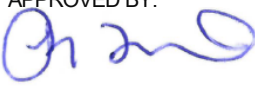


<b>MANUAL CHANGE TRANSMITTAL</b>		NO. <b>20-5</b>
TITLE: Department of Transportation <i>Construction Manual</i>	APPROVED BY:  Rachel Falsetti, Chief Division of Construction	DATE ISSUED: <b>10-28-2020</b>
SUBJECT AREA Sections 2-1, 3-5, 4-11 and 5-3	ISSUING UNIT Division of Construction	
SUPERSEDES Sections 2-1 of May 2020, 3-5, and 5-3 of September 2019, and 4-11 of July 2019	DISTRIBUTION All Requested Manual Holders	

The purpose of this manual change transmittal is to announce updates and corrections to the Caltrans *Construction Manual*. The following section or sections have been updated to reflect new policy and supersede the corresponding section of the *Construction Manual* as previously published. Updated sections are available at <https://dot.ca.gov/programs/construction/construction-manual> and are indicated by the date listed in the right-hand column on that page. Changes are identified by change lines in the margins of this document.

**Section 2-1, “Safety”**

Specifies that each visit to inspect safety issues on projects should be documented with Form CEM-0606, “Construction Safety Checklists,” and either Form CEM-4501, “Resident Engineer’s Daily Report Asst. Resident Engineer’s Daily Report,” or Form CEM-4601, “Assistant Resident Engineer’s Daily Report.” The same forms must be used for the weekly safety reports. Section 2-106D, “High Visibility Garment,” specifies class and type of safety garment required for all Caltrans staff during field operations. In addition, new Section 2-109, “Project Safety Reviews”, provides guidance on improving safety for construction projects by using project safety reviews between Caltrans and industry partners. The new section adds information on project safety meetings before the start of construction work with the contractor’s designated project safety representative. It describes every-other-week joint safety reviews and information about new Section 5-1.28, “Project Safety Reviews,” of the *Standard Specifications*. How to conduct post-project safety meetings is also discussed in this section.

**Section 3-5, “Control of Work”**

Updates Section 3-522 to agree with Construction dispute resolution Forms CEM-6202, CEM-6204, CEM-6206, and CEM-6207 that were updated in February 2019, to transfer the responsibility for submitting these forms from the resident engineer to the dispute resolution board chair or dispute resolution advisor. Guidance regarding specific deadlines for submitting forms was also added.

**Section 4-11, “Welding”**

Section 4-1104, “Level of Inspection,” updates inspection from intermittent to match the specifications for the work.

**Section 5-3, “Change Orders”**

Delineates change order delegation with and without an approved change order quality control plan. Adds new category codes to facilitate tracking of change orders funded by FHWA pre-approved supplemental work items, including links to the updated change order code generator.

### **Section 1 Safety**

#### **2-101 General**

#### **2-102 Duties and Responsibilities**

- 2-102A District Deputy Director for Construction
- 2-102B District Construction Safety Coordinator
- 2-102C Construction Engineer
- 2-102D Resident Engineer
- 2-102E Project Safety Coordinator
- 2-102F Project Staff

#### **2-103 Managing Safety Hazards**

- 2-103A Imminent Hazards
- 2-103B Serious Hazards
- 2-103C Minor or Nonserious Conditions
- 2-103D Corrective Actions for Safety Hazards

#### **2-104 Division of Occupational Safety and Health**

- 2-104A Authority and Responsibility
- 2-104B Citations and Civil Penalties
- 2-104C Classes of Employers
- 2-104D Procedures During Division of Occupational Safety and Health Inspections
  - 2-104D (1) Elements of a Cal/OSHA Inspection
  - 2-104D (2) Participation in the Inspection
  - 2-104D (3) Procedures if Citations are Received

#### **2-105 Emergency Contracts**

#### **2-106 Caltrans-Specific Safe Practices**

- 2-106A Caltrans Division of Construction Code of Safe Practices
- 2-106B Tailgate Safety Meetings
- 2-106C Safety Stand-down
  - 2-106C (1) Introduction and Purpose
  - 2-106C (2) Reporting Level
    - 2-106C (2a) Project
    - 2-106C (2b) District or Region
    - 2-106C (2c) Statewide
  - 2-106C (3) Contractor's Participation, Work Suspension, and Participation from Law Enforcement
  - 2-106C (4) Documentation
- 2-106D High-Visibility Garment

#### **2-107 Safety Precautions for the Public in Construction Areas**

#### **2-108 Hazardous Materials**

#### **2-109 Project Safety Reviews**

- 2-109A Project Safety Meeting Before Starting Work
- 2-109B Every-other-week Joint Safety Review
- 2-109C Post-Project Safety Meeting

### 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 and Health Manual*, Chapter 1, is the official Caltrans IIPP and can be found at:

<https://hs.onramp.dot.ca.gov/employee-safety-manual-online>

The *Caltrans Safety and Health Manual (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, and 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 must be 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 make sure 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) acts as a technical advisor to construction field personnel. The CSC is responsible for the following:

- Understanding 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.
- Making 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.
- Collaborating 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.
- Writing a safety review report using Form CEM-0606, "Construction Safety Checklists," and either Form CEM-4501, "Resident Engineer's Daily Report Asst. Resident Engineer's Daily Report," or Form CEM-4601, "Assistant Resident Engineer's Daily Report," of each visit to the project site, giving the resident engineer the original safety review report and copies to the construction engineer and the construction manager for review and follow-up.
- Being 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.
- Administering 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.
- Serving 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 review report and confirm that the resident engineer addresses, adequately closes, and documents closure of items mentioned in the safety review report

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.

Construction engineers advise, correct, and reprimand employees for safety violations and should document their reviews of employee safety programs as required by the *Safety Manual*.

### 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 review report were resolved. Complete written documentation of the review and abatement results and file with other project documents.
- Complete a project safety review report every week and file it in Category 6, "Safety," of the project records. Use Form CEM-0606, "Construction Safety Checklists," and either Form CEM-4501, "Resident Engineer's Daily Report Asst. Resident Engineer's Daily Report," or Form CEM-4601, "Assistant Resident Engineer's Daily Report," to support the project safety review report.
- Using 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. Caltrans employees must be able to assess their potential risk from contractor use of products requiring SDS. Verify that Caltrans employees have safe access to SDS, which may require provisions for eyewash stations, respirators, and other devices.
  3. Discuss other safety inspection items that may pertain to the contract, such as blasting operations, work in confined spaces, use of personal protective equipment, or backup alarms, traffic control, shoring and tunneling, and access to elevated work.
  4. Discuss known public health conditions and the contractor's obligation to contact the local public health department pursuant to Section 7-1.02K(6), "Occupational Safety and Health Standards," of the *Standard Specifications*.
- Before work is started, 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: trenching or excavating 5 feet or deeper in which any person is required to descend; demolishing more than 36 feet in height; erecting falsework and scaffolding in excess of 36 feet in height; working in confined spaces; or mining and tunneling.
    3. Notify the regional Underground Service Alert. Refer to Section 4-1902A, "Roadway Excavation," of this manual.
  - During the course of work, verify that contractors do the following:
    1. Report to the resident engineer any disabling or fatal accidents.
    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, orally 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 review report using Form CEM-0606 and either Form CEM-4501, “Resident Engineer’s Daily Report Asst. Resident Engineer’s Daily Report,” or Form CEM-4601, “Assistant Resident Engineer’s Daily Report,” 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 of the 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 accident 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 orally 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 review report with appropriate references in Form CEM-0606, “Construction Safety

Checklists,” and either Form CEM-4501 “Resident Engineer’s Daily Report Asst. Resident Engineer’s Daily Report,” or Form CEM-4601, “Assistant 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.

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 is 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 the safety review report, including all details leading 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 review report 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 review. 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.

### 2-103D Corrective Actions for Safety Hazards

Imminent and serious hazards may require immediate corrective actions; these actions must be taken immediately to correct unsafe work conditions or deficiencies. If the corrective actions cannot be taken immediately, discuss with the contractor how the unsafe condition will be corrected and a timeline for taking action; corrective actions are still to be completed as soon as possible. To confirm the corrective actions were taken, verify with the contractor's project safety representative how and when the unsafe condition was corrected on the next scheduled joint safety review discussed in Section 2-109B, "Every-other-week Joint Safety Review," (within a reasonable time frame from the previous joint safety review). A follow-up review may be needed to confirm these corrections.

## **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 verify 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 as defined in Section 2-104C, “Classes of Employers,” in this manual, 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 may include 6 months to 1 year in jail and 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 treats all informational memorandums as willful violations.

#### 2-104C Classes of Employers

California recognizes four types of employers, any of which may be cited by Cal/OSHA for safety violations. The classification may 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 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 verifying that 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. 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, employee addresses and their 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 and the construction engineer that Cal/OSHA is planning to inspect. If the CSC is not available, notify the district safety officer 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](mailto:Safety.Suggestions.HQ@dot.ca.gov)

- For citations related to structure work, confirm that structure representatives notify Structure Construction in the Division of Engineering Services.

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, discussed in 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 *Safety Manual*.

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

California Code of Regulations, Title 8, Section 1509, (8 CCR 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 review report.

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

Section 02.05, “Tailgate Safety Meetings for Field Personnel,” of the *Safety Manual* contains instructions for tailgate meetings. Follow that section and district policy.

