

State of California
DEPARTMENT OF TRANSPORTATION
CALIFORNIA TRAFFIC CONTROL DEVICES COMMITTEE

Minutes of Meeting
July 9, 2020

Committee Members in Attendance:

Hamid Bahadori, Chair
Pratyush Bhatia
Robert Bronkall
David Fleisch
Lt. Rick Hatfield
Bryan Jones
Monica Kress-Wooster
Xavier Maltese
Mike Sallaberry

Alternate Committee Members:

Doug Bilse
Rock Miller
Zoubir Ouadah

Committee Staff:

Vijay Talada, Executive Secretary
Arshad Iqbal, Senior Transportation Engineer
Hasibullah Mohabbat, Transportation Engineer Civil

Presenters:

Roger Barnes, Traffic Operations Branch Chief, Caltrans District 5
Troy Bucko, Caltrans Division of Traffic Safety Programs
Lourdes David, Caltrans District 4 Traffic Operations
Diane Dostalek, Caltrans District 5
Dain Pankratz, PE, representing the City of Glendora
Ananth Prasad, Principal Civil Engineer, County of Santa Clara
Joe Rouse, Caltrans Division of Traffic Operations, Program Manager, HOV and Managed Lane Programs
Barkev Tatevosian, Principal Transportation Planner, Los Angeles County Metropolitan Transportation Authority
Sam Toh, Caltrans District 5 Traffic Operations Engineer
Melissa Walker, Executive Director of Operations, San Bernardino County Department of Public Works
Ryan Whipple, WSP, representing the City of Imperial Beach

Public Comment

Xiao Yun Lu, Principal Investigator, Caltrans Division of Research, Innovation and System Information

Richard Moeur, Executive Secretary of the National Committee on Uniform Traffic Control Devices
Alison Moss, SANDAG Project Manager
Virendra Patel, Transportation Division, City of Concord
Steve Pyburn, Federal Highway Administration
Craig Rhodes, Director of Internal Processes for Traffic Management

ORGANIZATION ITEMS

1. Introduction

Chair Bahadori opened the meeting at 9:03 a.m. It was held via WebEx. He noted that Hasibullah Mohabbat had set up the meeting. Mr. Mohabbat explained some pertinent information on using Webex for the committee, including how Public Comment would be held.

The committee, and staff, introduced themselves.

The committee welcomed new committee member Monica Kress-Wooster.

2. Membership

Mr. Talada reported on membership changes.

- Ms. Kress-Wooster is the new Caltrans voting member.
- Andrew Maximous has resigned from the committee. The LOCC is in the process of appointing a replacement to the CTCDC.
- Richard Moorehead from Placer County is the new Northern California Alternate, representing the counties.
- Virendra Patel is the new Northern California Alternate, representing the League of California Cities.

Chair Bahadori announced that he has taken a position as City Traffic Engineer in Oceanside. He will be leaving the CTCDC after 17 years. This is his last meeting.

MOTION: Mr. Bronkall nominated David Fleisch as Chair. Alternate Mr. Bilse seconded. There was no opposition and the Motion passed unanimously.

MOTION: Mr. Fleisch nominated Bryan Jones as Vice-Chair.

Mr. Talada made the point of order that Caltrans or CHP representatives cannot hold the position of Chair or Vice-Chair of the CTCDC.

MOTION: Alternate Mr. Bilse nominated Bob Bronkall as Vice-Chair. Mr. Sallaberry seconded. There was no opposition and the Motion passed unanimously.

3. Approval of Minutes of the November 14, 2019 Meeting

MOTION: Mr. Fleisch moved to approve the November 14, 2019 California Traffic Control Devices Committee Meeting Minutes as reported. Mr. Bronkall seconded. There was no opposition and the Motion passed unanimously.

4. Public Comments

There were no public comments.

5. Items under Experimentation

There were no items under experimentation.

AGENDA ITEMS

6. Public Hearing

20-01: IA 22: Interim Approval for the optional use of red-colored pavement for Transit Lanes

Ms. Kress-Wooster introduced the item.

Mr. Talada gave the presentation, summarized below.

Interim Approvals are issued by FHWA and allow the use of traffic control devices that are not specifically covered by the MUTCD. Examples are the IA 18-Intersection Bike Boxes and the IA 14-Green Colored Pavement for bike lanes.

This Interim Approval item was issued by the FHWA in December 2019

Mr. Talada reviewed the typical process for the use of traffic control devices covered by IA. A flowchart identified potential actions that CTCDC could take.

MOTION: Mr. Bronkall moved to approve the item.

Mr. Sallaberry noted that on page 3, it states that the red pavement marking shall be installed from lane line to lane line for the entire length of the transit lane. For San Francisco, they would like the option not to have lane line to lane line because of pavement messages, tracks, and so on in the lane itself. He suggested changing the language to *should* to give flexibility.

MOTION: Mr. Sallaberry seconded with the change in the language to *should*.

MODIFIED MOTION: Mr. Bronkall suggested leaving the language as *shall* but at the very end, include an exception: *...except when professional engineering judgment determines otherwise*. Mr. Sallaberry agreed to the language.

Mr. Talada stated that he would follow up by placing this matter on the next meeting agenda, to report on feedback he received from the FHWA.

Mr. Sallaberry asked if CTCDC approval of the IA would be deferred until the next meeting. Mr. Talada answered that he would have to send FHWA an email stating the requested modification. He will come back to the CTCDC to report on their feedback.

Mr. Sallaberry noted that what CTCDC recommends to Caltrans is not final for the state; the committee's vote is a recommendation. Whatever CTCDC does moving forward, he would like to see the IA adopted as soon as possible, because it is a useful traffic control device. He would like the inclusion of the added language but he would not insist.

MODIFIED MOTION: Mr. Bronkall moved to approve the item with the *shall* statement with the modified exception for professional engineering judgment, followed up with the action that if FHWA is not willing to accept that, the item would be approved as is. Mr. Sallaberry seconded.

Chair Bahadori confirmed the Motion with Mr. Talada.

VOTE: There was no opposition and the Motion passed unanimously.

20-02: Revise CA MUTCD Section 2J.11 regarding specific service signs

Ms. Kress-Wooster introduced the item.

Mr. Iqbal gave the presentation, summarized below.

Existing law gives Caltrans the authority to administer the business logo sign program, which is designed to direct motorists not familiar with the area to services they may need. Originally established in 1978, the program was for rural areas along Interstate 5. In 1992, the Legislature expanded the program to include all freeways but imposed a 5,000-person cap.

With legislation changes, Caltrans currently has 38 locations with populations above the 5,000-person cap where businesses are participating in the program. They account for over 236 individual business logo signs.

As required by AB 178, Caltrans submitted a final report to the Legislature in April 2020 in which it did not recommend expanding the program to other urban areas. It recommended keeping the 5,000-person cap.

Mr. Iqbal showed the current and proposed language. Caltrans was proposing to delete wording referring to a 10,000-person cap, and to state that whatever signs are installed in areas whose population has now exceeded 5,000 should be kept until the end of their useful service life.

Committee Questions and Discussion

Mr. Jones expressed disappointment with this direction. The State of California has a hands-free policy while driving such that we should not be using our phones to find the businesses in the area. As businesses are struggling due to COVID-19, this program should be expanding, or Caltrans should be working to partner with the Chambers so that it does not have to fund the signs. We should be doing more to help our local businesses out in California; after all, we are public servants who exist because of sales tax and property tax. Sales tax from residents is to Caltrans' benefit.

Chair Bahadori asked about the current number of signs statewide. Has staff looked at options such as Mr. Jones just recommended for a type of program that can maintain the signs in cooperation with locals? Mr. Iqbal answered that they are keeping all the signs where the population is under 5,000. There are only 238 signs in locations where the population exceeds that. We are not removing those signs and that is why we want to delete this language from the MUTCD. Expanding the program and adding signs would result in sign pollution that would detract from traffic control device signs on the state highways.

