-8 and 2I-8(CA)) may be installed if a 511 travel information services telephone number is available to road users for obtaining traffic, public transportation, weather, construction, or road condition information.
02 The pictograph of the transportation agency or the travel information service or program that is providing the travel information may be incorporated within the D12-5, sign either above or below the TRAVEL INFO CALL 511 legend.
Standard:
03 **The logo of a commercial entity shall not be incorporated within the TRAVEL INFO CALL 511 sign.**
04 **The TRAVEL INFO CALL 511 sign shall have a white legend and border on a blue background.**
Guidance:
05 *If the pictograph of the transportation agency or the travel information service or program is used, the pictograph's maximum height should not exceed two times the letter height used in the legend of the sign.*

Freeway Assist Signs
Option:
06 A FREEWAY ASSIST CALL ### (SG49B(CA)) sign (see Figure 2I-8(CA)) may be installed if a Service Authority for Freeway Emergencies (SAFE) has established a mobile call box program, which is available to road users for obtaining roadside assistance such as tow service.
07 The pictograph of the SAFE that is providing the roadside assistance may be incorporated within the SG49B(CA) sign either above or below the FREEWAY ASSIST CALL ### legend.

Standard:
08 **The ### shall be replaced with the mobile call number applicable to the SAFE providing the roadside assistance.**
09 **The logo of a commercial entity shall not be incorporated within the FREEWAY ASSIST CALL ### sign.**
10 **The FREEWAY ASSIST CALL ### sign shall have a white legend and border on a blue background.**
Guidance:
11 *If the pictograph of the SAFE is used, the pictograph's maximum height should not exceed two times the letter height used in the legend of the sign.*
12 *A call box identification number (see Section 2I.03, paragraph 66) may be included on the sign for location identification purposes, when the sign has been placed at a location where a call box has been removed.*

13-05 Proposal to amend Sections 2C.37and 4I.03 of the CA MUTCD 2012 to add Activated Blankout METER ON & PREPARE TO STOP sign

Discussion: Zhongren Wang, Caltrans, stated that their office proposed including an illustration of the METER ON and PREPARE TO STOP signs in the CA MUTCD. The pedestrian signal head activated blank-out METER ON sign has been incorporated into the January 2000 version of the Ramp Meter Design Manual (RMDM), which is part of the Caltrans Highway Design Manual. The RMDM is a listed reference for the CA MUTCD since 2004. In addition, the activated blank-out METER ON sign was incorporated in the Caltrans 2006 and 2010 version Standard Plans (ES-4B). The activated blank-out PREPARE TO STOP sign was also incorporated in the Caltrans 2006 and 2010 version Standard Plans (ES14-A and ES14-C).

In the preparation of the 2011 version of the CA MUTCD, these activated blank-out signs were mentioned in Sections 2C.37 and 4I.03 briefly by their text messages only, but no mock-ups were shown. No sign numbers was assigned either.

Inclusion of these activated blank-out signs into the CA MUTCD was also a suggestion received from the Federal Highway Administration field office in Sacramento.

Zhongren requested that the Committee make recommendations to include the METER ON & PREPARE TO STOP illustrations in to the CA MUTCD.

Steve Pyburn, FHWA, stated that the proposed METER ON ped-head sign does not meet the border and spacing requirements. He noted that if California adopted the proposed sign, it would be out of compliance with FHWA.

Johnny Bhullar, Caltrans, stated that the letter height for the current ped-head sign is more than the minimum height requirement, however, if the height is reduced to a minimum requirement, the spacing requirement can be achieved. He added that the border requirement is not critical. To achieve border requirements, Caltrans would have to go with a bigger sign which is not practical at the locations where these signs have been normally placed. It will also require major financing without any benefit to the motorists, because motorists are familiar with the sign message.

Committee members stated that these signs have been in operation for the last several decades and that the motoring public are very familiar with the message on the sign when it is in operation, it means the ramp metering control is on.

Action: The Committee recommended adoption of the signs, however, suggested reducing the letter height for the current METER ON ped-head sign to a minimum requirement to achieve the required spacing.

13-06 Proposal to amend Section 3F.04

Action: The Committee recommended revising Section 3F.04 of the CA MUTCD 2012 as was proposed in the agenda.

Discussion: The proposed amendment was brought to Caltrans notice by Mr. Bill Winter, alternate member representing Southern California Counties. Caltrans checked with Districts

who implement these devices in the field and found that delineators are not inspected at night time. The comments received back from Districts agreed with the proposed amendments.