## 2-106C Safety Stand-down

This section defines requirements for implementing a safety stand-down based on a significant recent safety incident. The safety stand-down will include Caltrans and optional participation by contractor personnel at job sites to improve the safety culture and awareness. The severity of a safety incident will establish the criteria for determining which jobs require the stand-down and who participates. The stand-down may be at the affected job site or extend to all going jobs throughout the district, region, or state. Additionally, safety stand-downs encourage field personnel to stop work, focus on safe work practices, and to reaffirm their commitment for incorporating safe work practices into daily work habits and operations.

### *2-106C (1) Introduction and Purpose*

Caltrans is committed to protecting the safety and health of its employees and improving productivity through prevention of illness and injury. A safety stand-down is implemented as part of improving safety communication under the Caltrans’ Injury and Illness Prevention Program (IIPP). The stand-down’s goal is to raise awareness among Caltrans construction staff, contractors, and contractor employees on accident prevention and working to eliminate injuries and fatalities in construction

work zones. The term “safety stand-down” is used in construction to describe the temporary work stoppage to inform job-site workers of recent safety issues that have resulted in an injury, fatality, or a hazard at a construction job site.

The safety stand-down must be conducted after an incident results in a serious injury or fatality involving the public, a contractor, a consultant, or Caltrans staff. Unlike the required tailgate safety meeting, which is held at least every 10 working days, the safety stand-down must be held that day or the next work shift, to prevent a similar subsequent incident from posing a potential hazard to the workers or the traveling public.

The triggering incident must be reported upward through the management chain of command for determination and implementation of a safety stand-down in the district, region or statewide. When a better understanding of root cause of the incident is known, a follow up discussion or additional stand-down may be required to inform personnel of needed operational changes.

### *2-106C (2) Reporting Level*

Depending on the incident type, a safety stand-down is to be conducted and reported at the following levels:

#### *2-106C (2a) Project*

At the project level, safety stand-down is conducted after the occurrence of non-fatal recorded safety incident on the project. A non-fatal recorded safety incident includes serious injury involving Caltrans staff, contractor’s employee, consultant employee, member of the law enforcement or member of the public in the project work zone that required any in-patient hospitalization, even if to be discussed during the next shift or when understanding of the root cause is known at the project level. As described in Chapter 2, “Safety Meetings,” of the *Safety Manual*, “close-call incidents are incidents that did not result in contact, injury, or damage.” Close calls are reported via the mobile app for the Major Construction Incident Notification form using a smart phone or tablet and then tracked in a database where information is collected and stored.

Direction Level: The resident engineer in responsible charge has the authority to require project staff to conduct the safety stand-down and decide the appropriate next course of action at the project level.

#### *2-106C (2b) District or Region*

A district or region wide safety stand-down is required after a fatality involving a member of the public in a work zone.

Direction Level: The deputy district director of construction has the authority to direct project staff within the district or region to conduct a safety stand-down and decide the appropriate next course of action at the district or region level.



## 2-106C (2c) Statewide

A statewide safety stand-down is triggered by the following:

- Work zone fatality involving contractor and consultant, or both
- Work zone fatality involving law enforcement
- Work zone fatality involving Caltrans employees

Direction Level: The Division of Construction chief has the authority to direct all Construction staff throughout the state to conduct a safety stand-down and to decide the appropriate next course of action at the statewide level.

### *2-106C (3) Contractor's Participation, Work Suspension, and Participation from Law Enforcement*

Depending on the incident type, each safety stand-down has different participants and duration. Participation by the contractor staff is voluntary. The suspension of time to participate is a mutually agreed suspension of time as defined in "working day" definition 2.2.3 in Section 1-1.07B, "Glossary," of the *Standard Specifications*.

Law enforcement partners, such as California Highway Patrol, must be invited to participate in the safety stand-down when triggering incident involves member of the law enforcement.

### *2-106C (4) Documentation*

Use Caltrans Form PM-S-0110, "Safety Meeting Report," and refer to Section 02.07, "How to Document Safety Meetings" of the *Safety Manual*, to document the safety stand-down as a safety meeting. Find the *Caltrans Safety Manual* at:

<https://hs.onramp.dot.ca.gov/employee-safety-manual-online>

## 2-106D 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 American National Standard Institute (ANSI)/International Safety Equipment Association (ISEA) 107- 2004, or equivalent subsequent revisions.
- During hours of darkness, 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/ISEA 107-2004, or equivalent subsequent revisions, Class 3 label.
  2. A Caltrans rain jacket with an attached ANSI/ISEA 107-2004, or equivalent subsequent revisions, Class 3 label.
  3. A Class 3-equivalent garment—a Class 2 vest with the ANSI/ISEA 107-2004, or equivalent subsequent revisions, 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 on hazardous waste.

## **2-109 Project Safety Reviews**

Caltrans is committed to working with the Construction Industry to improve safety for construction projects by performing safety reviews. The Caltrans designated project safety coordinator is to conduct weekly safety reviews throughout the duration of the project by using Form CEM-0606, "Construction Safety Checklists." In addition, Caltrans safety staff (district construction safety coordinator, resident engineer, or designated project safety coordinator) is to meet every other week with the contractor's assigned project safety representative to perform a joint safety review of the project. This review may consist of jointly touring the job site to inspect temporary traffic control systems and other worker safety protection devices and protocols. It is recommended to use Form CEM-0606 to perform joint safety reviews and to aid in the inspection of safety requirements for the ongoing construction operations.

### **2-109A Project Safety Meeting Before Starting Work**

Before the start of construction, a preconstruction conference with the contractor must be held as described in Section 5-003, "Preconstruction Conference with the Contractor," of the *Construction Manual*. In addition to this meeting, a separate kick-off project safety meeting must be held with the contractor's designated project safety representative before starting work in accordance with Section 5-1.28, "Project Safety Reviews," of the *Standard Specifications*, to perform the following:

- Discuss project operations and safety requirements.

- Identify project safety personnel for Caltrans (district construction safety coordinator, resident engineer, or designated project safety coordinator) and contractor safety personnel (designated project safety representative), their contact information, and certifications (such as traffic control technician, flagger).
- Review requirements for calling in lane closure information and discuss when the Traffic Management Center is to be notified for emergency responses as mentioned in Section 2-303, “Reporting Procedures.”
- Determine schedule for all planned joint safety reviews.
- Discuss Construction Zone Enhanced Enforcement Program (COZEEP) plan and contact information if it is proposed for the project.
- Review the Positive Work Zone Protection plan if included in the project.

To document the safety kick-off meeting, use Form CEM-0604, “Joint Safety Reviews,” and file a copy of CEM-0604 in Category 6, “Safety,” of the project binder.

#### 2-109B Every-other-week Joint Safety Review

In accordance with Section 5-1.28, “Project Safety Reviews,” of the *Standard Specifications*, an every-other-week joint safety review is to be performed by the resident engineer (or designated project safety coordinator, when applicable) with the contractor’s project safety representative. The structure representative or designee is to attend when structure work is active. The review is documented by using Form CEM-0606, “Construction Safety Checklists,” or any other mutually agreed-upon form, such as a job hazard analysis from the contractor. Complete the checklists for the relevant safety topics to identify potential construction zone hazards at the job site. Additional safety items can be added to the form as needed to include the construction operations occurring at the job site. In the weekly project safety meeting, share the results of the review and discuss corrective actions proposed by the contractor along with discussing safety for future construction and traffic handling operations. File a copy of the form used for every-other-week joint safety review in Category 6, “Safety” of the project binder.

#### 2-109C Post-Project Safety Meeting

After project completion, in accordance with Section 5-1.28, “Project Safety Reviews”, of the *Standard Specifications*, the resident engineer is to schedule a post-project safety meeting with the contractor to determine how effectively the joint safety reviews were run, to review safety issues that arose during the project, and to discuss lessons learned for possible future safety enhancements. The post-project safety meeting is to be documented on Form CEM-0604, “Joint Safety Reviews,” and filed in Category 6, “Safety” of the project binder. Lessons learned should also be shared with the project development team.

### Section 5 Control of Work

#### 3-501 General

#### 3-502 Engineer's Authority

#### 3-503 Protests

#### 3-504 Partnering

#### 3-505 Order of Work

#### 3-506 Assignment

#### 3-507 Subcontracting

3-507A Amount of Work Subcontracted

3-507B Calculating the Amount of Work Subcontracted

3-507C The Subletting and Subcontracting Fair Practices Act

3-507C (1) Subcontracting in the Bidding Process

3-507C (2) Substitution Process

3-507C (3) Hearing Process for Substitutions

3-507C (3a) Before the Substitution Hearing

3-507C (3b) During the Substitution Hearing

3-507C (3c) After the Substitution Hearing

3-507C (4) Violations of the Subletting and Subcontracting Fair Practices Act

3-507C (5) Hearing Process for Substitution Violations

3-507C (5a) Before the Violation Hearing

3-507C (5b) During the Violation Hearing

3-507C (5c) After the Violation Hearing

3-507D Procedure for Approval or Acknowledgment of Subcontractors

#### 3-508 Representative

#### 3-509 Character of Workers

#### 3-510 Coordination with Other Entities

3-510A Permits, Licenses, Agreements, and Certifications

3-510B Contractor-Property Owner Agreement

Example 3-5.1. Agreement Between a Contractor Working on State Facilities and a Real Property Owner for Acquiring Construction-Related Material From Property Owner's Property (1 of 2)

Example 3-5.1. Agreement Between a Contractor Working on State Facilities and a Real Property Owner for Acquiring Construction-Related Material From Property Owner's Property (2 of 2)