Mr. Bronkall suggested, with the program being phased out as communities grow, that the offramps at business districts be clearly labeled. Mr. Talada responded that central business districts such as those do not really come under that section of the CA MUTCD. We can revisit the idea at a later date. This agenda item concerns the specific service signs of the logo program. Mr. Iqbal added that staff has been working with the group that deals with the MUTCD section that concerns other business.

Public Comment

Mr. Zoubir Ouadah tended to agree with Mr. Jones. He asked if the 5,000 figure adds an insignificant number of signs. It may be more appropriate for the driver to be able to have signs in the countryside where the population is lower, than in an urban setting. From that perspective it seems as if Caltrans should delete the 5,000 population threshold and open it, then add policy preventing a flood of signs.

[Mr. Ouadah made a point about the previous item on the red pavement marking. If a lane is 10 or 12 feet, the pavement should not need to be marked red from one line to the other. The background from a driver's perspective should be red instead of just asphalt so that you can have other things in the lane.]

Mr. Bilse suggested that the population number might be less important than the distance to the next interchange that provides services – it might be a mile or 10 miles. That might be a clearer direction.

Lourdes David, Caltrans District 4 Traffic Operations, commented on the choice available to the driver to stay in the central business district.

Committee Questions and Discussion

Mr. Fleisch saw this agenda item as intended to correct language in the MUTCD that is inconsistent with the State Legislature. He recommended approval of the language changes. He also felt it would be beneficial to have an agenda item at a later date to discuss the program in general.

MOTION: Mr. Fleisch moved to approve the proposed changes to the CA MUTCD. Mr. Bronkall seconded. There was no opposition and the Motion passed unanimously.

20-03: Proposed Changes to the CA MUTCD Exit Plaques

Ms. Kress-Wooten introduced the item.

Mr. Iqbal gave a presentation to the committee, summarized below.

He began with some background.

- He listed the sections of the MUTCD that address exit plaques.
- In January 2016, a collision in Santa Clara County involving a motor coach resulted in two fatalities. The location was US-101 and SR-85.
- In April 2017, the National Transportation Safety Board (NTSB) wrote to the Caltrans Director recommending adding left exit plaques to the left exit sign at the crash location and all other left exit guide signs on California highways.
- In March 2018, another crash happened at the same location, resulting in one fatality. The problem was the same – confusion over moving to the left.
- In May 2019, FHWA issued an Official Ruling that left exit plaques must be positioned *above and abutting* the guide signs.

Mr. Iqbal listed the proposed changes to Sections 2E.21, 2E.22, 2E.31, 2E.33, 2E.36, and 2G.10. It included option language in 2E.31, Interchange Exit Numbering, using FHWA's recommendation; it deleted the current option language.

Mr. Iqbal showed the new EXIT ONLY panels for Sections 2E.21, 2E.22, 2E.24, and 2E.40.

Staff had seen that some figures in the MUTCD show the W1 series on the new signs, however, it should be the E1 series. Staff was also proposing to make this correction.

Public Comment

Steve Pyburn, FHWA representative, stated that FHWA had requested this item for a number of reasons. A bus crash had led the NTSB to direct Mr. Pyburn's office to work with Caltrans to implement proper placement of the left plaques. Caltrans has a proactive retrofit program to properly place left plaques above and abutting the signs. In some places there are no left plaques, and that needs to be corrected quickly. FHWA is still seeing plans that have the left plaques in the improper location, despite changes in the MUTCD and despite direction by Caltrans headquarters. FHWA is asking for this language to make it very obvious to the designer.

Mr. Pyburn spoke regarding the EXIT ONLY plaques. FHWA has asked Caltrans to make this change in order to represent the standard statement in the MUTCD. The national standard should be shown prominently on the sign. The LEFT plaques have been shown to be directly related to public safety.

Joe Rouse, Caltrans Division of Traffic Operations Program Manager, HOV and Managed Lane Programs, noted that one of the challenges Caltrans has historically faced is that they have not had a detail to be able to mount these tabs onto our sign structures. He asked Mr. Iqbal if Caltrans has that detail available now.

Mr. Pyburn responded that FHWA, understanding this upcoming issue, had discussed the sign structure modifications with Caltrans in a letter several years ago. District 8 had come up with a simple bracket allowing the signs to be placed. The structural plans have not been changed; this affects another mandatory requirement: arrow per lane signs. FHWA is pushing Caltrans on that front. Retrofits are possible. Changing of the structural sections design are not an acceptable impediment to adding the left plaques.

Mr. Iqbal stated that Caltrans has identified about 85 structures that are left exit. Caltrans is going with 41 of those to add the left plaques with attachment. The Division of Engineering Services has already developed that detail, so Caltrans is going to develop plans for the plaque that use the detail. Meetings are coming up for the construction phase to start the LEFT EXIT tabs using the attachment to the existing sign structure.

Committee Questions and Discussion

Mr. Bronkall noted that one of the types of signs that often comes around is the interchange sequencing sign, which gives advance notice of multiple intersections ahead and mileage to the intersections. Are there plans to require adding the left lane to those intersection noticing signs to give people more time to move to the left or right in these multiple-lane urban areas? Mr. Iqbal responded that in the CA MUTCD, Caltrans is starting to install one or two signs before the actual exit to give the motorist the message to keep moving to the right. Caltrans is installing a sign at the SR-85 location. The next phase is to install the signs at other locations.

Mr. Bronkall stated that he had been looking at Figure 2E-31 for the signage Mr. Iqbal was referring to. Mr. Bronkall encouraged Caltrans, as they roll this out, to add LEFT in that signage to better guide motorists for lane positioning, especially in highways that have a significant number of lanes in one direction.

MOTION: Mr. Fleisch moved to approve the recommended language change. Mr. Bilse seconded. There was no opposition and the Motion passed unanimously.

20-04: Proposed Changes to the CA MUTCD-Memorial Sign Policy Change

Ms. Kress-Wooster introduced the item.

Mr. Iqbal gave the presentation, summarized below.

He listed Section 2M.10. He then explained how the Assembly adopts resolutions for memorializing a highway, bridge, or other component of the highway. Once a bill is passed, the resolution comes to the District where they come up with a cost and location. They then install the sign.

For many signs the person being honored has a nickname displayed. Sometimes a family member wants to add a nickname to the sign but that was not originally included in the bill. In some locations, the districts are using Section 2A.13 for local jurisdictions to be able to add punctuation to a word message.

Section 2M.10 gives the procedure to follow when legislation includes the memorial signs or plaques. The District Director will contact the sponsor of the legislation to determine appropriate wording for the signs or plaques.

The proposal has two changes for Section 2M.10:

1. The option to add a nickname, which will avoid any delay in the approval and installation of the memorial sign.
2. To delete the sentence stating that the District Director will contact the sponsor of the legislation to determine appropriate wording for the sign or plaque.

Committee Questions and Discussion

MOTION: Mr. Bronkall moved to approve the proposed changes. Mr. Bhatia seconded. There was no opposition and the Motion passed unanimously.

20-05: Request for approval of two new word message signs

Ms. Kress-Wooster stated that the request came from Caltrans District 5.

Diane Dostalek, Caltrans District 5, clarified that this was not a Request for Experimentation but instead a request for two new nonstandard word message signs. The location is the intersection of SR 154 and Roblar Avenue in Santa Barbara County.

Ms. Dostalek displayed the signs.

She explained that this intersection is a high-speed rural location with a collision rate over twice the statewide average. Incremental countermeasures have been installed but have not significantly reduced the collision rate. The predominant type of collisions are broadside, caused by drivers pulling out from Roblar and being broadsided by vehicles on SR 154. The majority are caused by local residents. Their statements consistently state that they did not see any approaching vehicles. The likely cause is that drivers on Roblar are not practicing the standard of care needed to ensure that it is safe to enter the intersection.

Ms. Dostalek showed a diagram of the proposed countermeasure with the new signs.

Committee Questions and Discussion

Mr. Talada confirmed the placement of this item in the agenda. It did not fit as an Action Item or Information Item.