Deletions and addition are shown in red color:

Option:

10 When needed for special conditions, delineators of the appropriate color may be mounted in a closely-spaced manner on the face of or on top of guardrails or other longitudinal barriers to form a continuous or nearly continuous "ribbon" of delineation.

~~Guidance:~~

~~11 Installations should be inspected at night to ensure that there are no confusing or misleading delineators.~~

~~Standard:~~

~~12 Unless local conditions justify otherwise, delineators shall be placed on all State highways.~~

Guidance:

~~13 Delineators should also be provided on all city and county roads.~~

~~A.~~ 14 13 ~~When~~ If used, delineators should be placed as follows:

~~B~~ A. On the outsides of highway curves of 3000 feet radius or less (including medians in divided highways), freeway exit and entrance ramps and connectors. Exception to this, is where a median barrier is delineated as shown in the Median Barrier Delineation Detail in Figure 3F-105(CA). Delineator spacing on curves is shown in Figure 3F-1 and Table 3F-1.

~~C~~ B. On the right of tangent sections of freeway entrance and exit ramps, collector roads, freeway connectors and lane reduction transition sections at 200 feet spacing.

~~D~~ C. On embankments higher than 10 feet and with side slopes steeper than 1:4. ~~Delineator spacing is approximately 525 feet.~~ The spacing on tangent sections is approximately 525 feet. For spacing on curves, see Figure 3F-1 and Table 3F-1.

~~E~~ D. On approaches to narrow bridges as shown in Figure 3F-104(CA).

~~F~~ E. On tangent sections of rural State highways where there are no reflective pavement markers, such as in snow areas. Delineator spacing is approximately 525 feet.

~~G~~ F. On all new guardrail or bridge rail installations, or when maintenance is required on existing guardrail or bridge rail, within 12 feet of the edge of traveled way and curves of 3000 feet radius or less. The spacing on tangent sections is approximately 525 feet. For spacing on curves, see Figure 3F-1 and Table 3F-1.

13-10 Reduced Speed Limits in Temporary Traffic Control Zones, Proposed to amend various Sections & Figures in Part 6 of the CA MUTCD

Action: The Committee recommended to adopt the revised policy as was submitted by Caltrans, see below detail:

This proposal also deletes the current reference to Engineering and Traffic Survey (E&TS) requirement as an E&TS is not required for reducing speeds in TTC zones. TTC speed limits do not fall under the definition of the Speed Trap and can be enforced with radar or lidar without a formal E&TS

California MUTCD 2012 Proposed Policy (Reduced Speed Limits in TTC zones)
Please note:

Black text is existing National MUTCD policy from FHWA that has been adopted for use in California and is the current policy.

Black crossed out text is existing National MUTCD policy from FHWA that has NOT been adopted for use in California.

Blue text is current and existing California created policy.

Red text is the proposed changes to current policy as per this proposal.

Green text is comments explaining the proposed changes included in this proposal.

Section 6C.01 Temporary Traffic Control Plans

Support:

01 A TTC plan describes TTC measures to be used for facilitating road users through a work zone or an incident area. TTC plans play a vital role in providing continuity of effective road user flow when a work zone, incident, or other event temporarily disrupts normal road user flow. Important auxiliary provisions that cannot conveniently be specified on project plans can easily be incorporated into Special Provisions within the TTC plan.

02 TTC plans range in scope from being very detailed to simply referencing typical drawings contained in this Manual, standard approved highway agency drawings and manuals, or specific drawings contained in the contract documents. The degree of detail in the TTC plan depends entirely on the nature and complexity of the situation.

Guidance:

03 *TTC plans should be prepared by persons knowledgeable (for example, trained and/or certified) about the fundamental principles of TTC and work activities to be performed. The design, selection, and placement of TTC devices for a TTC plan should be based on engineering judgment.*

04 *Coordination should be made between adjacent or overlapping projects to check that duplicate signing is not used and to check compatibility of traffic control between adjacent or overlapping projects.*

05 *Traffic control planning should be completed for all highway construction, utility work, maintenance operations, and incident management including minor maintenance and utility projects prior to occupying the TTC zone. Planning for all road users should be included in the process.*

06 *Provisions for effective continuity of accessible circulation paths for pedestrians should be incorporated into the TTC process. Where existing pedestrian routes are blocked or detoured,*

information should be provided about alternative routes that are usable by pedestrians with disabilities, particularly those who have visual disabilities. Access to temporary bus stops, travel across intersections with accessible pedestrian signals (see Section 4E.09), and other routing issues should be considered where temporary pedestrian routes are channelized. Barriers and channelizing devices that are detectable by people with visual disabilities should be provided.

