

LTAP News

Fall 2013

Caltrans Construction Oversight Program

Caltrans Construction Oversight Program is a part of the Division of Local Assistance, Office of Policy Development and Quality Assurance. Its primary function is to perform oversight of federally funded local agency construction projects off the State Highway System (SHS). The original program began in 2009 with the American Recovery and Reinvestment Act (ARRA). As part of ARRA legislation, approximately 1,050 projects with federal funding were reviewed statewide. However, as a limited term program, the program ended in 2012.

Continued on page 2

INSIDE

- ◆ Proven Safety Countermeasures
- ◆ LTAP Training Calendar for January-June 2014
- ◆ The California LTAP Center

Near the end of the ARRA program, the Office of the Inspector General for the Federal Highway Administration (FHWA) conducted a nationwide audit of ARRA projects. The audit discovered significant deficiencies and areas of non-compliance in these projects. As a result, Caltrans made a proposal to FHWA to continue the Construction Oversight Program and expand it to include all federal-aid projects off the SHS. The proposal was approved by FHWA for a three-year period spanning from July 2012 to July 2015.

To implement the Construction Oversight Program, the Division of Local Assistance issued Office Bulletin DLA-OB 13-3 in April 2013. The bulletin established the policies and procedures for the Construction Oversight Program, including three types of reviews:

- Preliminary construction reviews
- Mid-project reviews
- Post-construction reviews



The goal of the oversight program is to conduct at least one review on every federal-aid project. However, the intent is to have most of the reviews be mid-project. Preliminary construction reviews will be conducted on selected projects, while post-construction reviews will be done on a case-by-case basis.

The program is currently staffed by seven senior level engineers referred to as Construction Oversight Engineers (COEs). Currently, there are six COEs assigned to various Caltrans districts and two vacant positions. A Construction Oversight Coordinator is also located at Caltrans headquarters.

The COEs are responsible for visits to projects or agencies to review contract records for compliance with federal and state requirements. COEs compile findings from their reviews and distribute them to local agencies, DLAEs and the Program Coordinator. The Construction Oversight Coordinator compiles all reviews statewide and produces quarterly reports of findings, conducts trend analysis, and is the program liaison with FHWA. COEs also provide specialized training and assistance to local agencies and assist DLAEs and their staff by consulting on more complex construction related issues, such as change orders and claims.

By serving as a resource to local agencies in construction management and contract administration issues, the COEs can assist in ensuring compliance with all federal and state laws and regulations.

Construction Oversight Engineers (COE)

Construction Oversight Engineer (COE) positions return to the Caltrans Division of Local Assistance...

Districts 1, 2 and 3
Osama Abu-Markhieh
 (916) 205-8813

District 5 (North)
Siobhan Saunders
 (916) 539-5081

District 7
Mohammed Pasebani
 (916) 205-9908

Headquarters
Tim Buchanan
 (916) 654-3183

District 4 (North)
Moe Shakernia
 (916) 205-8159

District 5 (South)
Mike Giuliano
 (916) 205-6145

District 8
 To be filled

District 4 (South)
Siobhan Saunders
 (916) 539-5081

Districts 6, 9 and 10
Mike Giuliano
(acting – to be filled)
 (916) 205-6145

Districts 11 and 12
Anna Alonso
 (916) 205-9947

PROVEN SAFETY COUNTERMEASURES

Roundabouts

The modern roundabout is a type of circular intersection defined primarily by three basic operational principles:

- Geometry that results in a low-speed environment, creating substantial safety advantages.
- Entering traffic yields to vehicles in the circulatory roadway, leading to excellent operational performance.
- Channelization at the entrance and deflection around a center island are designed to be effective in reducing conflict.

Background

There are an estimated 300,000 signalized intersections in the United States. About one-third of all intersection fatalities occur at these locations, resulting in roughly 2,300 people killed each year. Furthermore, about 700 people are killed annually in red-light running collisions. Although traffic signals can work well for alternately assigning the right-of-way to different user movements across an intersection, roundabouts have demonstrated substantial safety and operational benefits compared to most other intersection forms and controls, with especially significant reductions in fatal and injury crashes. The Highway Safety Manual (HSM) indicates that:

- By converting from a two-way stop control mechanism to a roundabout, a location can experience an 82 percent reduction in severe (injury/fatal) crashes and a 44 percent reduction in overall crashes.
- By converting from a signalized intersection to a roundabout, a location can experience a 78 percent reduction in severe (injury/fatal) crashes and a 48 percent reduction in overall crashes.