Public Comment

Mr. Pyburn stated that he did not have a federal action on the sign, but there may be a dilemma in the CA MUTCD, which FHWA is required to approve, about the action. One part of the MUTCD says that you can only use traffic control devices that are in the manual. However, the federal MUTCD does not require every word message sign to be in the manual if it meets certain criteria for that type of sign.

Mr. David asked a question regarding the previous items. If the CTCDC has passed this proposal, how do we address a request for a nickname that is made after the concurrent resolution was passed without the nickname? He also asked FHWA to comment on the quotations. Mr. Iqbal answered that Mr. David can discuss the question with his district internally – there was a particular issue with the sign in question. The deputy in the district has approved it. The sign has been in use statewide with the nickname in quotation marks.

Mr. Ouadah asked about the larger sign displayed by Ms. Dostalek. Is it too big for a stop sign?

Committee Questions and Discussion

Mr. Bhatia commented that going through the National Cooperative Highway Research Program (NCHRP) 500 and the FHWA information, they are saying that this is still considered experimental, so if an agency wants to pursue its application, it is recommended that they do it with caution. When this was tried in Pennsylvania, there wasn't any conclusive result. Mr. Bhatia asked if it would be wiser to approve this as an experiment.

Mr. Sallaberry followed up on Mr. Pyburn's comments. Rather than have CTCDC approve each word message sign to be included in the CA MUTCD in order to meet that provision, Caltrans should adopt a change for the CA MUTCD to be more in compliance with the MUTCD: to allow word message signs to be used as needed. Chair Bahadori observed that this would be a more comprehensive change that is not part of today's agenda, but we could ask Caltrans to bring this proposal back. Mr. Talada responded that in the past we have considered changing the requirement to bring every word message sign that is not in the manual to the CTCDC. Staff has checked with the Caltrans legal staff and has been advised that the change would not be in compliance with state law. That is why the policy has not been changed. In view of that, any time we see a word message sign that does not comply with the CA MUTCD standard signage, we have decided to bring it to the CTCDC.

Chair Bahadori asked how to address the conflict: the request is not to put the sign in the CA MUTCD, but the CA MUTCD explicitly requires locals not to use any signs not in the document. Mr. Iqbal responded that we could choose the CTCDC process to consult with the local agency as well as the public before installing the word message sign at that specific location.

Mr. Fleisch answered Mr. Ouadah's question: the sign is across the street rather than on the stop sign. It would require someone to look across. Mr. Fleisch then asked if the item request includes adding the sign into the CA MUTCD. Mr. Talada answered that we do not have any

experimental results to back the installation of these word message signs. We do not have a good justification to add the signs to the CA MUTCD and to include the policy for the use of these signs. We can request the local jurisdiction to follow the Request for Experimentation process.

MOTION: Mr. Fleisch moved to allow Caltrans District 5 to be allowed to install the signs, but as an Experimentation – to collect data and bring back the results. Mr. Bhatia seconded.

Ms. Dostalek stated that she had understood that word message signs did not require experimentation, but she saw that this is contrary to the policy of which she had now been informed. She would accept the committee's decision as is, and stated that District 5 may or may not choose to install the signs.

Mr. Bronkall stated that he was inclined to vote No on the motion and to propose another motion to accept the proposal as is and approve the use of the sign without inclusion in the CA MUTCD.

Chair Bahadori stated that parliamentarily speaking, there was a motion on the floor that was seconded and had to be voted upon.

Mr. Bronkall felt that the item could be approved under Section 2A.06, paragraph 13, which states when experimentation is not required. He read that language for the committee.

NEW MOTION: After hearing Mr. Bronkall's additional information, Mr. Fleisch moved to approve the request to use the signs. Mr. Bhatia seconded. There was no opposition and the Motion passed unanimously.

20-06: Request for approval of a non-standard word message sign MAX FINE \$150

Ms. Kress-Wooster introduced the item.

Melissa Walker, Executive Director of Operations for San Bernardino County Department of Public Works, presented the details.

The county was requesting the use of a non-standard word message sign: MAX FINE \$150. It is to be affixed to existing "No Parking" signs located on 26 miles of state highway within the county, mainly in the mountains.

In August 2019 the County Board of Supervisors adopted a resolution to increase the amount of the fine for parking violations. It was recommended to provide some type of signage to provide warning to motorists and encourage them to park in legal areas.

Prior to this resolution, the parking fine was \$13. Many people were willing to pay that fee to be able to park illegally, especially in snow season. This led the Board of Supervisors to increase the fine.

Caltrans has agreed that the county will provide the signs and affix them to existing posts displaying NO PARKING signs. Caltrans staff is in the process of determining the number of signs that will need to be installed.

The county has been working with the CHP, Sheriff, and Code Enforcement to ensure that they can reduce the illegal parking issue. CHP has requested the county to install the signs and try to limit the amount of illegal parking for snow, especially with COVID continuing.

Committee Questions and Discussion

Chair Bahadori observed that when we place these items under Request for Experimentation, it puts the applicants under the obligation to come back with some report. Ms. Walker responded that the county had considered this a pilot project – there are many other areas on state highways in which they want to place these signs. They had wanted to start with a small, condensed area. After that they will probably ask for additional areas.

Chair Bahadori noted that the fee is fairly steep and motorists need to know that amount.

Public Comment

Mr. Pyburn stated that this sign presents the same dilemma as the sign in the previous item. The federal language says that custom word message signs do not require experimentation; however, Caltrans has added paragraph 13A to Section 2A.06 that says local agencies shall not develop word message signs. The action the committee took on the previous item – to look only at the federal language – makes the state language ambiguous and unnecessary.

Mr. Ouadah agreed that California has a dilemma in that the state does not give the authority to the local agencies to develop their own signs. The language Mr. Bronkall indicated was the federal language. Caltrans will have to go to that section of the manual and add, specific to California, how we want to do the sign wording, or remove the section in the beginning. He agreed with Caltrans that these signs should be done as experiments.

Committee Questions and Discussion

Mr. Fleisch pointed out that the language Mr. Bronkall had read was from the CA MUTCD, not the federal. A line-out in 13 took away *state* and *local*, and specifically says *Caltrans*; Caltrans can develop word signs but no one else. In this case San Bernardino and District 8 are asking, and they have already said they are willing to do this as experimentation. Mr. Fleisch felt that experimentation is appropriate here.

Chair Bahadori asked if the San Bernardino highways are state-owned or county-owned. Ms. Walker replied that they are state-owned. Chair Bahadori suggested that the county just send Caltrans an MOU and pay them for the signs. Ms. Walker responded that the county had been working closely with District 8 because there are many more areas where they want to place the signs – they have a lot of mountain roads.

Mr. Talada clarified that even though the CA MUTCD allows Caltrans to develop word message signs, whenever they get a request for a sign that is not in the CA MUTCD, their practice is to bring the request to the CTCDC so it can be vetted in front of the local agency and also offered for public comment.

Ms. Kress-Wooster suggested that we may need a separate agenda category for situations that are not experimentation but the applicants are seeking public comment and CTCDC approval.

Chair Bahadori asked how San Bernardino County wanted to proceed: to make it a District 8 request which will require approval of the CTCDC and not a Request for Experimentation, or to make it a county request that will require a Request for Experimentation.

Mr. Bronkall suggested that the sign be approved to be used where it is important for motorists to be aware of fines when they are significantly higher than other locations. The amount of the fine could be added for the specific location.

Mr. Talada stated that Caltrans would like to get this sign approved as a word message sign, not to proceed to the Request for Experimentation process. He agreed with Ms. Kress-Wooster's idea to create a new agenda item category of requests for word message signs not subject to Request for Experimentation requirements.

Chair Bahadori asked Ms. Walker if the fine is fixed at \$150. She replied that this amount is for snow areas where the county has the greatest problem; the amount of the fine may be less if it is not snowing at the time.

MOTION: Mr. Bronkall moved to approve the sign in the same way as the previous agenda item. Mr. Bhatia seconded. There was no opposition and the Motion passed unanimously.

20-07: Request for approval of express lane signs

Ms. Kress-Wooster introduced the item.

