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Chapter 2 Safety and Traffic

Section 1 Safety

2-101 General

Employers must comply with occupational safety and health standards established by federal and state laws. State laws require all employers to provide a safe place of employment, reasonably free from danger to life or health and to maintain a written Injury and Illness Prevention Program (IIPP).

The Caltrans Safety Manual, Chapter 1, is the official Caltrans IIPP. The Caltrans Safety Manual lists safety policies and procedures, provides a centralized reference to operational safety advisories, and standardizes procedures for reporting employee occupational injuries, vehicular accidents, and claims against Caltrans. The construction Code of Safe Practices (COSP), along with the Caltrans Safety Manual, defines standard safety practices for employees involved with inspecting construction activities and operations. The construction COSP is applicable only to Caltrans personnel performing duties in accordance with their job description. The contractor is responsible for means and methods to complete the work, is required to provide for public safety, and to provide safe access to Caltrans employees. Contractors and subcontractors follow the prime contractor’s IIPP and COSP. If a subcontractor’s IIPP and COSP are more stringent, the subcontractor must follow its own IIPP and COSP.

Federal Highway Administration requirements, the Standard Specifications, and contract standard special provisions establish compliance with safety regulations as a contract requirement.

2-102 Duties and Responsibilities

Districts are responsible for safety on Caltrans construction projects.

2-102A District Deputy Director for Construction

The district deputy director for construction should confirm that funding is adequate to maintain a training program to acquaint Caltrans construction personnel with the basics of construction safety. This training should take place a minimum of 4 hours per employee per year and be included in the district’s annual training plan. Safety training includes orientation for employees when they receive their first construction assignment. Employees returning to construction following an absence of 5 years or more should also receive the safety orientation.

Recent California laws have added a responsibility requiring supervisors to ensure that subordinates are implementing all safety requirements and are provided with the tools and the training necessary to protect them from being exposed to any potentially unsafe condition.
2-102B  District Construction Safety Coordinator

The district’s construction safety coordinator (CSC) should act as a technical advisor to construction field personnel. The CSC should also do the following:

- Understand Caltrans safety policies; contract specifications; and the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA), California Code of Regulations, Title 8 (CCR Title 8), “Industrial Relations.” Cal/OSHA is the state enforcing agency for safety regulations.

- Make unannounced site visits to ongoing construction projects on a routine and rotating basis. The CSC should also respond promptly to requests from the resident engineer or other Caltrans staff to visit projects to review project safety concerns.

- Collaborate with the resident engineer about specialized contract work, such as full freeway closures and unusual or complex operations including blasting and confined space operations. The CSC should visit the project periodically to observe the contractor’s overall efforts, answer questions, or look at specific areas when the engineer requests it. The frequency of the visits will depend upon the type and complexity of the work.

- Write a safety audit of each visit to the project site, giving the resident engineer the original safety audit and copies to the construction engineer and the construction manager for review and follow-up.

- Be the district’s primary contact with the Division of Construction safety engineer and the local Cal/OSHA representative, except for emergencies involving imminent hazards. Refer to Section 2-103A, “Imminent Hazards,” of this manual for more information. Maintain regular communication with local Cal/OSHA representatives.

- Administer the district’s construction safety training program, structured to meet district needs as mentioned in Section 2-102A, “District Deputy Director for Construction,” of this manual, including the mandatory heat illness prevention training required annually for all field staff and the mandatory hazard communication training offered every 2 years.

- Serve as advisor for the construction safety portion of the preconstruction conference.

2-102C  Construction Engineer

The construction engineer should review construction projects to verify that the resident engineer is monitoring the contractor’s construction safety program. The construction engineer should review the CSC’s safety audit and confirm that the resident engineer addresses, adequately closes, and documents closure of items mentioned in the safety audit. The construction engineer confirms that all deficiencies in the field are abated, signs the safety audit, and sends it to the construction manager for review and signature.
Construction engineers are responsible for the performance of employees under their supervision. They provide them with the training, personal protective equipment, and tools necessary to protect themselves from hazards. As part of the training, construction engineers should stress that under no circumstances should any Caltrans employees instruct the contractor how to correct a deficiency, either orally or in writing. They advise, correct, and reprimand employees for safety violations and should document their reviews of employee safety programs.