The benefits have been shown to occur in urban and rural areas under a wide range of traffic conditions, and ongoing research has expanded our collective knowledge on safety performance for specific scenarios. Although the safety performance of all-way stop control is comparable to roundabouts (per the HSM), roundabouts provide far greater operational advantages. Roundabouts can be an effective tool for managing speed and creating a transition area that moves traffic from a high-speed to a low-speed environment. However, proper site selection, channelization, and design features are essential for making roundabouts accessible to all users.

Guidance

Roundabouts should be considered as an alternative for intersections on federally-funded highway projects that involve new construction or reconstruction. Roundabouts should also be considered when rehabilitating existing intersections that have been identified as needing major safety or operational improvements. Roundabouts have also proven to be effective at freeway interchange ramp terminals and at rural high-speed intersections.

Found at: http://safety.fhwa.dot.gov/provencountermeasures/fhwa_sa_12_005.htm

Proven Safety Countermeasures in Action

Located along the Sacramento River in Northern California's Great Central Valley is the City of Anderson. On October 16, 2013, the City of Anderson celebrated the opening of a new roundabout. Through a partnership with Caltrans District 2, the city has completed this \$5.2 million project. The new roundabout includes a new northbound off-ramp from Interstate 5 which connects with Deschutes Road and Locust Road. The roundabout was built to reduce travel times, congestion, vehicle emissions and collisions. It also improves access to undeveloped and underdeveloped industrial land, and to existing commercial development.

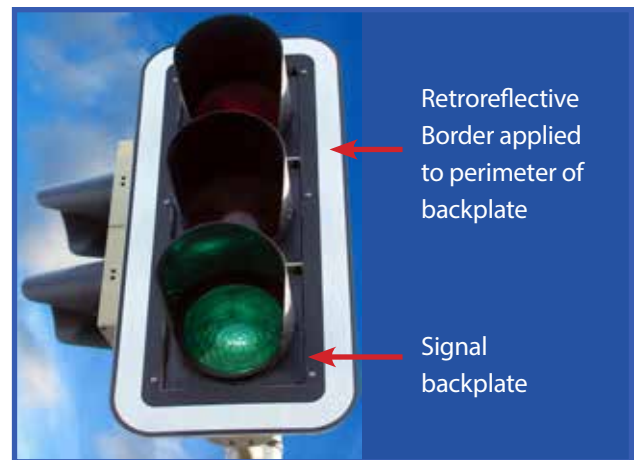


Backplates with Retroreflective Borders

Backplates are added to a traffic signal indication in order to improve the visibility of the illuminated face of the signal by introducing a controlled-contrast background. The improved visibility of a signal head with a backplate is then made more conspicuous by framing the backplate with a retroreflective border. Taken together, a signal head equipped with a backplate with retroreflective border is made more visible and conspicuous in both daytime and nighttime conditions, which is intended to reduce unintentional red-light running crashes.

Background

A project initiated in 1998 by the Insurance Corporation of British Columbia and the Canadian National Committee on Uniform Traffic Control investigated the effectiveness of applying retroreflective tape around the borders of traffic signal backplates. A small number of signalized intersections were treated and followed up with a simple before/after study, which concluded that the enhancement was effective at reducing crashes. A larger number of sites were subsequently treated, and a more robust statistical study was performed.



Since their initial introduction in Canada, several U.S. State highway departments and local road agencies have adopted practices and policies concerning this countermeasure. Additionally, the FHWA has encouraged this treatment as a human factors enhancement of traffic signal visibility and conspicuity for older and color blind drivers. Adding retroreflective borders is also advantageous during periods of power outages when the signals would otherwise be dark. The retroreflective sheeting continues to provide a visible cue for travelers to take note of the dark signal and adjust their actions accordingly. Per the study included in the Crash

Continued on page 5

Modification Factor Clearinghouse, the use of backplates with retroreflective borders may result in a 15 percent reduction in all crashes at urban, signalized intersections.