Option:

07 Provisions may be incorporated into the project bid documents that enable contractors to develop an alternate TTC plan.

08 Modifications of TTC plans may be necessary because of changed conditions or a determination of better methods of safely and efficiently handling road users.

Guidance:

Standard:

09 This alternate or modified plan ~~should~~ shall have the approval of the Engineer of the public agency or authority having jurisdiction over the highway responsible highway agency prior to implementation.

Guidance:

10 *Provisions for effective continuity of transit service should be incorporated into the TTC planning process because often public transit buses cannot efficiently be detoured in the same manner as other vehicles (particularly for short-term maintenance projects). Where applicable, the TTC plan should provide for features such as accessible temporary bus stops, pull-outs, and satisfactory waiting areas for transit patrons, including persons with disabilities, if applicable (see Section 8A.08 for additional light rail transit issues to consider for TTC).*

Reduced Speed Limits in TTC Zones

11 *Provisions for effective continuity of railroad service and acceptable access to abutting property owners and businesses should also be incorporated into the TTC planning process.*

12 *Reduced speed limits should be used only in the specific portion of the TTC zone where conditions or restrictive features are present. However, frequent changes in the speed limit should be avoided. A TTC plan should be designed so that vehicles can travel through the TTC zone with a speed limit reduction of no more than 10 mph.*

13 *A reduction of more than 10 mph in the speed limit should be used only when required by restrictive features in the TTC zone. Where restrictive features justify a speed reduction of more than 10 mph, additional driver notification should be provided. The speed limit should be stepped down in advance of the location requiring the lowest speed, and additional TTC warning devices should be used.*

14 *Reduced speed zoning (lowering the regulatory speed limit) should be avoided as much as practical because drivers will reduce their speeds only if they clearly perceive a need to do so.*

Standard:

14a **The justification for the reduced speed limit shall be documented in writing, in satisfaction of the Engineering and Traffic Survey (E&TS) requirement. Refer to CVC 627 for E&TS. Refer to CVC 21367 & 22362.** *(reason for deletion is that it is not in compliance with Section 2B.13 & CVC 21367 & 22362 as speeds can be reduced without E&TS)*

Option:

25 Reduced speed limits in construction zones may be established by an engineering analysis, which may include a traffic and engineering survey. *(relocated text)*

Support:

15 Research has demonstrated that large reductions in the speed limit, such as a 30 mph reduction, increase speed variance and the potential for crashes. Smaller reductions in the speed limit of up to 10 mph cause smaller changes in speed variance and lessen the potential for

increased crashes. A reduction in the regulatory speed limit of only up to 10 mph from the normal speed limit has been shown to be more effective.

Support:

16 See Section 2B.13 for permanent Regulatory Speed Limit signs and Speed Zones signs.

17 See Section 6F.12 for Road Work/Speed Zone (C17(CA)) sign, WORK ZONE (G20-5aP) plaque and END WORK ZONE SPEED LIMIT (R2-12) sign.

Construction Speed Zones:

18 Construction speed zones are established on roads under construction where reduced speed is necessary to limit the risk of an accident to workers and the traveling public during all hours of the day and night. Refer to CVC Section 21367 Protection of workers during working hours is provided for under CVC Section 22362.
CVC section 22362 gives the agency having jurisdiction over a highway the authority to regulate the speed of traffic to provide protection for workers when at work on the roadway or within the right-of-way so close thereto as to be endangered by passing traffic.
CVC Section 21367 gives the agency having jurisdiction over a highway the authority to regulate the speed of traffic whenever the traffic would endanger the safety of workers or the work would interfere with or endanger the movement of traffic through the area.
Guidance:
The need for a long-term reduced speed limit within a TTC zone should be a decision made during the project development process. The need for a short-term reduced speed limit within a TTC zone, such as a maintenance activity, should be determined in advance of planned maintenance activities.
Option:
If lowering speed limits for a short-term, such as a maintenance activity, signs lowering the speed limit by 10 mph may be placed in work zones that are not protected by a positive barrier and involve workers on foot or on equipment.
Guidance:
19 *Construction Reducing speed zones limits in TTC zones should be avoided if traffic speeds can be controlled reduced by other means. Speed restrictions should be imposed on the public only when necessary for worker or public safety.*
Standard:
20 **Where traffic obstructions exist only during the hours of construction, the speed zone signs shall be covered during non-working hours.**
Support:
21 CVC 22362 applies to "When Workers are Present" condition and signs need to be covered or removed when no work is in progress. As per CVC 21367, agency can "...regulate the movement of traffic...whenever the traffic would endanger the safety of workers or the work would interfere with or endanger the movement of traffic through the area." If obstructions would be present throughout the project duration the signs would not need to be covered or removed. This would also apply to situations where the construction work changes the highway configuration, curvature or elevation, making it necessary to post reduced speed limits.
Guidance:
22 *The traveled way should be signed and delineated to communicate physical conditions to the motorists such as curvature, narrow roadways, detours, rough roads, dips or humps, etc.*
Option:
23 The Advisory Speed (W13-1) plaque may be used in combination with various warning type signs to decrease speed at a particular location.
Guidance:
24 *To preserve the effectiveness of the W13-1 plaque, it should not be used unless the condition to which it applies is immediate and will be experienced by all motorists.*
Option:
25 Reduced speed limits in construction zones may be established by an engineering analysis, which may include a traffic and engineering survey. *(relocated text)*