2-102D  Resident Engineer
The resident engineer verifies that the contractor complies with all aspects of the contract, including applicable safety orders found in the CCR Title 8. To accomplish this, do the following:

• Identify unsafe conditions and the specific contract provisions or CCR Title 8 regulations involved.
• Assign a project safety coordinator if needed.
• Involve the district CSC in specialized contract work such as full freeway closures, blasting operations, confined space operations, multi-crane picks of large loads, or other unusual or complex contractor operations. Consult with the CSC to interpret Cal/OSHA regulations.
• Inform the CSC how unsafe conditions identified in the safety audit were resolved. Complete written documentation of the review and abatement results and file it with other project documents.
• In a special safety audit using Form CEM-4601, “Assistant Resident Engineer’s Daily Report,” document the construction safety activities of both the contractor and Caltrans project personnel.
• At least weekly, complete a project safety audit and file it in Category 6, “Safety,” of the project records. Use Form CEM-0606, “Construction Safety Checklists,” to support the project safety audit.
• Using normal contract administration procedures, verify that the contractor complies with Caltrans contract requirements and CCR Title 8.
• Develop a project-specific COSP document for Caltrans employees addressing all operations in the project for each contract and all contractor operations. Make it accessible to workers in the field, and confirm all project personnel have read and signed it. Keep the COSP in a conspicuous location at the job site office. Refer to Section 2-106A, “Caltrans Division of Construction Code of Safe Practices,” of this manual for additional guidance on developing a COSP. A baseline COSP document is on the Division of Construction website:

https://dot.ca.gov/programs/construction/safety-traffic
• Discuss project safety at the preconstruction conferences and document safety discussions in the project files throughout the duration of the project. Cover at least the following items:

1. Address new Cal/OSHA regulations that might be applicable to the contract.
2. Discuss requirements for contractors to make available the safety data sheets (SDS) for chemicals or construction materials used on the construction site so that Caltrans employees can determine their potential risk from contractor use of products requiring SDS and verify that Caltrans employees have safe access. The SDS may require provisions for eyewash stations, respirators, and other devices.
3. Discuss other safety items that may pertain to the contract, such as blasting operations, work in confined spaces, personal protective equipment, backup alarms, traffic control, shoring and tunneling, and access to elevated work.
4. Discuss known public health issues and the contractor’s obligation to contact the local public health service department pursuant to Section 7-1.02K(6), “Occupational Safety and Health Standards,” of the Standard Specifications.

• Before starting work, confirm that contractors do the following:

1. Submit an IIPP and the project Code of Safe Practices to the resident engineer, as required by the California Code of Regulations, Title 8, Section 1509 (8 CCR 1509), “Injury and Illness Prevention Program.”
2. Submit permits required before starting certain work, such as: trenches or excavations 5 feet or deeper in which any person is required to descend; demolition over 36 feet in height; falsework erection and scaffolding in excess of 36 feet in height; confined spaces; or mining and tunneling.

• During the course of work, verify that contractors do the following:

1. Report to the resident engineer any major incidents.
2. Notify the resident engineer immediately if Cal/OSHA arrives on the project for a site visit. As the site owner, Caltrans staff needs to participate in all Cal/OSHA site visits.

2-102E Project Safety Coordinator

The resident engineer may delegate safety responsibilities to an assistant resident engineer who will act as the project safety coordinator. This delegated work will usually be in addition to other assigned duties, but may be full time on large contracts. If there is significant structures work, the resident engineer may need to coordinate with the structures representative to have a structures project safety coordinator assigned for the structures specialty work.
The project safety coordinator acts as a safety advisor to Caltrans project personnel. The project safety coordinator should monitor and document contractor compliance with safety requirements, keep the resident engineer informed, and do the following:

- Monitor ongoing operations on the job site daily.
- Inform the contractor, verbally and in writing, of any operation or activity that does not comply with Caltrans contract requirements or Cal/OSHA regulations. Provide reference to the Standard Specifications or the specific regulation violated. Use Form CEM-0606, “Construction Safety Checklists,” to find the appropriate reference. These checklists are on the Division of Construction website:
  https://dot.ca.gov/programs/construction/forms
- Prepare a weekly project safety audit and file it in Category 6, “Safety,” of the project records.

2-102F Project Staff

Caltrans does not intend that the resident engineer and the project safety coordinator do all monitoring of the contractor’s construction safety activities. All construction personnel should consider the safety of the operations in conjunction with their normal inspections and to confirm that they have safe access to perform their duties. Inspectors—closest to and most familiar with the field operations—should do the following:

- Be familiar with construction zone traffic management, Cal/OSHA regulations, Caltrans safety policies, and specifications. Use Form CEM-0606 to monitor the contractor’s compliance with safety regulations and specifications.
- Routinely monitor, document, and discuss contract safety requirements with the contractor.
- Request assistance from the project safety coordinator or the district CSC if uncertain about a regulation’s requirements.

