

ASSEMBLY TRANSPORTATION COMMITTEE  
Informational Hearing  
Monday, February 10, 2014  
State Capitol Building, Room 4202  
1:30 p.m.

**Highway Work Zone Safety**

**Overview:**

The focus of today's hearing is on highway work zone safety. The ultimate goal of this hearing is improved highway worker safety. Toward this end, we will begin the hearing by developing a better understanding of the respective roles and responsibilities relative to providing work zone safety for highway workers. We will then discuss efforts made to date to improve highway work zone safety and, finally, explore what more can be done.

**Background:**

Highway work zone safety is a life-and-death issue. The Federal Highway Administration (FHWA) reports that, across the United States, nearly 2 people are killed and 101 people are injured every day in highway work zones and an average of 4 people are injured in a work zone every hour. The American Road and Transportation Builders Association reports that roadway construction workers are killed at a rate nearly 3 times as high as other construction workers and 8 times as high as general industry workers.

Last year was a particularly dangerous year on California's state highways. In April, 2 highway workers died in a rock-scaling accident. Five months later, over a 3-day period in September, 15 people, including several California Department of Transportation (Caltrans) workers, a California Highway Patrol (CHP) officer, and 6 community service cleanup crew members were injured in multiple highway accidents throughout the state. Approximately 2 months later, a contract highway worker was killed and another worker was injured when a vehicle veered into a closed lane on Interstate 680 in Northern California.

Highway work zones are a frequent fixture in California. Our state highway system encompasses over 50,000 lane miles statewide. With a population of over 37 million residents, home to several of the most congested regions in the United States, and serving as the eighth largest economy in the world, California's state highway system is heavily used and the need for infrastructure improvements, and, consequently, work zones, is endless. For example, Caltrans

had over 700 major construction projects going last year. Caltrans also worked on highway maintenance and rehabilitation projects that included more than 88,000 miles of striping on state highways and collecting and removing 155,000 cubic yards of litter and debris. As a result, there were likely over 1,000 active work zones on the state highway system at any given time.

### Highway Work Zones:

One of the primary challenges related to highway work zone safety is that highway work zones are not fixed in space or time. Generally, a work zone may be considered a highway location where maintenance, construction, survey, and/or other highway work is taking place. As a result, highway work zones variations include, but are not limited to, duration in time (long-term vs. short-term), time of day, length of work zone, number of lane closures, and project type (construction vs. maintenance).

These variations impact the motorist's driving conditions and result in alterations in driving behavior that can lead to congestion, erratic maneuvers, vehicle collisions, and highway worker injuries or fatalities. In fact, research has found that driving conditions in highway work zones to be more hazardous, require more attention, and pose a greater risk for drivers and workers than normal driving conditions for a number of reasons including:

- Construction activities may introduce additional distractions;
- Road geometric changes and construction activities demand special attention from drivers; and,
- Work zones may increase the variance speed and add dangerous interactions between vehicles.

Several of the lead causes of highway work zone accidents include:

- Speeding;
- Distracted driving; and,
- Driving under the influence.

### Safety Standards and Requirements:

Ensuring the safety for all workers is a critical component of all activities performed on the state highway system. To this end, a number of state departments play an imperative role in setting and issuing safety standards/requirements and providing enforcement within highway work zones.

Illustrating that highway safety remains the department's number one priority, Caltrans administers an estimated 17 directives, guidelines, and manuals that are to be used by both Caltrans employees and contract workers. Two of the key safety documents Caltrans administers are the Caltrans Safety Manual and the California Manual on Uniform Traffic Control Devices (MUTCD). The Safety Manual serves as the official department Injury and Illness Prevention Program (IIPP), which is required by all employers by the State Department of Occupational Safety and Health (see below). Similar to the federal MUTCD drafted by FHWA, the state

MUTCD is a thousand-plus page manual that is imperative in the development and implementation of Caltrans safety policies, each Division's Code of Safe Practices, and contract specifications to enhance the safety of all highway workers. Changes and modifications to the MUTCD and also the Caltrans Highway Design Manual must be submitted and evaluated by the Traffic Control Devices Committee. Table 1 identifies all 17 safety policies and manuals.