Barkev Tatevosian, Principal Transportation Planner at Los Angeles County Metropolitan Transportation Authority (LACMTA), stated that he was requesting approval from the CTCDC for two variants of MUTCD signs on the express lanes of the I-10 freeway.

Mr. Tatevosian provided some background.

- LACMTA operates the I-10 express lanes, which opened to the public in February 2013.
- LACMTA is going to implement a revised toll policy on the lanes. The proposed signs would provide appropriate, clear, and concise information about the new policy.
- Under the new policy, buses and vanpools enrolled in the program will travel toll-free. All other users will be tolled. Vanpools will be guided to call 511 for tolling information.

Mr. Tatevosian displayed the proposed vanpool sign. There will be approximately 14 installations.

He displayed the second sign, a regulatory sign that will have approximately 21 installations.

He showed typical mainline installation and typical ramp installation.

Committee Questions and Discussion

Mr. Fleisch asked if this is an experiment. Mr. Tatevosian replied that the policy change is a pilot program. The express lanes had started as an experiment, and have become permanent through a California Senate bill. The program has a minimum amount of time to be operational, but LACMTA does not know if it will become permanent. The pilot is not for the signs themselves, but for a change in business rules for express lanes.

Mr. Fleisch asked if LACMTA is going to bring back the express lane pilot program portion, or if goes somewhere else. Chair Bahadori noted that there is no Request for Experimentation here – there is no before-and-after study. It is really a request for a new sign. Mr. Fleisch asked if the intent is for these signs to be included in the manual – if this goes well, other locations will use them. Mr. Tatevosian concurred that this does not really fit the traditional experimentation and the MUTCDC aspect. The program is the pilot while the signs are just going to be used for motorists to get more information about the program.

Chair Bahadori asked if tour buses are included for express lane use. Mr. Tatevosian was fairly certain that they are. All types of buses are allowed; some may already have an exemption.

Chair Bahadori asked how people know what ENROLLED VANPOOL means and whether there is an occupancy requirement. Mr. Tatevosian replied that vanpools must register with the LACMTA – that is part of the program – and must continue to meet the occupancy requirements. The sign is needed to convey these details.

Chair Bahadori noted that vanpools might be enrolled in the regional transportation agencies of other counties but not Los Angeles County. Mr. Tatevosian answered that LACMTA is going to have its own registration process. If a vanpool calls them, it can get the information. Chair Bahadori commented that the wording should read BUSES & MTA-ENROLLED VANPOOLS.

Public Comment

Mr. Rouse commented that this sign is actually in line with language in the CA MUTCD: paragraph 8 of Section 2G-17. He also commented that there is a broad variety of types of operation for express lanes in California. At Caltrans Headquarters they are trying to come up with some standardization for their approach to signing; getting the types of signs proposed to the CTCDC installed at these facilities is a way to do that.

Mr. Pyburn thanked LACMTA and Caltrans District 7 for coming early to the FHWA with this proposal, so that FHWA can work with them to come up with signs that are compliant with California and federal MUTCD. Other Southern California agencies have addressed the problem in ways that resulted in very complicated signs that require much of the driver's time when traveling at freeway speeds. Mr. Pyburn mentioned that the meaning of enrolled vanpool is a growing problem in Southern California – tolling agencies have different business rules and there is inconsistency in the system.

Committee Questions and Discussion

Chair Bahadori's only concern was that the agency with which the vanpool must be registered should be clarified on the sign. Otherwise a trap is created for drivers who legitimately thought their vanpools were qualified. The name MTA should be on the sign. Mr. Tatevosian responded that LACMTA has been coordinating with the Air Quality Management District and different ETCs that have their own vanpools to inform them.

Ms. Kress-Wooster agreed with the view expressed during Public Comment regarding the need to provide signage that is as consistent as possible – with little variation – around the state. When we add the name of an agency to the sign, it becomes specific to that area. She asked Mr. Tatevosian to clarify the business rules for LA Metro; are vanpools enrolled outside of LA Metro allowed to drive with no toll? She felt that you would want that – to encourage high-density vehicles in this lane. Mr. Tatevosian answered that the intent is that right now, they would need to have a transponder. Enrolling in this program would prevent them from having to pay the toll. As of now, everyone needs a transponder to have toll-free travel. At peak periods the vehicle must have more than three passengers regardless of whether it is a vanpool or a regular vehicle. For non-peak periods the occupancy must be two or more. With the new program, they would have a different way of getting toll-free travel. He confirmed that vanpools coming from other areas can set the transponder to 3+ and pay no toll.

Mr. Bilse suggested that the vanpool sign read, VANPOOLS CALL 511 FOR ENROLLING INFO.

Chair Bahadori felt that these signs are going to proliferate all over Southern California, and each Regional Transportation Agency Board will have its own toll exemption policies. People need to know the name of the agency in which they must be enrolled.

Mr. Fleisch suggested the wording LOCAL ENROLLED VANPOOLS. Chair Bahadori felt that was not specific enough.

Mr. Bilse asked what happens to non-enrolled vanpools going into that lane: are they breaking the law, or will they just get a message from the agency instructing them to enroll? Chair Bahadori answered that toll violators will be sent a toll violation notice and must pay the fine plus administrative fees. Mr. Bilse asked if they could show that that are enrolled somewhere else. He asked if someone enrolls in two different regions: do they have two different transponders? Ms. Kress-Wooster answered that there is one standardized transponder for the FasTrak system in California.

Robert Campbell from LA Metro asked about the regulatory sign: is it discretionary or mandatory per the MUTCD based on what they are doing? Chair Bahadori answered that it does not qualify as a regulatory sign; it is more informational – you are hoping that your message informs the driver.

MOTION: Mr. Bronkall moved to approve the item with the EXPRESS LANE sign also including the name of the agency preceding the word ENROLLED, and the blue sign clarifying FOR ENROLLMENT. Mr. Bhatia seconded. There was no opposition and the Motion passed unanimously.

20-08: Request for experimentation with modified 4-section traffic control, 3-section bicycle traffic control, and modified R10-15B sign

Mr. Bilse introduced the item.

Ryan Whipple of WSP, representing the City of Imperial Beach, gave the presentation. Sandag is the other requesting agency; it is also managing this project.

The project is a 6.5 mile regional bikeway project connecting the Bayshore Bikeway to the San Ysidro Port of Entry. The City of Imperial Beach is the final stretch of the bikeway. It has recently completed some Class II bike lanes.

One of the key design challenges is the two freeway-accessing arterials. Experimental approval is being requested for the location where 13th Street intersects the two arterials.

Mr. Whipple showed photographs of the intersections. He showed the traffic control devices for use in the proposed design solution: a modified R10-15, a modified 4-section traffic control signal with flashing right turn yellow arrow indication, a modified 3-section traffic control signal for bicycles, and an R3-1 activated blank-out sign.

Mr. Whipple showed a conceptual drawing of the use of the devices and explained how they would be used.

CTCDC approval is needed for the modified R10-15. It is currently used in cities in other states and is consistent with the City of San Diego CTCDC experimentation request approved in August 2018.

Mr. Whipple explained the need to modify the 4-section vehicle signal head and its simultaneous use with the 3-section bicycle signal head, also approved for the City of San Diego experimentation request of August 2018. This phasing concept was approved for use in Spartanburg, South Carolina.

Mr. Whipple stated that two different bicycle design guides, NACTO and the 2013 FHWA Separated Bikeway Design Guide, recommend this phasing sequence. He explained the design guidance.

He explained other design considerations concerning flashing right-turn yellow arrows and bicycle signal phase.

He explained the “bend-out” design feature which increases visibility for bicycles and pedestrians, reduces turning speed for vehicles, provides space for vehicles to yield without blocking traffic, and provides an optimal queueing area for bicycles due to high vehicular volumes.

The supporting agencies are SANDAG, the City of Imperial Beach, and the City of Carlsbad.

They are expecting the installation of equipment to be completed around October 2022, followed by the experimentation period. The final report will be finished in the middle of 2024.