Example 3-5.2. Agreement Between a Contractor Working on State Facilities and a Real Property Owner for Disposing of Construction-Related Material on Property Owner's Property (1 of 2)

Example 3-5.2. Agreement Between a Contractor Working on State Facilities and a Real Property Owner for Disposing of Construction-Related Material on Property Owner's Property (2 of 2)

Example 3-5.3. Sample Approval to Acquire Material From Property Owner's Property Letter

Example 3-5.4. Sample Approval for Disposal of Material Outside the Highway Right-of-Way Letter

**3-511 Submittals**

**3-512 Construction Surveys**

3-512A Before Work Begins

3-512B During the Course of Work

**3-513 Records**

**3-514 Noncompliant and Unauthorized Work**

**3-515 Job Site Appearance**

**3-516 Areas for Use**

**3-517 Equipment**

**3-518 Property and Facility Preservation**

3-518A Landscape

3-518B Railroad Property

3-518C Nonhighway Facilities

3-518C (1) General

3-518C (2) Duties of the Utility Relocation Resident Engineer

**3-519 Maintenance and Protection**

3-519A General

3-519B Load Limits

3-519C Damage by Public Traffic

**3-520 Maintenance and Protection Relief**

**3-521 Requests for Information and Potential Claim Records**

3-521A General

3-521B Requests for Information

3-521C Potential Claim Records

3-521C (1) Form CEM-6201D, Initial Potential Claim Record

3-521C (1a) Resident Engineer's Response to the Initial Potential Claim Record

3-521C (2) Form CEM-6201E, Supplemental Potential Claim Record

3-521C (2a) Resident Engineer's Response to the Supplemental Potential Claim Record

3-521C (3) Form CEM-6201F, Full and Final Potential Claim Record

3-521C (3a) Resident Engineer's Response to the Full and Final Potential Claim Record

3-521D Documentation Guidelines for Disputes

3-521E Sample Dispute Response Clauses

- 3-521E (1) Request for Information for Notification of a Possible Differing Site Condition
  - 3-521E (1a) General
  - 3-521E (1b) If No Merit
  - 3-521E (1c) If Merit
  - 3-521E (1d) If Partial Merit
- 3-521E (2) Requests for Information to Protest a Time Adjustment Determination in a Change Order
  - 3-521E (2a) General
  - 3-521E (2b) If No Merit
  - 3-521E (2c) If Merit
  - 3-521E (2d) If Partial Merit
- 3-521E (3) Requests for Information to Protest a Weekly Statement of Working Days
  - 3-521E (3a) General
  - 3-521E (3b) If No Merit
  - 3-521E (3c) If Merit
  - 3-521E (3d) If Partial Merit
- 3-521E (4) Potential Claim Record
  - 3-521E (4a) General
  - 3-521E (4b) If No Merit
  - 3-521E (4c) If Merit
  - 3-521E (4d) If Partial Merit
  - 3-521E (4e) Request Additional Information

**3-522 Alternative Dispute Resolution Processes**

- 3-522A Partnering-Facilitated Dispute Resolution
- 3-522B Dispute Resolution Ladder
  - 3-522B (1) Dispute Resolution Ladder—Establishment
  - 3-522B (2) Dispute Resolution Ladder—Operation
- 3-522C Dispute Resolution Advisor and Dispute Resolution Board
  - 3-522C (1) Establishment
  - 3-522C (2) DRA or DRB Member Replacement
  - 3-522C (3) Operation
    - 3-522C (3a) Informal Dispute Meetings
    - 3-522C (3b) Traditional Dispute Meetings
    - 3-522C (3c) Dispute Resolution Board Progress Meetings
  - 3-522C (4) DRA or DRB Recommendations and Responses

**3-523 Final Inspection and Contract Acceptance**

- 3-523A General
- 3-523B Contract Acceptance
- 3-523C Work for Other Agencies or Owners
- 3-523D Asset Delivery Report

**3-524 Guarantee**

3-524A General

3-524B Work Not Completed by Contractor

### Section 5 Control of Work

#### 3-501 General

Section 5, “Control of Work,” of the *Standard Specifications*, details how contract work will be controlled. The proper performance of the contractor and resident engineer assure control.

Verify that the contractor provides quality control over the work. During the manufacture of products and the execution of the project, the contractor performs the actions necessary to assess and adjust production and construction processes to control the level of quality produced in the end product or facility, and to fulfill specified requirements.

The California Department of Transportation (Caltrans) performs activities required for Department acceptance. The resident engineer and authorized representatives sample, test, and inspect the work to determine if the quality characteristics meet the contract requirements within the tolerances specified. When tolerances are not specified, use judgment to determine if any deviation is allowed consistent with the trades involved.

For additional information on quality control and Caltrans acceptance, refer to Section 3-606, “Quality Assurance,” of this manual.

Section 5-1.01, “General,” of the *Standard Specifications*, requires the contractor to provide safe and unrestricted access to the work for inspection by Caltrans. The resident engineer must take full advantage of this access.

The Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) establishes standards for safe access to work, and Caltrans enforces them under Section 7-1.02K(6), “Occupational Safety and Health Standards,” of the *Standard Specifications*.

The cost of providing access for inspection of bid item work is included in the bid item price. If the contractor is required to construct facilities specifically to provide access for inspection of extra work, the cost may be included on change order bills. These costs, however, are limited to only the increased cost of providing inspection for the extra work and may not include the access costs that fall under the original item work.

Never operate the contractor’s equipment or allow any Caltrans representatives to operate the contractor’s equipment. During quality assurance inspections, only the contractor’s own equipment operators must operate the equipment.

#### 3-502 Engineer’s Authority

The term “engineer” refers to the resident engineer and authorized representatives. The engineer is responsible for contract administration and is authorized to make the final decision on questions regarding the contract. The engineer must act in



accordance with Caltrans policies and procedures and, in the absence of written policy or procedures, must exercise judgment within their ability and span of control as established by the district.

The engineer will focus on the details and methods of performing the work only if one or more of the following conditions exist:

- The details and methods of performing the work are specified.
- The essential attribute or end result cannot be measured.
- Public safety or convenience is involved.

Otherwise, the details and methods must be left to the contractor's discretion.

Resident engineers must report their assignments to all interested parties by submitting Form CEM-0101, "Resident Engineer's Report of Assignment." Submit this form as early as possible.

The resident engineer is the lead for contact and correspondence with the contractor.

### **3-503 Protests**

Section 5-1.06, "Protests," of the *Standard Specifications* allows the contractor to protest an engineer's decision by submitting a request for information. Protests by the contractor of weekly statements of working days, change orders, or failure to issue a change order must be done through a request for information.

### **3-504 Partnering**

Partnering allows all parties and stakeholders to establish and maintain cooperative communication channels and mutually resolve conflicts at the lowest responsible level. Become familiar with and follow Section 5-1.09, "Partnering," of the *Standard Specifications* and the Caltrans publication, *Field Guide to Partnering on Caltrans Construction Projects*. This publication is available under Resources/Manuals at:

<https://dot.ca.gov/programs/construction/partnering>

For additional guidance, contact the partnering coordinator in either the district or the Division of Construction. The names and contact numbers for these coordinators are available under Contacts on the Caltrans link at:

<https://dot.ca.gov/programs/construction/partnering>

Supplemental funds to cover the anticipated partnering costs are included in projects with an engineer's estimate of more than \$1 million. To pay for Caltrans' share of the partnering costs, execute a change order using the change order code AUZZ.

Use of a partnering facilitator is recommended on all projects. Use of a partnering facilitator is required, however, on all projects greater than \$10 million and longer than 100 working days. A list of partnering facilitators is available under Contacts at:

<https://dot.ca.gov/programs/construction/partnering>

When selecting a partnering facilitator:

- Consider the extent of a candidate’s experience as a partnering facilitator on other Caltrans projects.
- Check with other resident engineers or the partnering coordinator in either the district or in the Division of Construction for information regarding potential facilitators.
- Interview several facilitators. Do not assume all facilitators are the same. Search for the right facilitator for the job.
- Confirm the full scope and cost of the facilitator’s work. Not all facilitators perform the same amount of work, and the cost differences for a 1-day session can be as much as \$15,000. The cost for each session should include all costs of the facility, full payment for the facilitator, materials used during the session, and all pre- and post-session work. The facilitator should make an effort to get to know the parties, facilitate the sessions to foster a team dynamic, provide meeting notes, and follow up on any action items discussed at the meeting.
- Verify that the facilitator’s services include administering monthly project surveys. The facilitator is allowed to charge for this survey.

### **3-505 Order of Work**

If the plans or special provisions do not contain a specified sequence of operations, contractors may select their own schedules, provided the planned order of work meets any dates specified for completion and openings of portions of the work to traffic.

Occasionally, the contractor may submit a proposed modification of the specified order of work that will be more satisfactory for the work’s operation. If, in the resident engineer’s opinion, Caltrans will benefit as much or more by adopting the proposed modification as it would under the specified plan, the contractor’s plan may be implemented with a change order requested by the contractor. Caltrans must receive a monetary adjustment if the contractor has any reduced costs from the change. Also, a contractor may benefit if a change is proposed and accepted under a change order for a value engineering change proposal. Refer to Section 3-405, “Value Engineering,” of this manual and Section 4-1.07, “Value Engineering,” of the *Standard Specifications*.

The resident engineer must recheck the specified plan of operations during the work’s progress. Changes in circumstances may necessitate altering the planned sequence and schedule. Construction in stages is often a part of the contract on major projects, and revised progress schedules may be required as the stages of work develop.