Guidance:

26 *Construction zone speed limits should be reduced in sequential stages and where overall reduction of 15 mph or more is required. The first stage of the sequence should be a reduction of 10 mph and the final stage reduction should be 10 mph or 5 mph, as necessary.*

Standard:

27 **The reduced speed limit shall not be less than 25 mph. Refer to CVC 22362.**

Option:
28 As an example, if the project falls within an established 55 mph zone, and a 40 mph speed limit is considered necessary, it may be posted only if the approaching speed limits are lowered in two stages (i.e., first to a 45 mph speed limit followed by a reduction to the desired 40 mph.
Guidance:
29 *Speed Limit and End Zone signs should be installed at locations jointly agreed upon by the Traffic Engineer and the Construction Engineer.*
Support:
30 Orders for construction speed zones Documentation for reducing speed limits in TTC zones are ordinarily issued for the entire length of the construction TTC zones in a project. This avoids the necessity and resulting delay of obtaining a new order documentation each time the speed restriction signs require relocation to fit the conditions. It is not the intention, however, that the entire length be posted for the duration of the contract project.
Standard:
31 **Speed restriction limit signs for reduced speed limits shall be posted only in areas where the traveling public is affected by construction TTC operations.**
Guidance:
32 *As the construction TTC zone activities change progresses, signs should be moved as appropriate.*
Standard: *(move to Section 6F.12)*
33 **Signs shall be used only during working hours and removed, or covered during non-working hours unless the movement of traffic through the TTC zone is affected during non-working hours as well. Refer to CVC 21367.**
34 **Signs shall be removed immediately following completion of the construction or change in the conditions for which they were installed. When the construction is completed or the speed restriction is no longer necessary, the formal speed zone orders shall be revoked.**

Section 6F.12 Work Zone and Higher Fines Signs and Plaques

Option:
01 A WORK ZONE (G20-5aP) plaque (see Figure 6F-3) may be mounted above a Speed Limit (R2-1X(CA)) sign to emphasize that a reduced speed limit is in effect within a TTC zone. An END WORK ZONE SPEED LIMIT (R2-12) sign (see Figure 6F-3) may be installed at the downstream end of the reduced speed limit zone.
Guidance:
02 *A BEGIN HIGHER DOUBLE FINES ZONE (R2-10) sign (see Figure 6F-3) should be installed at the upstream end of a work zone where increased fines are imposed for traffic violations, and an END HIGHER DOUBLE FINES ZONE (R2-11) sign (see Figure 6F-3) should be installed at the downstream end of the work zone.*
Option:
03 Alternate legends such as BEGIN (or END) DOUBLE FINES ZONE may also be used for the R2-10 and R2-11 signs.
04 A FINES HIGHER, FINES DOUBLE, or $XX FINE plaque (see Section 2B.17 and Figure 6F-3) may be mounted below the Speed Limit sign if increased fines are imposed for traffic violations within the TTC zone.
05 Individual signs and plaques for work zone speed limits and higher fines may be combined into a single sign or may be displayed as an assembly of signs and plaques.
06 The TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES (C40(CA)) and TRAFFIC FINES DOUBLED IN WORK ZONES (C40A(CA)) signs may be placed approximately 500 feet in advance of the first required TTC sign(s). The placement of

the C40(CA) and C40A(CA) signs is at the discretion of the responsible person(s) in charge of the work zone.

Support:

07 Refer to CVC 42009 for fines for offenses committed in highway construction or maintenance area. In California, as per CVC only doubling of the fines is allowed, not higher fines of other denominations.