Committee Questions and Discussion

Mr. Sallaberry noted that he is a member of the Bicycle Technical Committee of the National Committee on Uniform Traffic Control Devices (NCUTCD); the interim approval for bicycle signals is being proposed for revision to remove the conflict of having a green bike signal only come on to completely protected situations. He commented on bicycle actuation: if it is only actuated, you may run into compliance issues when cycles roll up on a red bike signal but they see green through indications for the other movements. You may want to consider “fixed time” and have a green bike symbol show up every cycle. Mr. Whipple responded that this question has come up in discussions with the City of Imperial Beach. Currently their thought process is that by using visibility hits for the bicycle indication, and the fact that the shared through-right vehicular lane is present, cyclists who are more comfortable can still use the through lane with the vehicle green ball plus the flashing right yellow arrow; more cautious cyclists can use the bend-out facility.

Alison Moss, SANDAG Project Manager, stated that the green bicycle signal will be actuated for the duration with the green ball. It will only go red when the left turns are going on, so even if a cyclist were to arrive on a “stale” green, they would still get the go-ahead. Mr. Whipple confirmed.

Mr. Bilse asked for clarification: he thought that if you do not show up before the green, you must wait a cycle. Mr. Whipple answered that because it is on actuation (and there are advance bicycle detectors), if the timing works with the bicycle actuating the passive detection prior to moving into the intersection, the bicycle will have the green. Otherwise, it will come to a stop because of either the pushbutton or the passive actuation. They are penalized. The bend-out feature does allow for cyclists who want to continue through.

Mr. Bilse commented that the bike signal head is needed to get an advance release of the bicyclists. Mr. Whipple confirmed.

Mr. Bhatia asked for clarification on where the activation for bicycles will be: is it in the bend-out feature? Mr. Whipple confirmed.

Ms. Moss commented on the nature of the streets intersecting in this location. 13th Avenue is a minor street compared to Palm Avenue and Imperial Beach Boulevard. More times than not, a bicyclist is going to show up and be waiting for the light – it isn't very often that it is going to be green, and they will be chasing it and getting the red bike symbol.

Mr. Bilse posed a hypothetical in which two bikes show up in the middle of the green, and one proceeds in the through mixed lane while one proceeds through the bike lane. The one in the bike lane will get a ticket. Ms. Moss asked if it would be an adverse impact to put it on recall. Mr. Bilse agreed and recommended that they happen concurrently.

Mr. Sallaberry recommended use of a sufficiently long red bike phase before the opposing left gets its signal notification.

Public Comment

Ananth Prasad, Civil Engineer, Santa Clara County, commented on the position of the flashing yellow arrow: people who are colorblind have learned that the green is always at the bottom. Having a flashing yellow arrow at the bottom could be confusing. He suggested red at the top, next the yellow ball, next the yellow arrow, and at the bottom the green.

Mr. Ouadah commented that 13th Street is a minor street, so probably a recall would be all right. He asked about the signage: the R10-4 that the applicant is proposing does not have the sign that says PUSH BUTTON FOR GREEN LIGHT which has been deleted from the MUTCD. For the pushbuttons, you may have to choose another sign.

Mr. Pyburn advised the applicant that this experiment must be approved by Federal Highways Headquarters before it can be implemented in the field.

Richard Moeur, Executive Secretary of the National Committee on Uniform Traffic Control Devices, spoke regarding the R10-15 sign. In 2014 the National Committee made a recommendation to the FHWA to adopt a sign similar to what is being proposed here, except that the MUTCD proposal called for a sign of 30 inches wide by 36 inches tall to accommodate the bicycle/pedestrian symbol. The applicant might want to consider that design.

Mr. Moeur spoke regarding Mr. Sallaberry's mention of current IA-16, an NCUTCD action. In the past the National Committee submitted recommended language for IA-16 to FHWA prior to its adoption; recently the National Committee moved to resubmit the recommended language to FHWA.

Mr. Rock Miller commented that there are a number of slight variations in this experiment, including those using a flashing yellow for the bicycle instead of a solid green. The National Committee has been in touch with most of the agencies doing this; generally, no one is having a problem with this particular approach. The National Committee is hopeful that the FHWA will approve requested modifications to IA-16, but there is no guarantee. There are many FHWA experiments underway to allow bicycle movements to proceed while turns across the bikeway are permitted, and some agencies are using this technique without the approval of a request to experiment by the FHWA.

Committee Questions and Discussion

Mr. Bilse clarified that the term “recall” should not be used – we want the wiring to be such that the bike signal works concurrently with the green ball for the vehicles. Ms. Moss agreed.

Mr. Sallaberry asked if the green bike symbol should come up before the green ball. Mr. Bilse affirmed.

MOTION: Mr. Sallaberry moved to approve the experiment. Mr. Fleisch seconded.

FRIENDLY AMENDMENT: Mr. Bronkall moved to allow the flexibility to include the NCUTCD sign standard. Mr. Sallaberry agreed and amended the Motion to approve the request. Mr. Fleisch agreed.

Mr. Bilse asked how we are approaching the IA-16. Mr. Whipple answered that they will get in contact with FHWA to apply for an exemption.

FRIENDLY AMENDMENT: Mr. Sallaberry agreed to add the IA-16 action to the amended Motion.

VOTE: There was no opposition and the Motion passed unanimously.

20-09: Request for experimentation of the performance of Variable Speed Advisory (VSA) sign

Ms. Kress-Wooster introduced the item.

Hassan Aboukhadijeh, Project Manager, Caltrans Division of Research, Innovation, and System Information (DRISI), gave the presentation. He stated that the project will minimize traffic delays and improve safety.

He described the problem. Driver behavior is the main cause of traffic on the freeways. DRISI is proposing Variable Speed Advisory signs to attempt to control driver behavior. The signs would cause traffic to flow more smoothly and give drivers more time to react to changing conditions. UC Berkeley has developed a system to improve bottleneck flow and reduce shockwaves on the freeway.

The request comes under Section 1A.10 of the CA MUTCD for experimentation. The proposed traffic control device complies with the CA MUTCD for an advisory condition. The sign is easy for drivers to understand; there is a need for it; it is expected to provide additional active traffic management. The signs will be placed one mile apart to give the driver enough time to respond.

The location will be in Sacramento: Highway 99 northbound from Elk Grove Boulevard to the SR-50 interchange. This 13-mile corridor has 16 onramps and 11 offramps. DRISI proposes to use 15 of the signs beginning in October 2020 and ending in September 2021. The test time will be 6:00-9:00 a.m. on weekdays.

Mr. Aboukhadijeh listed the physical specifications of the sign.

He gave a system overview. Caltrans traffic detectors and radar units gather information about traffic speed and road conditions and transmit the data to a PATH computer, where it is analyzed. UC Berkeley software makes a decision about what speed to display on the signs. The data is updated every 30 seconds. The installation on the road is not permanent.

During the proposed field test, DRISI will work with Caltrans PIO on public outreach; community support is very important. DRISI will work closely with District 3 traffic engineers to monitor the system. They will do gradual testing to avoid negative impacts on traffic; they will have a website to monitor traffic and to display the data. The evaluation plan will include before-and-after studies. DRISI will report back to the CTCDC on the status of the evaluation and share the final results with everyone.

Mr. Aboukhadijeh emphasized that this is a field test for research only without permanent installations or changes on the road. No footprints will be left.

Committee Questions and Discussion

Mr. Bronkall stated that he was encouraged by any efforts to improve traffic flow on freeways with the effects of riboning. If successful, this could be expanded statewide.

Chair Bahadori commented that speed optimization definitely improves traffic flow and carrying capacity of the freeway. He has experienced this while driving on freeways in Switzerland, Germany, and Austria. It will be interesting to see how well a suggested speed limit works compared to a mandatory one.

Mr. Bhatia asked about the timespan of the experiment – whether DRISI will take into account the traffic effects of the COVID situation – making sure the tests can be done in slightly more congested conditions. Mr. Aboukhadijeh answered that DRISI is working with District 3 and UC Berkeley. They are hoping that traffic patterns will be back to normal by next year.