### **3-506 Assignment**

If the contractor submits any of the following contractor action request forms to the resident engineer, the contractor must also include a completed and signed Form STD 204, “Payee Data Record,” as part of the submittal in accordance with Section

5-1.12, "Assignment," of the *Standard Specifications*. Submittal of scanned or faxed copies is acceptable.

- Form CEM-1202A, "Contractor Action Request–Change of Name/Address," is submitted by the original contractor as an informational submittal to notify Caltrans of change to the contractor's business name or mailing address.
- Form CEM-1202B, "Contractor Action Request–Assignment of Contract Monies, Assignee Change of Name/Address" is submitted by the original contractor or surety as an informational submittal to provide notification if a contractor is assigning contract payments to another entity, such as a surety, bonding company, or escrow company. If payments are assigned to a different entity and the remaining contract work is assigned to a new prime contractor, the contractor must submit Forms CEM-1202B and CEM-1203 to cover both actions.
- Form CEM-1203, "Contractor Action Request–Assignment of Contract Performance," is submitted by the original contractor, surety, or bonding company to assign contract performance to another contractor. An assignment of performance request is an action submittal that requires the Division of Construction Chief's consent, as authorized agent for the director in order for the request to be approved.

Carefully review and verify the information in contractor action request submittals. Adhere to the procedures listed in the instructions of Forms CEM-1202A, CEM-1202B, and CEM-1203. For a contractor business name change submitted under Form CEM-1202A, refer to Section 3-704A, "Responsibilities," of this manual for information regarding validation of insurance bonds and contract bonds.

### **3-507 Subcontracting**

Contractors can use subcontractors on their projects provided the subcontractor and the prime contractor comply with Section 5-1.13, "Subcontracting," of the *Standard Specifications*, and with state and federal laws and regulations. The contractor is required to submit Form CEM-1201, "Subcontracting Request," before subcontracted work starts.

When projects use subcontractors, the resident engineer must focus primarily on:

- Always knowing which subcontractors are working on the project and on which specific items they are working.
- Making sure that listed subcontractors have a valid public works contractor registration number before they begin work.
- Making sure that listed subcontractors are not improperly removed or replaced.
- Verifying that the prime contractor achieves the subcontracting level pledged when the contract was awarded to meet requirements of the Disadvantaged Business Enterprise (DBE), Disabled Veteran Business Enterprise (DVBE), and small business programs.
- Assuring adherence to the provisions of the Public Contract Code.

For more information on these subcontracting requirements, refer to Section 8-3, “Disadvantaged Business Enterprises and Disabled Veteran Business Enterprises,” of this manual.

### 3-507A Amount of Work Subcontracted

Section 5-1.13, “Subcontracting,” of the *Standard Specifications*, requires that the prime contractor perform at least 30 percent of work using the contractor’s own organization unless a different percentage is specified in the special provisions. This requirement does not apply if the work is for a building-construction, non-federal-aid contract.

The percentage of work subcontracted is calculated for first-tier subcontractors only. A contractor’s organization includes only workers employed and paid directly by the prime contractor and only equipment owned or rented by the prime contractor, with or without operators.

Discuss unusual subcontracting situations with the construction engineer. If the situation indicates that additional information is necessary but only available through an inspection of the contractor’s records, request a copy of the subcontract agreement from the prime contractor. If a review of the subcontract agreement does not help resolve the situation, discuss the possibility of an audit with Division of Construction’s field coordinator.

### 3-507B Calculating the Amount of Work Subcontracted

The contractor must submit Form CEM-1201, “Subcontracting Request,” stating what percentage and dollar amount of an item will be subcontracted. The resident engineer must verify the amount. Any rational method of estimating the amount will be acceptable; for example:

- The percentage of an area, volume, or length
- The portion applicable to material cost
- The portion of labor and equipment cost

When an entire item is subcontracted, use the prime contractor’s item bid price as the dollar amount for the form. When a portion of an item is subcontracted, apply the percentage of the bid item subcontracted to the prime contractor’s item bid price as the dollar amount for the form.

To assure that the contractor is not requesting approval for a subcontractor other than those listed in the bid documents, the resident engineer must check the DBE, DVBE, and small business commitment listings and the list of subcontractors. If a discrepancy is noted, advise the contractor and ask for an explanation. The resident engineer must not approve the subcontracting request until the contractor provides an acceptable explanation.

## 3-507C The Subletting and Subcontracting Fair Practices Act

### *3-507C (1) Subcontracting in the Bidding Process*

Sections 4100 through 4114 of the Public Contract Code are called the “Subletting and Subcontracting Fair Practices Act” (Act) and apply to Caltrans construction projects. The Act is designed to prevent prime contractors from “bid shopping” for subcontractors after bids are opened and the low bidder is known.

The Act requires that subcontracted work in excess of one-half of 1 percent (0.005) of the contractor’s total bid amount or \$10,000, whichever is greater, must be listed in the prime contractor’s bid proposal. When a prime contractor fails to list a subcontractor in its bid, the law requires that the prime contractor must perform the work with its own forces. The prime contractor may not add an unlisted subcontractor by requesting a substitution. Exceptions to this requirement are discussed in Public Contract Code 4107 (c) and Public Contract Code 4109.

For building projects such as a maintenance station or other off-highway project, all subcontracted work in excess of one-half of 1 percent (0.005) of the contractor’s total bid amount must be listed.

Verify that the listed subcontractor performs the work or that the contractor complies with the substitution procedures in the Act.

### *3-507C (2) Substitution Process*

To replace a subcontractor listed in the bid documents, the prime contractor must submit a written request based on the reasons identified in Public Contract Code Section 4107, and include the public works contractor registration number of each substituted subcontractor. To assure this requirement is met, verify that the subcontractor’s registration number is valid at the California Department of Industrial Relations’ Public Works Contractor Registration Search website:

<https://cadir.secure.force.com/ContractorSearch>

When the prime contractor requests a substitution, proceed as follows:

1. Send the request to the district construction office for review.
2. The district construction office must send a written notice to the listed subcontractor by certified mail, overnight mail, or fax, informing the listed subcontractor of the prime contractor’s request to substitute and the reasons for the request. The notice must provide the subcontractor 5 business days to submit a written objection to the substitution.
3. If the listed subcontractor does not file a timely written objection, the resident engineer must approve the substitution. The resident engineer must approve the new subcontractor following the guidelines under Section 3-507D, “Procedure for Approval or Acknowledgment of Subcontractors,” of this manual. If the removed subcontractor’s firm was a listed DBE, DVBE, or small business, refer to Section 8-3, “Disadvantaged Business Enterprises and Disabled Veteran Business Enterprises,” of this manual for additional steps required in the process.

4. If the listed subcontractor submits timely written objections to the substitution, the district must conduct a hearing. Send written notice of the hearing to the prime contractor and the subcontractor a minimum of 5 business days before the hearing is conducted. The written notice should include a request that any substantiating documents be provided before the hearing.

### *3-507C (3) Hearing Process for Substitutions*

The intent of the substitution hearing is to give both parties the opportunity to explain to the hearing officer why a substitution should or should not occur. Substitution hearings are conducted informally. Normally, the hearing officer is the district construction deputy director.

#### *3-507C (3a) Before the Substitution Hearing*

- Obtain from both parties documents to substantiate the reasons for substitution.
- Review all information submitted by both parties and provide copies to the hearing officer. If the hearing officer believes legal or other assistance may be required during the substitution or hearing process, the district must contact the construction field coordinator, who will arrange for such assistance as appropriate.
- The hearing officer must develop a line of questioning to assure that sufficient evidence exists on which to base a decision about the request.

#### *3-507C (3b) During the Substitution Hearing*

- Audio or video recording may be used to assist in taking notes but is not required.
- The hearing officer should allow each party sufficient time to present its position and offer a counterargument on the substitution request. List additional supporting information presented by either party in the hearing notes.

#### *3-507C (3c) After the Substitution Hearing*

- The hearing officer will issue written findings and a decision on the substitution request. As soon as possible after the hearing, send a copy of the decision to the prime contractor and the objecting subcontractor by certified mail with a return receipt.
- Send the Division of Construction's labor compliance manager a copy of the final decision.
- Require the contractor to submit a Form CEM-1201, "Subcontracting Request," for the new subcontractor.

### *3-507C (4) Violations of the Subletting and Subcontracting Fair Practices Act*

The following presents typical examples of some of the more common violations of the Act by a prime contractor:

- Subcontracting additional work to a listed subcontractor where the work was not originally listed as subcontracted work and is in excess of the threshold requirements.
- Using a subcontractor not listed at bid time whose dollar value of work is in excess of the threshold.
- Substituting subcontractors without Caltrans' consent.
- Performing work that the bid documents designated a subcontractor to perform.

If these or any other violations occur, proceed as follows:

- Discuss the apparent violations with the construction engineer and the district labor compliance officer.
- If the construction engineer and district labor compliance officer agree that an apparent violation has occurred, send the prime contractor a certified letter including the following text:

You are in apparent violation of Sections 4100 through 4114, "Subletting and Subcontracting Fair Practices Act," of the Public Contract Code, for work being performed on item(s) \_\_\_\_\_ of Caltrans Contract No. \_\_\_\_\_. You will be assessed a penalty of \$\_\_\_\_\_ as provided in Section 4110 of the Public Contract Code.

If you wish to dispute this apparent violation or the assessed penalty, you must request a hearing with Caltrans. You will be given 5 days notice of the time and place of the scheduled hearing in accordance with Section 4110 of the Public Contract Code.