Guidance:

08 *The C40A(CA) sign is intended to be manufactured as a fabric sign and should be used on a short term (daily) basis only. Longer term situations should use the C40(CA) sign.*

Support:

09 CVC 22362 applies to "When Workers are Present" condition and signs need to be covered or removed when no work is in progress. However, per CVC 21367, agency can "...regulate the movement of traffic...whenever the traffic would endanger the safety of workers or the work would interfere with or endanger the movement of traffic through the area." If obstructions would be present throughout the project duration the signs would not need to be covered or removed. This would also apply to situations where the construction work changes the highway configuration, curvature or elevation, making it necessary to post reduced speed limits.

Option:

10 A WORK ZONE (G20-5aP) plaque may be mounted above a Speed Limit sign to emphasize that a permanent (24 hours a day, 7 days a week) reduced speed limit is in effect within a TTC zone. An END WORK ZONE SPEED LIMIT (R2-12) sign (see Figure 6F-3) may be installed at the downstream end of the reduced speed limit zone.

11 The Road Work/Speed Limit (C17(CA)) sign Speed Limit (R2-1X(CA)) sign with a WORK ZONE (G20-5aP) plaque mounted above it may be used for the protection of workers during working hours to reduce speed limit within a TTC zone.

Standard:

12 **The C17(CA) sign Speed Limit (R2-1X(CA)) sign with a WORK ZONE (G20-5aP) plaque mounted above it shall only be used in conjunction with appropriate advance warning signs.**

13 **The C17(CA) signs Speed Limit (R2-1X(CA)) sign with a WORK ZONE (G20-5aP) plaque mounted above it shall be removed or covered promptly when no longer applicable.**

Support:

14 The C17(CA) sign Speed Limit (R2-1X(CA)) sign with a WORK ZONE (G20-5aP) plaque mounted above it is authorized for use by CVC Section 22362. This section provides authority to post a speed limit of not less than 25 mph at locations where employees of any contractor, or of the agency in charge of the job, are engaged in work upon the roadway.

15 Posting unrealistically low speed limits will result in loss of sign credibility and a high violation rate.

Guidance:

16 *Before using a C17(CA) sign* Speed Limit (R2-1X(CA)) sign with a WORK ZONE (G20-5aP) plaque mounted above it*, work zone conditions should be analyzed to determine what maximum speed limit would be appropriate for that particular location.*

17 *The C17(CA) sign* Speed Limit (R2-1X(CA)) sign with a WORK ZONE (G20-5aP) plaque mounted above it *should be placed within 400 feet of the zone where workers are on the roadway or so nearly adjacent as to be endangered by traffic.*

Option:

18 The C17(CA) sign Speed Limit (R2-1X(CA)) sign with a WORK ZONE (G20-5aP) plaque mounted above it may be provided by the agency having jurisdiction over the street or road.

Guidance:

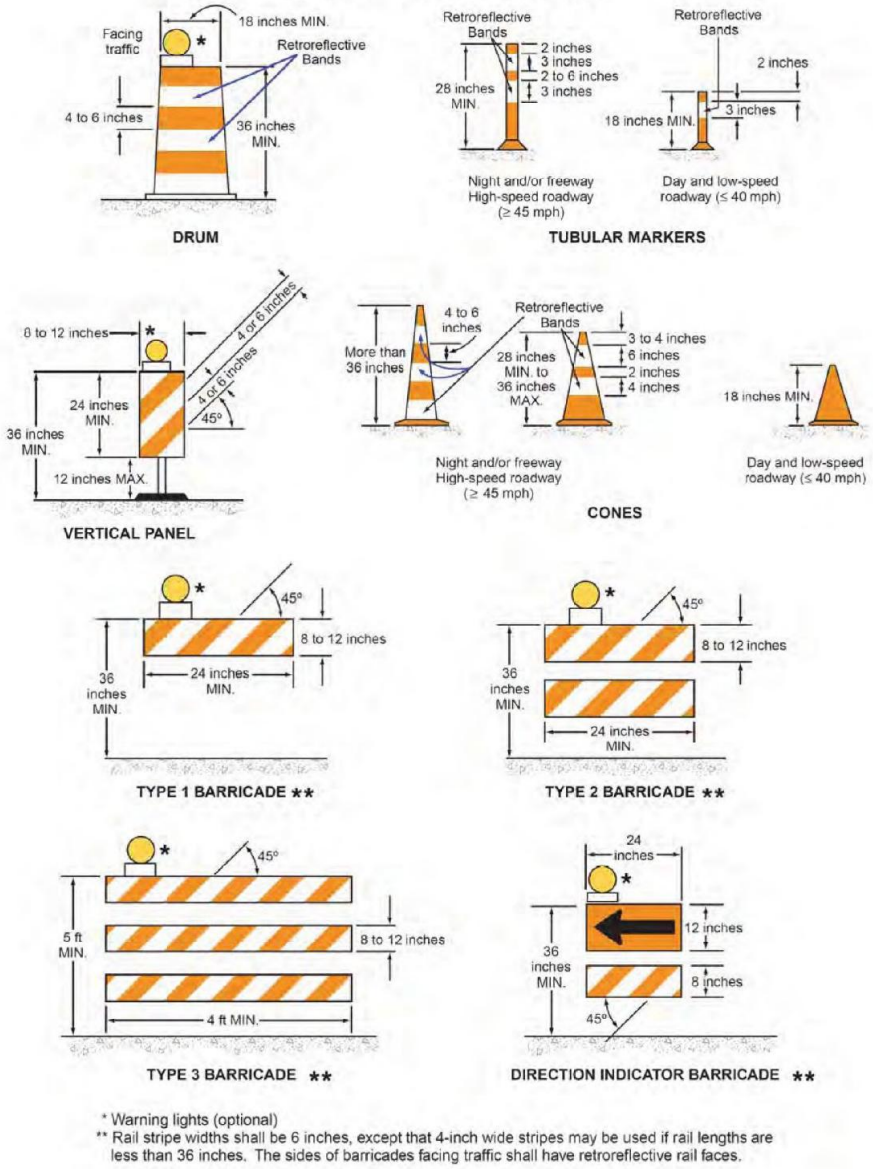
19 *The C17(CA)* Speed Limit (R2-1X(CA)) sign with a WORK ZONE (G20-5aP) plaque mounted above it *should be posted a maximum distance of 400 feet in advance of where, and when workers are present; and the Speed Reduction (W3-5) sign or Speed Zone Ahead (R2-4(CA)) sign informs road users of the reduced speed limit TTC zone.*