Public Comment

Mr. Pyburn stated that Federal Highway Headquarters will have to approve this experiment before implementation. He expressed concern about using advisory speed, which is typically used to warn of potential hazard. Alternate wording is available; he preferred directly telling drivers why they should go at that speed.

Mr. Ouadah commented that since the signs as traffic control devices comply with the MUTCD, why was there need for the experiment? Chair Bahadori agreed.

Xiao Yun Lu, Principal Investigator for the project, stated that on one hand, they want to provide as rich information as possible to advise the driver of the advisory speed, but at the same time, they want the information to be as simple as possible. A variable message sign accomplishes this. The speed displayed is based on overall corridor traffic – that is why the number is dynamic. The test is not simply for the sign; it is also for the dynamic of driver behavior.

Committee Questions and Discussion

Mr. Bilse commented that it is really a safety issue: traffic is slowing in front of the driver, and the sign recommends an advisory speed that maximizes the flow. The message is really that the driver should slow down.

Chair Bahadori commented that this is a warning sign; it is not enforceable. He felt that the experiment is not necessary for the sign although the results will be interesting. Some drivers will oblige the advisory and some will not, and a differential of 15-20 miles per hour may be created which may be a traffic safety problem.

Mr. Bilse stated that while the sign may not need to be included in the experiment, additional signage at the ramp metering may need to be included, in order to inform motorists what to expect ahead as they merge onto the highway.

Mr. Aboukhadijeh reiterated that they are going to work closely with the District and they are going to do public outreach – the public needs to comply with these signs so outreach is valuable. The public will be aware before the field test begins.

MOTION: Mr. Bronkall moved to approve the project with the flexibility of the language on the advisory sign to be changed based on FHWA approval, as well as allowing authority to place additional signage as needed near the ramp meters to educate the public. Mr. Bhatia seconded. There was no opposition and the Motion passed unanimously.

Mr. Talada recommended that Mr. Ouadah act in place of Mr. Fleisch after 2 p.m. Chair Bahadori concurred.

20-10: Request for experimentation with active “Red Signal Ahead” warning sign

Mr. Bilse introduced the item.

Dain Pankratz gave the presentation. He stated that the sign is used nationally, usually around private roads. The City of Glendora has contacted the FHWA and the agencies, and has not found a request for this sign to be approved.

He provided some background. The Metro Gold Line project is a light rail train going through downtown L.A.; in the final phase the line will go through Glendora. The team decided that the existing signs need to be improved upon because of blind curves. The project is currently under construction and is scheduled to open in 2025 or 2026.

The problem is a blind corner approximately 250 feet (at one intersection) to 350 feet (at the other intersection) that lead into a traffic signal downstream. The traffic signals have a pedestrian crossing as well as railroad tracks. Presently there is only a right turn warning sign.

Mr. Pankratz displayed the sign. It is a SIGNAL AHEAD sign with the word RED above in LED. As the traffic signal ahead becomes active, the RED will illuminate about 250-300 feet before the intersection.

He described the two applications at their locations.

The project is supported by Metrolink. It went through a series of traffic consultants from the city and the project.

The request is for a two-year demonstration period in line with the project schedule. It would be tested from 2024-26. If there are any hazards or conflicts during the demonstration period, the project stakeholders are aware that they will go back to the standard warning signs (W2-3).

Mr. Pankratz mentioned a point of discussion from the earlier presentations: bypassing the demonstration period and going to approval for use. Possibly that could apply here.

Committee Questions and Discussion

Mr. Bronkall expressed a concern about LEDs imbedded into the text's signal head, and how that would affect the requirement for the black text on a yellow background for the warning sign. When illuminated, there may be issues regarding red text complying fully with MUTCD requirements for black on yellow. Mr. Pankratz responded that the other sign has white LEDs on the signal head which are illuminated all the time, surrounded by a thin layer of black signal head. The preference is for the standard sign with red.

Mr. Bronkall indicated that he was inclined to support the sign on slide 8. Mr. Pankratz agreed, as did Chair Bahadori.

Public Comment

Mr. Ouadah commented that the experiment is needed because the sign with LED is not in the MUTCD. He felt that we should go towards the international symbol, and combine it with the SIGNAL AHEAD warning sign; the LED flashing is more the actual red light. A red bulb with SIGNAL AHEAD made more sense to him from a traffic operation standpoint.

Committee Questions and Discussion

MOTION: Mr. Fleisch moved to approve the sign shown on slide 8. Mr. Bronkall seconded. There was no opposition and the Motion passed unanimously.

20-11: Request for approval of proposed temporary overhead sign and proposed HOV 2 Discount sign

Ms. Kress-Wooster introduced the item.

Joe Rouse, Caltrans Division of Traffic Operations, Program Manager, HOV and Managed Lane Programs, gave the presentation. He stated that the signs would be placed along express lane corridors throughout California. This project is in District 4.

Mr. Rouse provided some background.

- The project is in Alameda and Santa Clara Counties and will run between Oakland and Milpitas.
- Existing HOV lanes on the 880 corridor will be converted to High Occupancy/Toll (HOT) lanes and will be signed as Express Lanes per the CA MUTCD.
- During the conversion, all users must have a FasTrak electronic transponder.
- The Bay Area Infrastructure Financing Authority (BAIFA) has the legislative authority to collect a toll on these Express Lanes. They have established a policy that HOV-3 will go toll-free and HOV-2 will use the lanes at a 50% discount. This two-tier pricing structure is the first of its kind in the U.S.
- The CHP has made it very clear that without proper signage, they will be unable to enforce the requirements of the California Vehicle Code (CVC).
- Signs need to be developed to convey the lane usage requirements in the CA MUTCD.

The CVC Sections for which the CHP is asking for signage to help enforce are 21655.5 (a) and 21655.5 (b). Toll laws are covered in CVC Sections 23302 (a)(1) and 23302 (b).

CA MUTCD sections that pertain are 2G.03 and 2G.17.

Mr. Rouse displayed the regulatory signs presently being used to convey Fastrak lanes and HOV restrictions. He was addressing the variation in the signs with Mr. Pyburn to take a more standardized approach.

He displayed the new sign designs. They will enable CHP to cite drivers that have their FasTrak Flex switchable transponder set incorrectly and drivers violating the vehicle occupancy requirements.

Mr. Rouse emphasized that in order for people to use the I-880 Express Lane toll-free, they must have a transponder with a switch – a FasTrak Flex. The three parts of the sign package are:

1. At the top plaque is a message indicating who travels toll-free.
2. One of the signs has a message in the middle plaque indicating who travels at a discount.
3. At the bottom plaque is a message conveying the need for a FasTrak flex transponder for toll-free or discounted travel.

This is not a request for an experiment; it is similar to items presented earlier where the applicant is requesting approval to use the signs to address this type of operational situation.

Mr. Rouse shared the signs with the California Toll Operators Committee (an ad hoc body of all the agencies that operate toll roads across the state). A comment was that some express lanes may not offer toll-free travel to any class of vehicle, but they may offer discounted travel to HOVs, for example, I-15 in Riverside and San Bernardino Counties. Their sign package will look similar.

Lourdes David, Caltrans District 4 Traffic Operations, gave the corresponding presentation. They are requesting a temporary sign to inform drivers of the operational changes that are going to happen. He listed the changes, which concern the number of persons, hours of operation, and striping.

In addition to MTC's videos, maps, and website, eight temporary panels will inform the public of the upcoming changes one or two months before the actual change.

Mr. David showed the temporary HOV sign overlays and their locations along the corridor.

He showed the overhead sign structure and proposed sign.

Committee Questions and Discussion

Mr. Bhatia asked about clean air vehicles: is there any need to convey information to them that they still qualify for the HOV2 discount when using this facility? Mr. Rouse answered that the applicants had discussed this, and decided to avoid sign overload. The clean air vehicle community seems to be aware of what they are permitted to do; they also need a clean air vehicle transponder. They can get information on how to obtain the discount through the Bay Area FasTrak website.