If you do not request a hearing, the penalty will be assessed as a permanent deduction on the next progress pay estimate.

- Send copies of the letter to the subcontractor and to the district labor compliance officer.
- If a contractor requests a hearing, schedule it using the same procedure described in Section 3-507C (3), "Hearing Process for Substitutions," of this manual.

Occasionally, the contractor will list subcontractors that the Act does not require to be listed. In this case, changes require only an updated subcontracting request to identify the new subcontractor. For the process, refer to Section 3-507D, "Procedure for Approval or Acknowledgment of Subcontractors," of this manual. If the subcontractor is a DBE, DVBE, or small business, refer to Section 8-3, "Disadvantaged Business Enterprises and Disabled Veteran Business Enterprises," of this manual for additional requirements.

### *3-507C (5) Hearing Process for Substitution Violations*

Section 4110 of Public Contract Code requires Caltrans to conduct a hearing for violations of the "Subletting and Subcontracting Fair Practices Act." The intent of the violation hearing is to determine whether a penalty should be assessed against the

prime contractor for the violations. Each party is entitled to present its arguments on the alleged violations. The hearing should follow the process outlined below.

#### 3-507C (5a) Before the Violation Hearing

- Retain a neutral decision-maker to be the hearing officer. To keep the process as short as possible, this person would preferably be a Caltrans employee at senior transportation engineer level or above who is completely out of the chain of command for the project at issue.
- Hire a certified court reporter to transcribe the proceedings. Contact the Division of Construction labor compliance program manager for assistance with this process.
- If necessary, subpoena third parties, such as the subcontractor, or supplier. Contact the Division of Construction labor compliance program manager for assistance with this process.

#### 3-507C (5b) During the Violation Hearing

- The resident engineer and district labor compliance officer testify under oath to the facts that led Caltrans to conclude an issue or apparent violation existed. They should be prepared to provide copies of all documents or other evidence, such as correspondence, daily reports, or payroll records used to reach that conclusion. Caltrans should provide the original documents. Conclusions drawn from the documents can be summarized verbally as testimony.
- The hearing officer will conduct direct and cross-examination of witnesses under oath.
- The hearing officer will accept any documents provided by each party and have the court reporter place them into the record as part of the certified transcript. The hearing officer will verbally verify that documents were received by noting what they are and assigning them an exhibit number.
- The hearing officer will make sure that the only issue addressed at the hearing is the violation of the Act (for example, not a DVBE violation or labor compliance issue). For violations of DBE, DVBE, or small business requirements, refer to Section 8-3, “Disadvantaged Business Enterprises and Disabled Veteran Business Enterprises,” of this manual.

#### 3-507C (5c) After the Violation Hearing

- The hearing officer must evaluate the evidence provided at the hearing and render a decision on the alleged violation within 10 days of the hearing.
- If the prime contractor is found to be in violation of the Act, the contractor must be assessed a penalty, taken as an administrative deduction, ranging from 0 to 10 percent of the subcontract amount. The hearing officer will determine the penalty amount based on the circumstances involved. The hearing officer’s finding is the final Caltrans administrative decision on the application and enforcement of the Act.



- Send the decision to the contractor and, if applicable, the subcontractor. Send a copy to the Division of Construction, which may refer the violation to the Contractors State License Board, in accordance with Section 4111 of the “Subletting and Subcontracting Fair Practices Act.”
- Deduct the penalty amount from the next estimate.

### 3-507D Procedure for Approval or Acknowledgment of Subcontractors

The resident engineer has the responsibility of approving subcontractors on federally funded projects and acknowledging subcontractors on state-financed projects. In general, approving or acknowledging subcontractors is necessary for only first-tier subcontractors. The contractor must submit Form CEM-1201, “Subcontracting Request,” to request subcontracting of contract work. When the contract is awarded, the contractor receives a blank Form CEM-1201, “Subcontracting Request.” Provide additional blank forms to the contractor when necessary. The last page of the form contains instructions for completing the form.

Upon receipt of Form CEM-1201, and before approving the contractor’s request, do the following:

- Check the contractor’s portion of the form to confirm that the listed subcontractors and work percentages match the bid documents.
- Verify that subcontractors are not on the Department of Industrial Relation’s debarred contractors list available at:  
<http://www.dir.ca.gov/dlse/debar.html>
- Complete lines 1 through 9.
- Verify that subcontractors comply with the DBE, DVBE, and small business goals submitted by the contractor before contract award. Verify that no conflict exists between DBE, DVBE, and small business requirements and the listing requirements of the Act.
- If the contractor’s request meets all the requirements, sign, date, and distribute the form.

Process the requests in the order of the request number since lines 2 and 6 contain running balances based on the percentage of work required. Follow the form’s instructions to complete the rest of the form.

### **3-508 Representative**

As required by Section 5-1.16, “Representative,” of the *Standard Specifications*, contractors, including those in a joint venture, must name in writing one authorized representative and provide the representative’s contact information. Resident engineers must insist that contractors meet this requirement promptly. If the contractor’s representatives from a joint venture disagree with each other, the resident engineer can contractually refuse to work with more than one representative.

### **3-509 Character of Workers**

Caltrans policy calls for a work environment with zero tolerance for violence, threats, harassment, and intimidation. This policy also applies to any subcontractor or employee of a contractor in their work with Caltrans personnel. Caltrans may discharge a worker from the project for engaging in any of these actions. Refer to Section 5-1.17, “Character of Workers,” of the *Standard Specifications* for more information.

If possible, notify the worker’s supervisor and discuss the decision to remove a worker before or as soon as possible after issuing the directive. The contractor may request reinstatement of the worker. If so, the resident engineer conducts a meeting with the construction engineer, the contractor’s authorized representative, and—at the contractor’s discretion—the affected worker, to discuss the reason for removing the worker and the contractor’s request for reinstatement.

None of these procedures affect the engineer’s authority to direct the removal of a worker from the project.

### **3-510 Coordination with Other Entities**

Section 5-1.20, “Coordination with Other Entities,” of the *Standard Specifications* requires the contractor to coordinate with other contractors or entities at or near the job site and materials sources to avoid delays.

#### **3-510A Permits, Licenses, Agreements, and Certifications**

The contractor is to possess all required permits, licenses, agreements, and certifications (PLACs) before starting the work covered by them. Verify that the contractor maintains a copy of the required PLACs at the job site.

Unless the necessary PLACs needed to enable the contractor to use a possible local material source or disposal site are included in the information handout, the contractor must obtain them at no cost to Caltrans even if the agreement made between Caltrans and the property owner is included in the information handout.

#### **3-510B Contractor-Property Owner Agreement**

If the contractor is proposing to use a noncommercial material source or disposal site, verify that the contractor has met the requirements of Sections 5-1.20A, “General,” 5-1.20B, “Permits, Licenses, Agreements, and Certifications,” and 6-1.03, “Local Materials,” of the *Standard Specifications*.

Arrange a joint meeting with the contractor and agencies that have jurisdiction over the use of the site to discuss the work and the required documentation to be submitted. This documentation may include permits, environmental studies, grading plans, a Stormwater Pollution Prevention Plan, local material plan, and testing imported soil from noncommercial sources, for example, for lead and pH levels.

Provide the contractor with a copy of the appropriate sample agreement. The contractor may use one of the sample agreements in this section or provide an equivalent agreement:

- Example 3-5.1, “Agreement Between a Contractor Working on State Facilities and a Real Property Owner for Acquiring Construction-Related Material from Property Owner’s Property”
- Example 3-5.2, “Agreement Between a Contractor Working on State Facilities and a Real Property Owner for Disposing of Construction-Related Material on Property Owner’s Property”

Review Section 7-1.02K(6)(j)(iii) of the special provisions and consult with the district aerially deposited lead coordinator concerning lead level of the existing soils onsite, at:

<https://dot.ca.gov/programs/construction/environmental>

Add the following text to the agreement when applicable:

Owner acknowledges the material being deposited on the property contains lead with concentrations between 80 mg/kg and 320 mg/kg, which is above the residential California human health screening level for lead as determined by the California Environmental Protection Agency. By submission of this agreement, the owner certifies (1) the property is a commercial/industrial property and (2) the property is not and will not be used for any type of housing, including but not limited to, apartment, motel, hotel, farm, ranch, or any other type of property, including but not limited to, day care, park, school, hospital, or university, which could allow occupants to reside on the property now or in the future or would lead to daily, repeated, long term exposure to the material. The property is zoned as \_\_\_\_\_.

After the contractor and property owner enter into an agreement and obtain all required documentation, the contractor must submit these for approval. After review and verification of the adequacy of the contractor’s submittals, provide written approval to the contractor to use the site. Refer to Examples 3-5.3, “Sample Approval to Acquire Material From Property Owner’s Property Letter,” and 3-5.4, “Sample Approval for Disposal of Material Outside the Highway Right-of-Way Letter,” for approval letter samples.

In those cases in which Caltrans has made prior arrangements by designating a disposal or borrow site and entering into an agreement with a private property owner for disposal, removal, or excavation of material, the designated sites may be made available for contractor use as discussed in Section 7-103H, “Disposal, Staging, and Borrow Sites,” of this manual. In accordance with Section 5-1.20B, “Permits, Licenses, Agreements, and Certifications,” of the *Standard Specifications*, the contractor must comply with the provisions of the Caltrans-owner agreement if the contractor uses the site or the contractor may make a new agreement with the property owner.