2-103 Managing Safety Hazards

In carrying out Caltrans’ responsibilities for verifying safety compliance as a contract requirement, use the following guidelines.

2-103A Imminent Hazards

Imminent hazards are work conditions that, if not corrected, could result in an incident causing severe or permanently disabling injury or death. When an imminent hazard is found or the contractor permits repeated occurrences of a hazardous condition, the Caltrans representative should take the following steps:

- Advise the contractor verbally of the condition and the need for correction.
- Remove all Caltrans employees from the hazardous exposure.
• If the contractor complies, document the incident in the project’s safety audit with appropriate references in Form CEM-4501, “Resident Engineer’s Daily Report.” Document the unsafe work condition, discussions with the contractor, and how and when the unsafe condition was corrected.

• If the contractor does not comply, temporarily suspend the affected operation. Confirm the suspension order in writing to the contractor.

• Document the incident and the action taken in the resident engineer’s daily report. Document the unsafe work condition, discussions with the contractor, and how and when the unsafe condition was corrected.

Whenever it is necessary to suspend a contractor’s operation, notify the CSC, resident engineer, and the construction engineer of the hazardous condition and the actions taken. Verify that all contractual remedies to address the contractor’s safety issues have been exhausted and documentation fully prepared and filed before considering notifying Cal/OSHA. Involve the CSC as a checker in the process to verify nothing was overlooked. Get permission from the construction manager before calling Cal/OSHA. These actions will limit potential multi-employer liability against Caltrans. Notify the Division of Construction safety engineer about the actions taken. Place safety audits, including all details leading up to the suspension and copies of orders, in Category 6, “Safety,” of the contract files.

2-103B Serious Hazards

Serious hazards are work conditions that, if not corrected, could result in a disabling injury and possibly death or develop into an imminent hazard. When a serious hazard is found to exist, the Caltrans representative should take the following steps:

• Advise the contractor orally of the condition and the need for timely correction. If appropriate, set a compliance deadline.

• Remove all Caltrans and consultant employees from the hazardous exposure.

• If the contractor fails to provide timely correction, consider ordering a temporary suspension of the affected operation. Confirm the suspension order in writing to the contractor.

• Document the incident in the project’s safety audit with appropriate references in the resident engineer’s daily report. Document the unsafe work condition, discussions with the contractor, and how and when the unsafe condition was corrected.

2-103C Minor or Nonserious Conditions

Minor or nonserious conditions are ones that could result in minor injuries or might be classified as minor threats to health. When a nonserious or minor condition is found to exist, the Caltrans representative should take the following steps:

• Advise the contractor orally of the condition and the need for correction.

• Remove all Caltrans and consultant employees from the hazardous exposure.
• Document the incident in the project’s safety audit. Document the unsafe work condition, discussions with the contractor, and how and when the unsafe condition was corrected.

• If the contractor fails to correct the condition or permits a repeated occurrence, notify the resident engineer and CSC.

2-104 Division of Occupational Safety and Health

This section provides information about the organization of Department of Industrial Relations, Cal/OSHA, its enforcement powers, and its inspections.

2-104A Authority and Responsibility

Caltrans enforces contract requirements, not safety orders. The law requires Cal/OSHA to enforce safety orders and promote safe workplaces and practices. Cal/OSHA achieves this function through three separate agencies—a rule-making function, an enforcement function, and an independent appeals board, described as follows:

• The Occupational Safety and Health Standards Board (Standards Board) adopts, amends, and repeals safety orders. Both state and federal law require that the safety orders be no less restrictive than federal Occupational Safety and Health safety orders.

• Cal/OSHA has a number of branches responsible for administering the safety orders as adopted by the Standards Board.

• Citations issued by Cal/OSHA for violations may be appealed to the Occupational Safety and Health Appeals Board for a hearing and, in rare instances, appealed to a Superior Court.

To allow Cal/OSHA to accomplish its mission, the California Labor Code gives Cal/OSHA the authority to enter and inspect any place of employment to ensure that the contractor is observing safe conditions and practices. If necessary, this right of entry can be enforced with a warrant.

2-104B Citations and Civil Penalties

If Cal/OSHA uncovers and documents unsafe conditions or work practices, it may issue citations. The severity of the violations cited determines the civil penalties, and the penalty amount is based on procedures established in the regulations. Public agencies are not exempt from these penalties.