Guidance

Backplates with retroreflective borders should be considered as part of efforts to systemically improve safety performance at signalized intersections. Adding a retroreflective border to an existing signal backplate can be a very low-cost safety treatment, as the materials are simple strips of retroreflective sheeting. For existing traffic signals that lack even standard backplates, the addition of backplates with a retroreflective border can often be accommodated on existing mast arm and span wire

assemblies, but the structural capacity of the supports must be properly evaluated. The most effective means of implementing this proven safety countermeasure is to adopt it as a standard treatment for signalized intersections across a jurisdiction so that it is consistently included with all new construction and modernization projects, as well as being a worthy retrofit project for existing signals at intersections with red-light running crash histories. It is important to note that the Manual on Uniform Traffic Control Devices (MUTCD) specifically allows this treatment as an option that is discussed in Part 4. In terms of color and size, implementation of backplates and retroreflective borders must be consistent with the latest edition of the MUTCD.

Found at: http://safety.fhwa.dot.gov/provencountermeasures/fhwa_sa_12_007.htm

NOW AVAILABLE in Southern California: Retroreflectometer Loan Program

Under FHWA's Manual of Uniform Traffic Control Devices (MUTCD) retroreflectivity requirements of traffic signs, California's cities, counties, and regional transportation agencies are responsible for maintaining their signs to a minimum level of retroreflectivity and contrast levels.

To help local agencies meet these requirements, Caltrans and Sacramento State are offering a Retroreflectometer Loan Program. Under this program, local agencies will have access to retroreflectometer equipment at no charge for up to two weeks. Local agencies will be required to sign a Loan-Borrow Agreement and pick up and return the equipment at one of two locations:

- Northern California - Sacramento State's College of Continuing Education (CCE)
- Southern California - California State University, San Marcos

If you would like to reserve the equipment, please contact Gabriel Hernandez at (916) 278-4805 or ghernandez@csus.edu.



LTAP Training Calendar for January-June 2014

FEDERAL AID SERIES*

January 13-17, 2014	Crowne Plaza	Union City, CA
February 3-7, 2014	Caltrans District 3 Office	Marysville, CA
March 3-7, 2014	Santa Ynez Valley Marriott	Buellton, CA
April 7-11, 2014	Ayres Hotel	Anaheim, CA
May 5-9, 2014	Mission Inn Hotel & Spa	Riverside, CA
June 2-6, 2014	Double Tree by Hilton	Rohnert Park, CA

RESIDENT ENGINEERS ACADEMY**

January 27-30, 2014	Hampton Inn & Suites	Alameda, CA
February 18-21, 2014	CSUS College of Continuing Education	Sacramento, CA
March 17-20, 2014	Warner Center Marriott	Woodland Hills, CA
April 21-24, 2014	Holiday Inn Fresno-Airport	Fresno, CA
May 19-22, 2014	Ayres Hotel	Anaheim, CA
June 16-19, 2014	Double Tree by Hilton	Rohnert Park, CA

* A registration fee of \$50 will be charged to attend any combination of days within the same week of training. Caltrans will subsidize the remainder of the training.

** Due to limited seating in the Resident Engineers Academy, you must request admittance by sending an email to the Caltrans District Training Coordinator or DLAE in your area at www.dot.ca.gov/hq/LocalPrograms/training/DTCs.htm. Once the priority registration list has been compiled and approved by Caltrans, you will receive an email from our registrar with instructions on how to register online. For more information, visit www.cce.csus.edu/LocalAssistance.



The California LTAP Center

The Local Technical Assistance Program (LTAP) and Tribal Technical Assistance Program (TTAP) are composed of a network of 58 Centers – one in every state, Puerto Rico and regional Centers serving tribal governments. These LTAP/TTAP Centers enable local counties, parishes, townships, cities and towns to improve their roads and bridges by supplying them with a variety of training programs, an information clearinghouse, new and existing technology updates, personalized technical assistance and newsletters.

The California LTAP Center is housed at Sacramento State's College of Continuing Education (CCE) under a partnership with the California Department of Transportation (Caltrans) Division of Local Assistance. Subsidized, practical training for transportation professionals is also provided as part of the Cooperative Training Assistance Program (CTAP).

For more information on the California LTAP Center, visit us at www.cce.csus.edu/localassistance.