When the contractor makes a new agreement with the property owner that revises the terms of the Caltrans-owner agreements, the new agreement supersedes the Caltrans-owner agreement. Review the new agreement to verify that Caltrans is relieved of its obligations under the terms of the original agreement.

Under some agreements, Caltrans will directly pay the owner of the material or disposal site. Payment must be made to the owner and royalties deducted from payments to the contractor. In the case of county-consummated agreements, royalties usually are deducted in a similar way.

Before contract acceptance, Section 5-1.20B(4), "Contractor-Property Owner Agreement," of the *Standard Specifications* requires the contractor to submit a document signed by the owner of the site indicating that the contractor has satisfactorily complied with the provisions of the agreement. If the owner is not satisfied, determine what additional work is necessary before recommending acceptance of the contract and advise the contractor accordingly. Do not delay recommending acceptance of the contract if you determine that the contractor has complied with the terms of the agreement.

An agreement between the contractor and a property owner is not required for procuring local material from an established commercial source.

For the disposal of waste material in a commercial landfill or treatment facility, verify the types of wastes accepted and the permit status of the landfill or treatment facility at the California Water Resources Control Board, CalRecycle, and Department of Toxic Substances Control websites:

[http://www.waterboards.ca.gov/water\\_issues/programs/land\\_disposal/walist.shtml](http://www.waterboards.ca.gov/water_issues/programs/land_disposal/walist.shtml)

<http://www.calrecycle.ca.gov/DataCentral/Facilities.htm>

<http://www.dtsc.ca.gov/HazardousWaste/>

Alternatively, contact the facility to obtain a copy of the facility's permit.

Example 3-5.1. Agreement Between a Contractor Working on State Facilities and a Real Property Owner for Acquiring Construction-Related Material From Property Owner's Property (1 of 2)

**MATERIAL ACQUISITION AGREEMENT**

Contract No.: \_\_\_\_\_

County/Route/Mile post: \_\_\_\_\_

The contractor, \_\_\_\_\_, ("Contractor") has entered into Contract No. \_\_\_\_\_ ("Contract"), with the State of California, Department of Transportation ("Department"), for work that is described as follows:

\_\_\_\_\_ ("Project").

The owner, \_\_\_\_\_, ("Owner") of the real property ("Property") at

\_\_\_\_\_ (for example, address, location, county and parcel number(s), project station(s), offsets, and other property location information) agrees to allow the Contractor to remove from the Owner's Property approximately \_\_\_\_\_ cubic yards of \_\_\_\_\_ (such as soil, aggregate, asphalt grindings, or other material) ("Material") for use on the Project.

Owner agrees that the Contractor has assumed ownership of the Material once it is removed from the Property.

Contractor and Owner agree to abide by the requirements of Section 5-1.20, "Coordination with Other Entities," of the *Standard Specifications*. The *Standard Specifications* are available at:

<https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications>

Contractor and Owner agree to obtain and furnish to the Department's engineer, all necessary permits, licenses, agreements, and clearances prior to removing Material from the Property.

By submission of this agreement to the Department's engineer, Contractor and Owner are acknowledging that they have been informed, or otherwise apprised, of all restrictions, laws and permit requirements associated with the transporting and removal of the Material from the Property and have agreed to abide by the same. These laws include but are not limited to:

- Local Ordinances—Grading permits for the grading, filling, excavation, storage, or disposal of soil or earthen material.
- California Fish and Game Code (Section 1602), "Lake or Stream Bed Alteration Agreement"—A permit required prior to the removal or placement of material in a location where it can pass into waters of the state, directly or indirectly, through causes such as erosion or maintenance.

Example 3-5.1. Agreement Between a Contractor Working on State Facilities and a Real Property Owner for Acquiring Construction-Related Material From Property Owner's Property (2 of 2)

- California Fish and Game Code (Section 5650)—A prohibition against the deposition of petroleum products (including asphalt), or any material deleterious to fish, plants, or birds where it can pass into the waters of the state.
- Federal Clean Water Act (Sections 301 and 402), “General Permit for Discharges of Storm Water Associated with Construction Activity”—A permit is required prior to soil disturbance of an area of one acre or more.
- Federal Clean Water Act (Section 404), “Permit for Discharge of Dredged or Fill Material”—A permit from the United States Army Corps of Engineers may be required for the discharge of fill material into waters of the United States including wetlands.
- State Contract Act, aggregate sources must comply with the Surface Mining and Reclamation Act of 1975 (SMARA).

Owner and Contractor agree that the Material will be excavated, removed, and transported, and the Property left in a manner that will not cause injury or harm to any person or property. If an injury or harm does occur to any person or property or should any environmental impacts or litigation arise as a result of the excavation, removal, transportation, deposition, or the final form in which the Property is left, the Contractor agrees to indemnify, defend, protect, and hold harmless the Department in any action in law or equity in accordance with Section 7-1.05, “Indemnification,” of the *Standard Specifications*.

Pursuant to Section 5-1.20B(4), “Contractor-Property Owner Agreement,” of the *Standard Specifications*, Owner acknowledges Contractor will submit this agreement to the Department as evidence that the Owner has authorized the use of the Property as a Material source for the Project. Owner acknowledges that the Contractor is not authorized to make any representations or agreements on behalf of the Department. Contractor and Owner agree that the Department is released from any and all obligations to Owner made by Contractor under this agreement and the Department is released from any and all obligations to Owner under any prior agreement made between the Department and Owner.

Owner and Contractor acknowledge that they have had the opportunity to receive independent legal advice with respect to the meaning, implications, and advisability of entering into and executing this agreement.

Date: \_\_\_\_\_  
\_\_\_\_\_  
(Signature of Property Owner)

Date: \_\_\_\_\_  
\_\_\_\_\_  
(Signature of Contractor's Authorized Representative)

Example 3-5.2. Agreement Between a Contractor Working on State Facilities and a Real Property Owner for Disposing of Construction-Related Material on Property Owner's Property (1 of 2)

**MATERIAL DISPOSAL AGREEMENT**

Contract No.: \_\_\_\_\_  
County/Route/Mile post: \_\_\_\_\_

The contractor, \_\_\_\_\_, ("Contractor") has entered into Contract No. \_\_\_\_\_ ("Contract"), with the State of California, Department of Transportation ("Department"), for work that is described as follows:

\_\_\_\_\_  
\_\_\_\_\_ ("Project").

The owner, \_\_\_\_\_, ("Owner") of the real property ("Property")  
at \_\_\_\_\_

\_\_\_\_\_ (for example, address, location, county and parcel number(s), project station(s), offsets, and other property location information) agrees to allow the Contractor to dispose on the Owner's Property approximately \_\_\_\_\_ cubic yards of \_\_\_\_\_ (such as soil, aggregate, asphalt grindings, or other material) ("Material") generated from the Project.

Owner agrees that the Contractor has assumed ownership from the Department of the Material that is being deposited on the Property.

Contractor and Owner agree to abide by the requirements of Section 5-1.20, "Coordination with Other Entities," of the *Standard Specifications*. The *Standard Specifications* are available at:

<https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications>

Contractor and Owner agree to obtain and furnish to the Department's engineer, all necessary permits, licenses, agreements, and clearances prior to placing Material on the Property.

By submission of this agreement to the Department's engineer, Contractor and Owner are acknowledging that they have been informed, or otherwise apprised, of all restrictions, laws and permit requirements associated with the transporting and placement of the Material on the Property and have agreed to abide by the same. These laws include but are not limited to:

- Local Ordinances—Grading permits for the grading, filling, excavation, storage, or disposal of soil or earthen material.
- California Fish and Game Code (Section 1602), "Lake or Stream Bed Alteration Agreement"—A permit required prior to the removal or placement of material in a location where it can pass into waters of the state, directly or indirectly, through causes such as erosion or maintenance.

Example 3-5.2. Agreement Between a Contractor Working on State Facilities and a Real Property Owner for Disposing of Construction-Related Material on Property Owner's Property (2 of 2)

- California Fish and Game Code (Section 5650)—A prohibition against the deposition of petroleum products (including asphalt), or any material deleterious to fish, plants, or birds where it can pass into the waters of the state.
- Federal Clean Water Act (Sections 301 and 402), “General Permit for Discharges of Storm Water Associated with Construction Activity”—A permit is required prior to soil disturbance of an area of one acre or more.
- Federal Clean Water Act (Section 404), “Permit for Discharge of Dredged or Fill Material”—A permit from the United States Army Corps of Engineers may be required for the discharge of fill material into waters of the United States including wetlands.

Owner and Contractor agree that the Material will be transported, deposited, and left in a manner that will not cause injury or harm to any person or property. If an injury or harm does occur to any person or property or should any environmental impacts or litigation arise as a result of the excavation, removal, transportation, deposition, or the final form in which the Property is left, the Contractor, agrees to indemnify, defend, protect, and hold harmless the Department in any action in law or equity in accordance with Section 7-1.05, “Indemnification,” of the *Standard Specifications* regardless of the manner or form of the action.

Pursuant to Section 5-1.20B(4), “Contractor-Property Owner Agreement,” of the *Standard Specifications*, Owner acknowledges Contractor will submit this agreement to the Department as evidence that the Owner has authorized the placement of the Material on the Property. Owner acknowledges that the Contractor is not authorized to make any representations or agreements on behalf of the Department. Contractor and Owner agree that the Department is released from any and all obligations to Owner made by Contractor under this agreement and the Department is released for any and all obligations to Owner under any prior agreement made between the Department and Owner.