Violations—classified as regulatory, general, serious, willful, or repeat—result in monetary penalties. Failing to abate hazards or making false statements also mandates penalties.

Under the multi-employer liability clause, Cal/OSHA has authority to cite all employers who are observed as having employees exposed to a hazard at a multi-employer worksite. Cal/OSHA identifies an exposing, creating, controlling, or correcting employer (defined in next subsection) for each unsafe condition found. It
bases employers’ degree of responsibility on their awareness of the condition, the foreseeability of the condition, and reasonable steps they take to protect employees.

In addition to receiving civil penalties, both Caltrans and contractor managers can be held criminally responsible. To be held criminally responsible, the manager must knowingly or negligently allow a serious violation, repeatedly violate safety orders, or directly refuse to correct a known unsafe condition. Criminal penalties can be as severe as 6 months to 1 year in jail and may include fines.

Occasionally, Cal/OSHA will issue an informational memorandum when it encounters a condition or potential condition to which no employee has been exposed, but if an employee were to be exposed, a safety violation would exist. Cal/OSHA always classifies a violation of an informational memorandum as a willful violation.

2-104C  Classes of Employers
California recognizes four different types of employers, any of which can be cited by Cal/OSHA for safety violations. The classification can result in more than one employer cited for the same violation. The California Labor Code identifies these employer categories:

- **Exposing employer**—the employer whose employees were exposed to the hazard.
- **Creating employer**—the employer who actually created the hazard.
- **Controlling employer**—the employer who was responsible by contract or through actual practice for the safety and health conditions on the worksite, the one who had the authority for ensuring the hazardous condition was corrected.
- **Correcting employer**—the employer responsible for correcting the hazard.

On a standard contract put out to bid with plans and specifications, the prime contractor is the controlling employer in accordance with Section 7-1.02K(6)(a), “General,” of the Standard Specifications.

Caltrans may be the exposing employer if Cal/OSHA observes that Caltrans employees were exposed to a hazard and the employees failed to remove themselves from exposure to the hazard or ask the contractor for correction to provide safe access to the work. Taking a proactive role in addressing and documenting safety and communicating it to the contractor would help create a common understanding, emphasize Caltrans' priority, and help in protecting the state from being cited under any of the above categories.

2-104D  Procedures During Division of Occupational Safety and Health Inspections
This section describes what takes place during a Cal/OSHA inspection and what resident engineers and their assistants should do while it is carried out.

2-104D (1)  Elements of a Cal/OSHA Inspection
Every Cal/OSHA inspection has three elements: the opening conference, the walk-through inspection, and the closing conference.
Opening conference—The Cal/OSHA inspector requests the highest level of onsite management, makes introductions, and states the reason and purpose of the inspection. The inspector asks questions about the employer, such as the size of the organization, number of employees on site, addresses, and phone numbers. The inspector may also ask about the employer’s IIPP, emergency contact numbers, and the addresses of the medical facilities closest to the job site. The inspector asks the employer for permission to make a walk-through site inspection and invites the employer to join the inspection.

Walk-through inspection—The inspector will tour the site observing the work in progress, condition of the site, and work practices followed. The inspector may interview employees about their training, work procedures, and protective equipment. During the inspection, the inspector may take photographs and measurements. If it is a post-accident investigation, the inspector identifies and interviews witnesses and may request contact information such as name, address, and phone number. The inspector notes violations observed, findings that will probably result in a citation during the closing conference.

Closing conference—After completing the walk-through inspection, the inspector meets with managers, supervisors, and employee representatives to discuss the violations and proposed citations. The inspector bases citations on the observations and on manager, supervisor, and employee statements. The inspector may hold this conference immediately after the walk-through inspection or defer it. Although the conference is usually conducted in person, the inspector may conduct it on the phone.

2-104D (2) Participation in the Inspection

As a matter of policy, Caltrans cooperates and participates with Cal/OSHA. Caltrans employees are not required to make any statement that may be harmful to their interests or those of Caltrans. If uncomfortable with answering any questions, politely decline. In the event of an inspection, do the following:

Opening conference—Notify the CSC that Cal/OSHA is planning to inspect. If the CSC is not available, notify the district safety officer and construction engineer of the pending inspection. If the CSC or safety officer can arrive in a reasonable length of time, request a delay of the walk-through inspection until their arrival. The resident engineer or representative should participate in the inspection, and the construction engineer should also participate.

Walk-through inspection—Participate in and document the inspection. Record what areas were inspected, who was interviewed, and what violations the Cal/OSHA inspector mentioned. For Caltrans records, take the same photographs and make the same measurements as the Cal/OSHA inspector.