Mr. Ouadah asked if a California resident driving an electric car cannot use these carpool lanes while traveling through the state, because he lacks the transponder. Mr. Rouse confirmed: you need a transponder to use these lanes. Chair Bahadori clarified that toll express lanes are not technically HOVs. Mr. Rouse explained that the reason for the transponder requirement is to help with enforcement of the lane; they had cases of single occupants jumping into the lane without a transponder. The requirement helps mitigate some of the cheating – without the transponder the vehicle license plate will be captured by the overhead toll tag readers.

MOTION: Mr. Bhatia moved to approve the proposed temporary overhead signs and the HOV 2 discount signs. Mr. Bronkall seconded. There was no opposition and the Motion passed unanimously.

20-12: Request for approval of orange contrasted temporary pavement delineation in construction zones

Ms. Kress-Wooster introduced the item.

Troy Bucko, Caltrans Division of Traffic Safety Programs, gave the presentation. He represented District 11 in this Request for Experiment.

Mr. Bucko reviewed some national and international studies that were similar. It has been found that using orange striping in construction zones alerts drivers that they are in a different kind of an area.

- The Ontario Ministry of Transportation in Canada found that orange striping had a good success rate in reducing collisions and had a positive perception among the public.
- The New Zealand Transportation Authority did successful tests with laying orange striping over the top of the yellow and white striping. Public opinion was positive.
- In the U.S., the FHWA has approved three experimental processes in Wisconsin, Texas, and Kentucky.
 - In Wisconsin the use of fluorescent orange striping had a positive response from the public. They looked at collision data.
 - In Texas the use of orange thermoplastic with raised indented rumble strip-type embedded material had positive results in driver surveys. They also looked at collision data.
 - In Kentucky they had good results from public feedback, and also looked at speed variation durability of the color and markings.

Caltrans was proposing to do public surveys, retro-reflectivity readings on the pavement marking when installed, and speed differential.

They were proposing a contrast striping detail along a corridor of a construction design-build project in San Diego. Two alternatives will be tested in this pilot project experiment:

- For Alternative 1, the orange stripe would be added in front of the typical stripe that would normally be there; the yellow or white stripes would not be removed.
- For Alternative 2, they would place the orange stripe on either side of the wider yellow stripe.
- The gore areas would be the same for both alternatives.

District 11 has filed a Request for Experiment with FHWA as well.

The following forms of data collection will be done:

- The corridor already has good closed-circuit television cameras for observing how motorists traverse through the work zone.
- Dashboard camera video of the work zone will be recorded.
- Public surveys will be conducted.
- DRISI researchers will put a motorist survey on the I-5 NCC Project website.

- DRISI researchers will collect retro-reflectivity data.
- CHP will be consulted on how well the striping is working to slow traffic down in the construction zone.
- Pre-data is available for comparison to see how collisions are reduced.
- Data from pre-COVID 19 exists to use when traffic has gone back to normal.
- A public information campaign will be done.
- Traffic collision reports that Caltrans gets from the CHP will be used for a before-and-after study.
- Autonomous vehicles will be used to test the orange striping.
- The small segment of the population with orange/red color-blindness will still be able to see the original striping color.

Mr. Bucko gave the proposed timeline. The orange striping will be evaluated between January 2021 and March 2022. District 11 hopes to bring the results back to the CTCDC in May 2022.

Committee Questions and Discussion

Chair Bahadori asked if the original striping will be maintained. Mr. Bucko confirmed; the white and yellow striping will be left as is and the orange striping will be added as a contrast color. Chair Bahadori commented that orange striping has no definition in the CVC or the DMV Driver Handbook – drivers do not know what they are supposed to do when they see orange striping. The original striping must be maintained.

Mr. Ouadah commented that the National Committee is leaning toward adopting something like this for construction zones because of the results they have been seeing. He asked if this will be in Part 6, Temporary Traffic Control, should it be adopted. Mr. Bucko confirmed.

Mr. Ouadah asked about construction zones where the lanes are being shifted: when converting the broken lane line to a solid line, have you considered that for the orange marking? Mr. Bucko answered that it wouldn't be any different with the solid lines –the orange contrast color will still be added to solid white lanes.

Mr. Ouadah asked about raised reflective pavement markers (RRPMs). If you shift the lanes it is probably going to be a 24-hour shift, so night driving with the RRPMs becomes critical to the drivers. Has the applicant looked at orange colors for those? Mr. Bucko thought they would retain the original color with the original stripe.

Public Comment

Craig Rhodes, Director of Internal Processes for Traffic Management, and technical member on Part 6 of the NCUTCD, pointed out that they were presented with this during their June meeting, and it was not received well by all members of the committee. Wisconsin and Texas are high snow areas with low visibility; in those areas it would make sense but would it make as much sense in San Diego? Mr. Rhodes also asked if this would be used only on expressways and freeways, or would it be considered on highways, and what would be the duration? He mentioned that a few of the striping companies are going to like this because they will charge four or five times the price of white or yellow striping, but the rest of the companies are going to have some issues.

Chair Bahadori asked for clarification on the committee Mr. Rhodes mentioned. He explained that in June the Technical Committee meeting for the NCUTCD had been given a presentation by PSS that showed snow conditions.

Mr. Moeur clarified that Mr. Rhodes was conveying some of the discussion on the orange markings held by the Temporary Traffic Control Technical Committee, but that the National Committee as an entity has not yet taken a position on this. A proposal for MUTCD changes will not be brought forward until the experimental data has been received.

Committee Questions and Discussion

MOTION: Mr. Ouadah moved to approve Caltrans to proceed with the experiment as presented. Mr. Bilse seconded.

Mr. Ouadah stated that the CAV Task Force of the National Committee was enthusiastic about the project.

VOTE: There was no opposition and the Motion passed unanimously.

20-13: Request for approval of part-time travel on left shoulder

Ms. Kress-Wooster introduced the item.

Roger Barnes, Traffic Operations Branch Chief, Caltrans District 5, stated that they were seeking approval to use a non-static sign package for a part-time travel lane project. Located in Pismo Beach, it is intended to relieve congestion on U.S. 101. District 5 is an active participant in the Managed Lanes Working Group with the Caltrans Office of Mobility Programs. The goal is to standardize managed lane projects.

District 5 has been in consultation with FHWA through the process on some of the other packages; today they are addressing static sign packages. Because it is a coastal zone, visual impact is a big issue and a Visual Impact Assessment was completed in May.

With the part-time lane strategy, the left or right shoulder is converted to a travel lane during some hours of the day when the adjoining lanes are likely to be heavily congested.

The motorists are comprised of daily commuters to Santa Maria and recreational commuters including many RVs. The project limits are about five miles in length along southbound U.S. 101 in Pismo Beach. Hours of operation are slated for 2:00-7:00 p.m. Sunday through Saturday.

Lane use control signals will be used throughout the corridor as part of the management strategy.

Mr. Barnes described the series of eight signs and the progression of the signs with the lane use control signals.

The District is working with local partners to help manage the lane. The project has been deemed a project of interest by FHWA.

Committee Questions and Discussion

Chair Bahadori commented that a few years ago, District 11 came to the CTCDC regarding bus use on the shoulders during peak hours.

Mr. Jones was in favor of this efficient use of taxpayer money to use the right-of-way during short periods of time. At the same time, adding more lanes during times of congestion is not going to move the traffic any more. CHP in the past has had concerns that this is their work area – but disabled cars can be moved off to the right side.

Mr. Ouadah expressed concern about the differential in speed. CHP did not want too much speed between the traffic flowing on the shoulder freely and the people stationed in the main lanes. Will this experiment deal with that issue? Sam Toh, Caltrans District 5 Traffic Operations Engineer, answered that they did not expect to see a speed differential such as that seen in the San Diego bus on shoulder project. He confirmed that because they are trying to increase capacity during certain hours, the flow of traffic should be evenly distributed among the lanes.

Mr. Bhatia asked how the dynamic signs will be installed on the freeway. Mr. Toh showed the slide with that illustration; they will be on the barrier.