Owner and Contractor acknowledge that they have had the opportunity to receive independent legal advice with respect to the meaning, implications, and advisability of entering into and executing this agreement.

Date: \_\_\_\_\_  
\_\_\_\_\_  
(Signature of Property Owner)

Date: \_\_\_\_\_  
\_\_\_\_\_  
(Signature of Contractor's Authorized Representative per Std. Spec 5-1.16)



Example 3-5.3. Sample Approval to Acquire Material From Property Owner's Property Letter

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

GAVIN NEWSOM, Governor

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF CONSTRUCTION

[Resident Engineer's Address]

[City, CA ZIP]

[PHONE (Area Code) xxx-xxxx]

[FAX (Area Code) xxx-xxxx]

TTY 711

www.dot.ca.gov



Making Conservation  
a California Way of Life.

Date: [Month dd, yyyy]

[Contractor's Name]

[Address]

[City, State ZIP]

Subject: Approval to Acquire Material From [property owner's name and address]

Dear [contractor name]:

In accordance with the provisions of Sections 5-1.20, "Coordination With Other Entities," and 6-1.03, "Local Materials," of the *Standard Specifications*, you are authorized to remove [insert number] cubic yards of [type of material] ("Material") from [property owner name]'s property located at [property address]. According to the submitted agreement, [contractor name] and [property owner] have represented all necessary permits, licenses, and clearances were obtained and submitted before the removal of the Material and have released the Department of Transportation (Department) from any obligations resulting from its removal.

The Department does not warrant or guarantee that the Material is of any particular type or is suitable for any particular purpose.

The agreement also includes [contractor]'s and [property owner]'s promise to hold the Department harmless from all claims for injury to persons or damage to property resulting from its removal. The contractor shall comply with all parts of the contract including Sections 7-1.06, "Insurance," and 7-1.05, "Indemnification," of the *Standard Specifications*. [Contractor name] shall defend, indemnify, and save harmless the state from any and all claims, demands, causes of action, damages, costs, expenses, actual attorneys' fees, losses or liabilities, in law or in equity arising out or in connection with [contractor name]'s performance of this contract including acquiring material from [property owner name]'s property.

Sincerely,

[Name of resident engineer]

c:

## Example 3-5.4. Sample Approval for Disposal of Material Outside the Highway Right-of-Way Letter

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

GAVIN NEWSOM, Governor

### DEPARTMENT OF TRANSPORTATION

DIVISION OF CONSTRUCTION

[Resident Engineer's Address]

[City, CA ZIP]

[PHONE (Area Code) xxx-xxxx]

[FAX (Area Code) xxx-xxxx]

TTY 711

www.dot.ca.gov



Making Conservation  
a California Way of Life.

Date: [Month dd, yyyy]

[Contractor's Name]

[Address]

[City, State ZIP]

Subject: Approval for Disposal of Material Outside the Highway Right-of-Way

Dear [contractor name]:

In accordance with the provisions of Sections 5-1.20, "Coordination With Other Entities," of the *Standard Specifications*, you are authorized to dispose of [insert number] cubic yards of [type of material] ("Material") to [property owner name]'s property. According to the submitted agreement, [contractor name] and [property owner] have represented all necessary permits, licenses, and clearances were obtained and submitted before the disposal of the Material and have released the Department of Transportation (Department) from any obligations from its disposal.

The Department does not warrant or guarantee that the Material is of any particular type or is suitable for any particular purpose.

The contractor shall comply with all parts of the contract including Sections 7-1.06, "Insurance," and 7-1.05, "Indemnification," of the *Standard Specifications*. [Contractor name] shall defend, indemnify, and save harmless the state from any and all claims, demands, causes of action, damages, costs, expenses, actual attorneys' fees, losses or liabilities, in law or in equity arising out or in connection with [contractor name]'s performance of this contract including disposing material on [property owner name]'s property.

Sincerely,

[Name of resident engineer]

c:

bc:

*"Provide a safe, sustainable, integrated and efficient transportation system  
to enhance California's economy and livability"*

### **3-511 Submittals**

The contract may require that plans, working drawings, or samples be submitted to the engineer for authorization. Submittals are considered either “action submittals” or “informational submittals.”

Action submittals consist of written and graphic information and samples that require the engineer’s response. The engineer reviews the submittals, makes corrections, or sends the submittals back to the contractor for correction.

Informational submittals consist of written information required to be provided before the affected work can start, but they do not require a response from the engineer.

Caltrans has a procedure for authorizing plan submittals for facilities that were designed by Structure Design. Resident engineers should review this procedure if the work includes such facilities. To view this procedure, refer to Section 132, “Miscellaneous Buildings,” of *Bridge Construction Records and Procedures*, Vol. 2. Pumping plants and electrical and mechanical equipment use a similar procedure. Districts must establish procedures for facilities designed by the district.

In addition, the contract may require that plans and calculations be submitted to the resident engineer for review and authorization for falsework, shoring, and bridge demolition. Refer to Sections 120, “Falsework”; 122, “Shoring”; and 124, “Demolition Plan Review,” respectively, of the *Bridge Construction Records and Procedures*, manual Vol. 2, for guidelines for the review and approval process.

### **3-512 Construction Surveys**

Section 5-1.24, “Construction Surveys,” of the special provisions requires Caltrans to place stakes and marks necessary to permit satisfactory completion of the work. For information on construction surveys, refer to Chapter 12, “Construction Surveys,” of the *Caltrans Surveys Manual*.

The district Surveys Unit will set the construction marks and stakes when the area is ready and will start setting marks and stakes within 2 business days of receiving the request for construction stakes.

Contractors have the option of constructing projects with automated machine guidance (AMG) using digital terrain model (DTM) and digital design model (DDM) files provided by Caltrans. Resident engineers should notify district Surveys and the project engineer when a contractor elects to use AMG. Resident engineers need to verify with project engineers that changes to terrain affecting earthwork quantities such as soil erosion or recent improvements are reflected in the current electronic design files.

For projects with more than 5,000 cubic yards of earthwork, the following specifications are included in the contract:

- Caltrans makes the electronic design files available to contractors as supplemental project information in Sections 2-1.06B, “Supplemental Project Information,” of the *Standard Specifications* and special provisions.

- Sections 5-1.24B, “Department Construction Surveys for Automated Machine Guidance”; 5-1.25, “Automated Machine Guidance”; and 5-1.26, “Grade Quality Control,” of the special provisions.

### 3-512A Before Work Begins

Take the following steps before work begins:

- Consult with the project engineer to confirm that the project site has not significantly changed since the original survey was performed. If there are changes in the project area terrain that could affect earthwork quantities, request that the district Surveys field check the area. Any new data should be added to the existing digital terrain model (DTM). Design should calculate new earthwork quantities based on a revised DTM.
- Consult with the district Surveys regarding the stability of the project control network. Typically, Surveys will check project control and set supplemental control prior to the start of construction activities. Areas with subsidence and other datum instabilities can cause problems in construction using AMG. Inaccurate control coordinates can cause problems if not caught early.
- Project control sheets should be included in the project plans. If a project control sheet is not in the project plans, request from the district Surveys a Project Control Form 4.1, “Project Datums and Control,” which identifies the datum, epoch, and the horizontal and vertical coordinates of the survey control points within the project limits. In the absence of a project control sheet in the project plans, provide the contractor the completed Form 4.1 and required attachments.
- Review the contractor’s AMG quality-control plan for compliance with the requirements in Section 5-1.25, “Automated Machine Guidance,” of the special provisions.
- Inform the district Surveys that the contractor intends to use AMG. Request that a representative from the district Surveys attend the preconstruction conference, or separate AMG meeting, to discuss AMG requirements with the contractor.
- At the preconstruction conference, or separate AMG meeting, discuss the following:
  - Contractor’s AMG quality-control plan
  - Global navigation satellite systems (GNSS) rover and just-in-time (JIT) training
  - Project control verification
  - District Surveys’ review of the contractor’s site calibration or localization
  - Project construction staking in accordance with Chapter 12, “Construction Surveys,” of the *Caltrans Surveys Manual*, and 5-1.24B, “Department Construction Surveys for Automated Machine Guidance,” of the special provisions
  - Electronic files

- Areas with questionable GNSS coverage that may require conventional staking
- Areas not covered in the digital design model (DDM), such as some drainage areas, that will require conventional staking
- Shoulder or gore issues
- Determine if a GNSS rover will be supplied by the contractor. See Section 5-1.25, “Automated Machine Guidance,” of the special provisions. If the contract does not require the contractor to provide a GNSS rover, contact Surveys to request a GNSS rover for use on the project site.
- Verify that Construction staff receives GNSS rover, JIT training. If a GNSS rover is contractor-supplied, the contractor must provide the training. Otherwise, request that district Surveys provide a GNSS rover and training for construction staff.
- Request that district Surveys review and comment on the contractor’s site calibration or localization procedures in accordance with the contractor’s quality-control plan. Confirm that the contractor has performed a GNSS site calibration or localization to the adjusted survey control network.
- Determine frequency for the verification of the contractor’s GNSS system. Request maintenance records from the contractor on all GNSS equipment used on the project.