Reduced Speed Limits in TTC Zones
Sign Size Comparisons

	Current Policy	Current Policy	Proposed Policy
Closure duration	Long-term duration closure	Short-term duration closure	All duration closures
Physical barrier	Physical barrier separating motorists/workers	No physical barrier separating motorists/workers	With or without physical barrier separating motorists/workers
CVC Section	CVC 21367	CVC 22362	CVC 21367 or 22362
	G20-5aP  R2-1	 C17 (CA) (Front)  C17 (CA) (Back)	G20-5aP  R2-1
Conventional Road	24 x 48 (18+30)	24 x 24	24 x 48 (18+30)
Expressway	36 x 72 (24+48)	36 x 36	36 x 72 (24+48)
Freeway	36 x 72 (24+48)	48 x 48	36 x 72 (24+48)

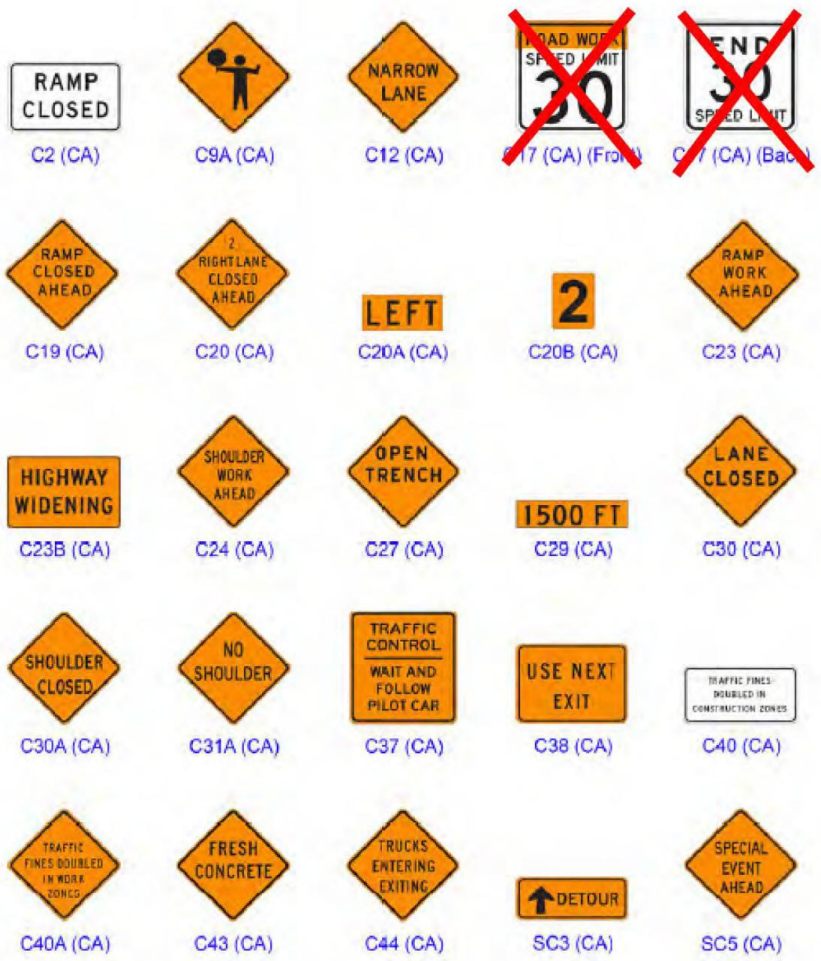
Figure 6F-3. Regulatory Signs and Plaques in Temporary Traffic Control Zones
(Sheet 1 of 2)