**Table 1: Overview of Caltrans Policies and Manuals**

|   |   |
|---|---|
| <b>Policies, Directives, and Guidelines</b>           | <ul style="list-style-type: none"> <li>▪ Safety and Health policy (DP-03)</li> <li>▪ Communication &amp; Entertainment Devices in the Work Zone policy (DP-29)</li> <li>▪ After-Incident Reporting directive (DD-04)</li> <li>▪ Research and Deployment Steering Committee directive (DD-81)</li> <li>▪ Worker Safety on the State Highway System directive (DD-103)</li> <li>▪ Memos to Designers / Design Information Bulletins</li> <li>▪ Quality Guidelines for Temporary Traffic Control Devices and Features</li> </ul> |
| <b>Engineering Manuals</b>                            | <ul style="list-style-type: none"> <li>▪ Highway Design Manual</li> <li>▪ California Manual on Uniform Traffic Control Devices</li> <li>▪ Transportation Management Plan Guidelines</li> </ul>  |
| <b>Safety Manuals for Caltrans workers</b>            | <ul style="list-style-type: none"> <li>▪ Construction Manual</li> <li>▪ Maintenance Manual</li> <li>▪ Construction Code of Safe Practices</li> <li>▪ Maintenance Code of Safe Practices</li> </ul>  |
| <b>Contract Specifications for contracted workers</b> | <ul style="list-style-type: none"> <li>▪ Standard Specifications</li> <li>▪ project-specific specifications</li> <li>▪ Contractors required to maintain injury and illness prevention programs</li> </ul>   |

Caltrans is not the only state department involved in work zone safety. The State Department of Industrial Relations', Division of Occupational Safety and Health (CalOSHA) oversees implementation and enforcement of employer safety requirements (including highway construction) through several safety programs. Every employer is required to develop and implement an IIPP. The IIPP must be specific to each employer's operations, and additionally, specific to the construction industry, employers must also adopt a written Code of Safe Practices.

Furthermore, CHP provides enhanced safety-related traffic enforcement in and around highway work zones. CHP's Construction Zone Enhanced Enforcement Program (COZEEP) assists in the management of traffic passing through the construction zone. COZEEP involves the presence of the CHP in certain construction zones to serve as a reminder to the motoring public to slow down, observe construction zone signs, and use care while driving through the work zone. Similarly, the Maintenance Zone Enforcement Enhancement Program (MAZEEP) provides enforcement for Caltrans road maintenance and rehabilitation projects.

The ultimate responsibility for ensuring safe work zones, however, rests with the employer. As previously mentioned, all employers – including contractors, must develop and implement an IIPP. IIPP's also provide contractors with the opportunity to identify specific workplace hazards and set up an effective action plan accordingly. Furthermore, as identified in Table 1, contractors are subject to Caltrans' "general provisions" and may also be subject to project-specific safety standards and requirements, often found in Caltrans' "special provisions."

### Work Zone Safety Task Group:

In August 2012, approximately 60 people gathered for a Work Zone Safety Task Group (task group) meeting. The attendees were comprised of Caltrans, CHP, FHWA, labor, the construction industry, researchers, and practitioners. The task group held quarterly meetings over a period of approximately 12 months in order to identify, draft, and implement recommendations to improve highway work zone safety. The task group drafted a "work plan" consisting of 12 initiatives with each stakeholder being responsible for the implementation of several recommendations as specified. The majority of the recommendations (see attachment) have either been implemented or will be implemented by June 2014.

### Hearing Structure:

The hearing will begin with Chair Lowenthal presenting opening remarks and providing an overview of the hearing's objectives. Following the Chair's presentation and any introductory remarks by other committee members, the first panel will include representatives from Caltrans, CHP, and CalOSHA. This panel will be discussing the roles and responsibilities of their respective agencies in providing highway work zone safety. The second panel will consist of representatives from the construction and labor industries. Similarly, these representatives will provide testimony on the industry's roles and responsibilities in ensuring their workers are provided a safe working environment. The third panel will encompass all representatives with the discussion focusing on debriefing previous testimony and identifying any potential next steps.