Closing conference—Participate in the closing conference. The construction engineer or another representative should also participate. If the district safety officer or CSC is not present, insist that the closing conference be delayed until one of them can attend. If the inspector proposes citations, remain open and noncommittal.
2-104D (3) Procedures if Citations are Received

If you receive citations by personal delivery or mail, take the following actions:

- Notify the district safety officer, CSC, and construction engineer that a citation has been served.
- Fax a copy of the citation to the Office of Health and Safety in the Division of Safety and Management Services at (916) 227-2639 or email a copy of the citation to: Safety.Suggestions.HQ@dot.ca.gov
- For citations related to structure work, confirm structure representatives notify Structure Construction.

Work with the district safety officer, CSC, and the Office of Health and Safety in the Division of Safety and Management Services to resolve citations. If necessary, arrange for legal support.

2-105 Emergency Contracts

Emergency contracts (refer to Section 5-501, “General,” of this manual) present additional safety concerns for Caltrans. Cal/OSHA could consider Caltrans as the controlling employer for this type of work because Caltrans is defining the work and agreeing to the means and methods to complete the work.

Section 5-506, “Initial Stages of the Project,” of this manual discusses documenting all discussions regarding safety.

Section 5-508, “Prosecution of the Work,” of this manual discusses prosecution of the work and requires verification that the proposed means and methods are safe and effective.

2-106 Caltrans-Specific Safe Practices

Every employee has the responsibility to be informed of and follow the specific policies and practices discussed in the Caltrans Safety Manual.

2-106A Caltrans Division of Construction Code of Safe Practices

California Code of Regulations, Title 8, Section 1509, “Injury and Illness Prevention Program,” requires that every employer adopt a written COSP. Verify that one is prepared for every project. Verify that it includes project-specific items. If unique contract safety items are not addressed in the COSP, consult with the CSC to have additional COSPs prepared for the project and included in the project file. If the contractor has developed a project-specific COSP item that they request Caltrans amend into the Caltrans COSP, consult with the CSC. The project file should contain documentation that all employees have read and understood the COSP.

2-106B Tailgate Safety Meetings

Cal/OSHA safety orders require tailgate or toolbox safety meetings. As stated in 8 CCR 1509, the meetings must be held at least once every 10 working days.
Construction engineers or resident engineers should conduct a tailgate safety meeting with all employees who are new to the project to discuss the project and potential safety issues that might arise because of contractor operations.

Tailgate safety meetings should be project-specific. Topics to discuss might include: upcoming work; specialty work, such as crane critical picks and confined space entry; review of incidents; or the most recent project safety audit.

Under Cal/OSHA safety orders, contractors and subcontractors are required to hold their own tailgate safety meetings for the benefit of their own employees.


2-106C High-Visibility Garment

The following are required for all Caltrans staff during field operations:

- For daytime use, a minimum of a Class 2 garment is required. Its attached label must identify the garment as Class 2 and should clearly state that it is an ANSI 107-2010 garment (ANSI 107-2004 garments are also compliant in this and requirements below).

- For nighttime use, a Class 3 garment is required. A Class 3 garment may be used in the daytime. The following options meet Class 3 requirements:
  1. A Class 3 “sleeved” vest with the ANSI 107-2010 Class 3 label.
  2. A newer Caltrans rain jacket with an attached ANSI 107-2010 Class 3 label.
  3. A Class 3-equivalent garment—a Class 2 vest with the ANSI 107-2010 label worn with Class E pants.

2-107 Safety Precautions for the Public in Construction Areas

Construction sites receive many visitors, including nonconstruction staff from Caltrans; personnel from federal, state, and local agencies such as the Department of Water Resources, Department of Fish and Wildlife, and Air Quality Management District; property or business owners; and members from the media. All visitors not associated with the contractor should follow Caltrans personal protection equipment requirements and construction Code of Safe Practices requirements unless their agency’s is more stringent. Resident engineers and assistant resident engineers should monitor for potential hazards to the general public and work with the contractor to take reasonable precautions to exclude the public from the construction area. Provide fencing, if practical, and “no trespassing” signs at sites that have potential dangers.

2-108 Hazardous Materials

If unanticipated hazardous materials are encountered on the project, notify the district hazardous waste coordinator who will advise you and may assist in the
disposal procedures. The coordinator may also suggest extra safety measures to take to protect the public and workers.

Refer to Chapter 7, “Environmental Stewardship,” of this manual for additional guidelines for dealing with hazardous waste.