Figure 6F-7. Channelizing Devices



* Warning lights (optional)
** Rail stripe widths shall be 6 inches, except that 4-inch wide stripes may be used if rail lengths are less than 36 inches. The sides of barricades facing traffic shall have retroreflective rail faces.

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



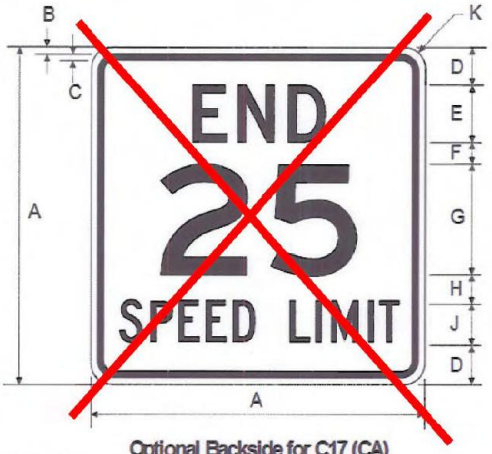
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

C17 (CA)

ENGLISH UNITS

A	B	C	D	E	F	G	H	J	K
24	.375	.625	2.5	3C	.75	1.5	10D	2.5	1.5
36	.625	.875	3.75	4.5C	1.5	2.75	13.3D	4.25	2.25
48	.75	1.25	5	6C	2.5	4	16D	6	3

COLORS: BORDER & LEGEND - BLACK
BACKGROUND - ORANGE (RETROREFLECTIVE) & WHITE (RETROREFLECTIVE)



Optional Backside for C17 (CA)

ENGLISH UNITS

A	B	C	D	E	F	G	H	J	K
24	.375	.625	2.75	4D	1.5	8D	2	3C	1.5
36	.625	.875	4	6D	2.75	12D	2.75	4.5C	2.25
48	.75	1.25	5.5	8D	3.5	16D	3.5	6C	3

COLORS: BORDER & LEGEND - BLACK
BACKGROUND - WHITE (RETROREFLECTIVE)

NOTE: When using back-to-back and one side is not applicable, that side shall be covered.

3/4/11

R2-1
SPEED LIMIT (ENGLISH)

*Optically space numerals about centerline

A	B	C	D	E	F	G	H	J	K	L
18	24	.375	.625	3	3 E	2	8 E	7.188	5.5	1.5
24	30	.375	.625	4	4 E	2	10 E	9.563	7.313	1.5
36	48	.625	.875	6	6 E	5	14 E	14.375	11	2.25
48	60	.75	1.25	8	8 E	6	16 E	19.125	14.625	3

C

COLORS: LEGEND — BLACK
BACKGROUND — WHITE (RETROREFLECTIVE)

1-10

Request for Experimentations

13-01 Request to Experiment with Green & Shared Roadway Bicycle Markings

Action: The Committee authorized the City of Oakland to conduct experimentation with Green and Shared Roadway Bicycle Markings as proposed. The Committee also complimented the city on their well documented proposal.

13-02 Request to Experiment with Bike Boxes and Wide Bike Lane Stripe

Action: The Committee authorized the City of Davis to conduct experiment with Bike Boxes and wide Bike Lane Stripe as proposed.

13-07 Request to Experiment with Bike Boxes

Action: Item was deferred to 2014

06-2 Experiment with Colored Bike Lane

Action: Item was removed from the pending Items Under Experimentation

08-7 Experimentation with new Warning Sign for Bicyclists

Action: Item was removed from the pending Items Under Experimentation

11-4 Experiment with Rectangular Rapid Flashing Beacon (RRFB) vs. Existing Circular Rapid Flashing Beacon (CRFB)

Action: The City of Santa Monica presented the final report and stated that the rectangular rapid flashing beacon showed more compliance compared to the traditional circular rapid flashing beacon. Both devices (tools) can be used by agencies based on current standards. The Committee accepted the final report submitted by the City of Santa Monica and complimented for the City submitting good data.