Mr. Bronkall asked about the sign with specific language stating ALLOWED WITH GREEN ARROW; none of the other signs have that language. Should that language be added to the other signs? Mr. Toh answered that as the motorists go toward the opening of the part-time lane, they will see the TRAVEL ON LEFT SHOULDER ALLOWED sign and then the lane use control signal. The sign that Mr. Bronkall mentioned is going to be mounted on each lane use control signal pole. Mr. Barnes suggested having a second sign below stating WITH GREEN ARROW or something to that effect. Mr. Toh cautioned against displaying too much information for motorists to comprehend.

Mr. Sallaberry felt that the signs were wordy and suggested a regulatory sign simply showing a green arrow with a sign that says LANE OPEN, and a red X that says LANE CLOSED. That way people are focused primarily on what they see over the lane itself.

Mr. Jones stated that the city of Phoenix does something similar with reversible two-way left turn lanes.

Mr. Bilse stated that when the lane becomes a travel lane, it is no longer a shoulder. That is confusing. He liked the idea of LANE OPEN or LANE CLOSED.

Mr. Ouadah leaned more toward the perspective of using the shoulder as a traffic lane rather than a lane to be used or not used. He asked about the lane line striping of that shoulder lane. Mr. Barnes answered that part of the strategy is to limit the access at select locations – they want commuters going south to Santa Maria to use that lane, not to allow it to be open continuously. They want selective control of the access at key points.

Mr. Bilse felt that the motorists do not care about the name “shoulder” – they just want to know if they can travel on it. It is either open or closed. The striping should be for a lane. He was in favor of having openings in the lane the same as HOV lanes so that drivers are not stuck in the lane.

Mr. Bhatia agreed that the wording should be simplified.

Mr. Ouadah stated that the purpose of a shoulder on high-speed roadways is to help drivers – it is a recovery zone. There is a critical safety element. In his mind, the concept of shoulders is important.

Mr. Bronkall agreed with the concept that this should be treated as an open lane or a closed lane. It is the same sort of concept as adding a lane for trucks on a hill.

Public Comment

Mr. Rouse stated that the Managed Lane Working Group is working on statewide guidance on part-time lanes. For this type of project a standardized signage package is needed. The guidance is going to address many of the issues raised here: speed differential, design standards, and rebuilding shoulders. He supported clarifying the sign wording to make it simpler, and offered to work with the District 5 team. He was hoping that the package developed by District 5 would be the framework for standardized signage for these types of projects. Many other agencies are proposing mostly bus-on-shoulder projects and have been waiting for this guidance. He hoped that the CTCDC would approve this request in some fashion so that it can be incorporated into the guidance.

Mr. Pyburn stated that FHWA is looking to use standard sign requirements already in the MUTCD to convey the required information to the public. District 5 had come up with this sign and marking package which complies with the MUTCD. FHWA was fine with the signs, although the package has three advance signs, two that apply within the lane, and three that end the lane. That is consistent with HOV lane marking concepts of Section 2G. FHWA always advocates simpler signs and could accept those being proposed. They would be happy to help create simpler signs as needed, within the confines of the MUTCD.

Committee Questions and Comments

MOTION: Mr. Bronkall moved to approve the experiment and recommend that the applicant work with FHWA to refine the sign package to something more simplistic. Mr. Bhatia seconded.

Mr. Sallaberry recommended that those working on the project should check the Richmond-San Rafael Bridge, which has a part-time lane. It is marked as a lane rather than a shoulder. They may not have as many signs as those proposed for the Pismo Beach project. He agreed that using this existing infrastructure rather than widening freeways is going to become more popular. He was in favor of very simple signage that gives the Operations people more flexibility (including an X for lane closed and an arrow for lane open), as well as consistency with other existing projects.

Mr. Bilse agreed, but pointed out that the X and the arrow are not regulatory. For regulatory, we will still need a sign.

Mr. Jones encouraged Caltrans to look at what Phoenix is doing with their mobile lanes. It is very intuitive – much easier to understand than the wordy signage. Further, Caltrans is already using the red X and green arrow in the Bay Area although they are not regulatory.

Mr. Ouadah felt that the length of the segment is probably long enough that the signage is not clutter but is adequate. He asked for confirmation from Mr. Bronkall that if Caltrans and FHWA do not come up with simpler signs, the Motion is still acceptable. Mr. Bronkall confirmed.

Chair Bahadori agreed that these lanes are increasing as we try to maximize the use of the concrete and asphalt real estate already out there, so it would be good to come up with a

package sign to save having these discussions all over again. He noted that in Vancouver there are reversible lanes without a single sign – they use the green arrow and red X.

VOTE: There was no opposition and the Motion passed unanimously.

20-14: Request for approval of usage of new word message sign recommended by the FHWA (Push or Wave at Button for)

Mr. Bronkall introduced the item.

Ananth Prasad, Principal Civil Engineer with the County of Santa Clara, gave the presentation.

He described the problem that with the outbreak of COVID-19, pedestrian pushbuttons at signalized intersections are considered high touch areas. Some members of the public are requesting to “recall” the pedestrian phase and eliminate the pushbuttons; some are walking with the vehicle phase without pressing the pushbutton.

The solution is a new device with technology to wave a hand in front of the pushbutton to activate it. The device complies with the current MUTCD. However, to educate the public, a new sign is needed. The FHWA recommends modifying the R10-4B sign, which Mr. Prasad displayed.

The hand wave is universal and can be used by all segments of the population. The county has reached out to ADA and also the blind center in the Bay Area for their feedback.

The county is in the process of replacing all the pushbuttons with the contact-free device with pushbutton. The signs will be key for educating the public.

Because of COVID-19 there is an urgency in getting the devices installed. None of the current standard signs give this message to pedestrians. Adoption of the sign follows FHWA recommendations and helps ensure national consistency.

Committee Questions and Discussion

Mr. Sallaberry asked if Mr. Prasad had considered a message that just says WAVE AT BUTTON FOR [ped signal]. Mr. Prasad answered that it would not be compliant with the MUTCD. The message needs to give the options of pushing the button or waving.

Mr. Ouadah commented that this device would discriminate against blind people because they do not know they have to wave to avoid pushing the button; there is no voice to instruct them. Why not include that in this experiment? Mr. Prasad answered that blind instructors in the Bay Area have given feedback thus far that has been good. The pushbutton still has a locator tone. He did not have a provision for voice messaging.

Mr. Ouadah pointed out that the device can talk; with COVID-19 we want to discourage people from pushing the button. Since this is an experiment, why not have the manufacturer add the voice into the system to instruct “Wave to cross” or something like that? We would then have the results and we would have a complete package. Chair Bahadori responded that this would require a redesign of the system – the equipment they have in the field now does not have a motion detector. Mr. Prasad responded that the wording of such a voice message would have to be addressed for the MUTCD. This urgent request pertains to the current pandemic. More elaborate experiments can be looked at in the future.

Public Comment

Mr. David commented that in District 4, the blind community had requested to have street names supplied in Braille on the signs.

Virendra Patel, City of Concord, asked about the cost of the system and the sort of retrofit that is required. Mr. Prasad stated that the vendors say the cost is the same as for the current APS units; the technology is simple and can be added at the typical cost. For retrofit, if you have an existing APS unit at an intersection, this is just a change to the unit: the wiring is there.

Committee Questions and Discussion

Mr. Bronkall noted that FHWA has already considered language they deem appropriate.

MOTION: Mr. Bronkall moved to approve the proposal as is; any accessibility issues relating to ADA rest in the device itself and can be worked out at a later date and will be up to the county to resolve. Mr. Bilse seconded.

Mr. Bhatia asked if the system relies on one particular vendor. Mr. Prasad answered that just one vendor had come forward, but the sign itself would be workable with any type of hand wave on a device.

VOTE: There was no opposition and the Motion passed unanimously.

7. Next Meeting

Chair Bahadori stated that the next meeting would be November 5, 2020.

He thanked Hasibullah Mohabbat for coordinating the meeting so smoothly.

He also thanked Mr. Talada for all the support he has given during Chair Bahadori's time on the committee, and he thanked the committee members for their friendship and support, and the great work they have done together.

8. Adjourn

Chair Bahadori adjourned the meeting at 3:53 p.m.