Discussion Items

13-08 Minimum Yellow Light Change Interval Timing for signalized Intersections

Discussion: The CTCDC discussed the minimum yellow light-change interval. There was lengthy discussion on this topic with a variety of participants from as far as the State of Wisconsin in attendance. Various speakers provided and shared significant research/studies on this issue. Honorable Assembly Member Adrin Nazarian also attended and provided his view. The following were present from the legislative side:

- Assembly Member - Adrin Nazarian is the Sponsor of AB 612
- Chief of Staff to AB Nazarian - Dan Savage
- Staff Member - Cynthia Alvarez
- Erin Riches, Principal Consultant
  Senate Transportation and Housing Committee
- Ted Link-Oberstar from the Senate Office of Research

Because of the significant variation in points of view on this subject, the CTCDC formed a subcommittee to more completely review pertinent documents and research. The subcommittee is comprised of CTCDC members and other participants and will develop recommendations to bring back to the full CTCDC. Because of the complexity of the issue, the subcommittee will not likely have a recommendation in time for the October 17, 2013 CTCDC meeting. More realistically, a recommendation should be back to the Committee by the January/ February 2014 meeting.

The following volunteered to work on the sub-committee:

- Hamid Bahaodri, CTCDC Vice Chairman will chair the sub-committee.
- Bill Winter, Alternate Member CTCDC from LA County
- Caltrans
- Sean Skehan, City of Los Angeles
- Larry Patterson, Voting Member CTCDC City of San Mateo
- Jay Beeber, Executive Director of Safer Streets L.A
- Rock Miller, Alternate Member CTCDC
- City and County of San Francisco
- Assembly Member Adrin Nazarian's Office

The final verbatim minutes will have the detailed discussion on this agenda item.

13-09 Blank-Out STOP or YIELD signs for mid-block crosswalks

Action: Item was withdrawn.

Information Items

13-04 Option of splitting the material in the MUTCD into two separate Documents Proposed by FHWA

Johnny Bhullar gave information on this item to the Committee that FHWA has proposed to split the National MUTCD into two documents. One will carry SHALL statements only and the other will include all the "Guidance" and "May" requirements. This process is at the very beginning stages and states and agencies will find more on this proposal in the future. He added that the majority of the states/agencies who commented on this proposal have voted no on the split.

John Fisher, former CTCDC Chairman and current member of the National Committee, stated that there are more questions than answers at this time at the national level in regards to this spilt proposal.

Note: For detailed discussion on any of the above items, please visit the following website and read the meeting minutes:
http://www.dot.ca.gov/hq/traffops/engineering/ctcdc/index.htm

Summary of Accomplishments in 2013

4 items discussed from previous years (2006, 2008, 2011 and 2012)
15 items considered in 2013
10 items introduced in 2013
8 items completed in 2013
2 items approved for experimentation in 2013
3 items closed from pending experiments
2 items deferred into 2014

Items Carried into Future Year

13-08 Minimum Yellow Light Change Interval Timing for signalized Intersections

13-07 Request to experiment with Bike Boxes

Items Approved for Experimentations

13-01 Request to Experiment with Green & Shared Bicycle Marking

13-02 Request to experiment with Bike Boxes and Wide Bike Stripe

Status of Caltrans Actions on Past Items

13-10 Reduced speed limits in TTC Zones

Action: The policy was adopted and posted on the following website.
http://www.dot.ca.gov/hq/traffops/engineering/control-devices/policy.htm

Note: All remaining items recommended by the CTCDC during 2012 and 2013 will be incorporated in to the CA MUTCD during the next update unless a policy is needed to implement right away.

MISCELLANEOUS

CTCDC Agendas, Meeting Minutes, Annual Reports, and other information are available on the Internet at " http://www.dot.ca.gov/hq/traffops/engineering/ctcdc/index.htm /"

Additional information regarding the minutes of the CTCDC meetings held during 2013 may be obtained upon request from the Secretary or any member of the California Traffic Control Devices Committee.

SIGN SPECIFICATIONS

As provided in California Vehicle Code Sections 21400 and 21401, a list of the current California coded sign specifications used on streets and highways in California is available on the following website:

http://www.dot.ca.gov/hq/traffops/engineering/control-devices/specs.htm

MUTCD coded sign specifications are located in the FHWA Standard Highway Signs Book, available on the following FHWA website:

http://mutcd.fhwa.dot.gov/ser-shs_millennium.htm

Respectfully submitted by Devinder Singh, Secretary, CTCDC.