### 3-512B During the Course of Work

Take the following steps during the course of work:

- Notify the contractor of any errors or revisions in the lines and grades and whether a revised DDM file will be provided, or whether district Surveys will provide conventional staking for the area involved. Notify district Surveys of any changes in construction staking requirements.
- Verify that the contractor’s check testing results are submitted as informational submittals.
- Verify that the contractor is performing quality-control grade checking at the minimum frequency specified in Section 5-1.26, “Grade Quality Control,” of the special provisions. Do this by reviewing quality-control grade-checking reports submitted by the contractor prior to performing grade-checking verification.
- For grade-checking verification, the proper tools must be used to assure accuracy. Apply the following regarding accuracy and select the appropriate tools:
  - Less than 0.10 foot elevation tolerance, use either:
    - Level for vertical and GNSS rover for horizontal location
    - Total Station

- For 0.10 - 0.50 foot elevation tolerance, normally use a GNSS rover for vertical and horizontal, but any failing grades must be checked with a digital level or Total Station
- Greater than 0.50 foot elevation tolerance, use a GNSS rover
- For projects that require significant grade checking with an elevation tolerance of less than 0.10 foot, contact the district Surveys unit for assistance.
- The district Surveys unit will provide additional stakes to assist the resident engineer in performing grade checking where increased accuracy is needed. The possible need for additional stakes should be discussed at the preconstruction conference.
- In accordance with Section 12.1-6 (j), of the *Caltrans Surveys Manual*, the district Surveys unit, if resourced and requested, will assist the resident engineer with the inspection of line and grade in areas without conventional staking. The district Surveys unit may assist the resident engineer with project inspection using survey equipment, the project model, and survey control.
- Inspect line and grade by performing grade checking verification and documenting results on Form CEM-3810, "Construction Grade Checking Report."

### **3-513 Records**

Section 5-1.27, "Records," of the *Standard Specifications* requires the contractor to retain project records for at least 3 years after final project payment or resolution of any claims, whichever is later.

These records must be available for inspection, copying, and auditing by state representatives, and must be segregated by work cost categories:

- Bid item work
- Change order work that is not extra work
- Extra work
- Work performed under a potential claim record
- Overhead
- Subcontractors, suppliers, owner-operators, and professional services

This section also requires the contractor to use the Caltrans internet change order billing system. Provide training within 30 days of a contractor's request, and help the contractor's representative establish an account after receiving the training. Refer to Section 5-103E, "Change Order Billing," of this manual for additional information.

### **3-514 Noncompliant and Unauthorized Work**

Section 5-1.30, "Noncompliant and Unauthorized Work," of the *Standard Specifications*, specifies the contractor's responsibility for rejected or unauthorized work and for the removal and replacement of material that does not meet specification requirements.

Unauthorized work includes excavation outside planned slopes and below the grading plane. Unless an approved change order authorizes such excavation, do not permit it.

Except for material that is permitted to remain in place under the specifications for “contract compliance” and “operating range,” reject material represented by a test result not meeting the specified requirement.

Make sure the rejected material gets removed and replaced or remedied in some other manner if it is appropriate. When rejected material is remedied, it may remain in place only if the resident engineer gives written approval. In most cases, the approval requires a contractor-requested change order. For example, a change order would be necessary to approve a contractor’s proposal to remedy out-of-specification aggregate base by adding more aggregate to material deposited previously. A change order is necessary in this situation because the remedy requires a change in specifications. However, the resident engineer’s written approval is not required when the remedy is specified, such as the remedy for damaged galvanizing of pipe or guardrail.

For all material used in the work, make the payment in accordance with the specifications. As an alternative to removal and replacement, do not allow noncompliant material to remain in place without contract payment, unless the specifications, in consideration of “operating range” and “contract compliance,” or an approved change order, provide for such action.

### **3-515 Job Site Appearance**

Section 5-1.31, “Job Site Appearance,” of the *Standard Specifications* requires the contractor to keep the job site neat and includes provisions for disposal of debris.

### **3-516 Areas for Use**

Section 5-1.32, “Areas for Use,” of the *Standard Specifications* allows the contractor to occupy the highway only for purposes necessary to perform the work unless arrangements are made with Caltrans for temporary storage. The contractor has no right to make use of the property or to allow others to use it when such use is not reasonably necessary to perform the required work. For example, residency trailers must not be placed within the right-of-way, although one trailer may be allowed for yard security purposes if the engineer approves temporary storage within the right-of-way.

Prohibit any use of a Caltrans right-of-way that conflicts with the above requirements.

When areas for use are specifically described in the contract, verify the contractor is complying with terms of use. For example, where areas for use include bridge locations, the special provisions are to include restrictions, such as limitations on storage material types, permissible physical locations of storage, required access paths, and maintaining drainage system functionality. Review Structure Policy Directive 1-8, “Material Storage Under Bridges,” for additional information.

If a contractor requests the use of the highway for temporary storage or for any unusual or complicated situations, discuss the request with the construction field coordinator.

The contractor may enter into a rental agreement to use state-owned property outside the right-of-way.

Also, usable property under bridges or viaducts or other property that cannot be sold as excess, but can be leased, is classified as nonoperating right-of-way, also known as “airspace.” Each district involved with the development of such property has established an inventory. The special provisions will normally cover the use, or prohibit the use, of nonoperating right-of-way by the contractor. When the use of an airspace parcel is not part of the contract and a contractor later requests such use, the contractor must negotiate a lease for the parcel. A standard form is used for the lease and calls for payment based on fair market value. No special consideration will be given because the lessee is performing Caltrans work. Also, all normal provisions requiring insurance and parcel protection will be enforced. Additional requirements will be set forth for parcels that include areas beneath bridges pursuant to Structure Policy Directive 1-8, “Material Storage Under Bridges.”

### **3-517 Equipment**

Section 5-1.33, “Equipment,” of the *Standard Specifications*, requires each piece of equipment to have a number stamped or stenciled on it. The identifying number should further be referenced to the license plate issued for the piece of equipment. The additional reference is especially important in the case of tractor and trailer combinations where the tractor may pull different trailers on separate occasions.

Use the identifying numbers to keep records of working and idle time for both equipment and operators, including, among other items, contract items, extra work, move in and out, and plant erecting. Some items of work will require more detailed records than other items. Determine which items of work need more detailed records and how much detail will be necessary. Detailed records are also required for costs when the quantity of certain contract items runs over 125 percent or under 75 percent of the estimated quantity.

Do not instruct the contractor’s employees in equipment operation, because the contractor may interpret suggestions as the resident engineer’s direct orders. Caltrans personnel must also not adjust the contractor’s equipment or ride on equipment other than that designed for personnel transportation or as required to inspect specific features of the work.

### **3-518 Property and Facility Preservation**

Section 5-1.36, “Property and Facility Preservation,” of the *Standard Specifications* makes the contractor responsible for protecting and preserving all property involved in the project, including underground facilities and other facilities that are not openly visible. The resident engineer must be diligent in determining and pointing out the existence of property Caltrans knows about, especially underground facilities and other facilities that are not openly visible. For information about locating and



protecting underground utilities, refer to Section 3-520C, “Nonhighway Facilities,” of this manual.

Verify that the contractor does everything required under the contract to protect and preserve property. The contractor may be required to install temporary safeguards to protect existing facilities. However, the contractor’s responsibility includes only what is necessary to protect against damage by construction activity.

If a facility was not sufficiently protected and it is damaged, the contractor is responsible for replacing it with material of equal or better quality.

Make sure that the contractor does not begin any excavation without first contacting the regional notification center.

### 3-518A Landscape

The plans and specifications may require that certain trees, shrubs, and other vegetation are preserved. Make sure the contractor is aware of all plant life to be protected.

If any permanent protection is ordered, pay for this work as for any other ordered additional work.

### 3-518B Railroad Property

Make sure the contractor’s operations do not interfere with railroad operations. Do not allow the contractor’s operations to encroach on the railroad right-of-way unless it is specifically allowed by the contract. If work is required on or affecting the railroad right-of-way, the railroad requires a railroad flagger be present.

For any excavations on or affecting railroad property, verify that the contractor submits work plans showing the protection system to be used. The district railroad coordinator is Caltrans’ liaison with the railroad and should submit the work plans to the railroad for approval. The review time for these work plans is 65 days.

### 3-518C Nonhighway Facilities

#### *3-518C (1) General*

Some utilities will be relocated or abandoned to clear the right-of-way before construction of a highway project. A utility relocation resident engineer is assigned to coordinate and inspect utility relocation to clear the right-of-way before construction. The resident engineer assigned to a project assumes the responsibility of the utility relocation resident engineer. Make contact with all of the affected utility owners to facilitate the coordination of the work with the contractor’s activities.

The district Right of Way Unit, acting through the district utility coordinator, is responsible for making changes to “notice to owner” forms and right-of-way agreements. The district Right of Way Unit must also make all decisions about financial liability between Caltrans and the owner for utility work. Send change orders involving utility work to the district utility coordinator for concurrence.

### 3-518C (2) Duties of the Utility Relocation Resident Engineer

The utility relocation resident engineer must perform the following duties:

- Review all documents for the utility relocation work, including the “notice to owner” forms, encroachment permits, special provisions, contract plans, and correspondence about utilities not shown on the plans.
- Check the location of proposed and existing utility installations for possible conflicts with the proposed construction of the highway project.
- Determine whether Caltrans or the utility will establish necessary survey control and establish lines and grades. If Caltrans is responsible for these items, verify that necessary lines and grades are properly established so that relocation crews can efficiently perform the work. For possible conflicts, compare all facilities with available plans. Also, spot-check survey marks at critical locations for possible conflicts. Require changes where necessary.
- If utility relocation or abandonment is to occur before the highway project starts and there is sufficient time for entries to be made before contract advertising, submit to the district utility coordinator any changes or notices of newly discovered facilities and enter them on the contract plans or in the special provisions. Document in the resident engineer’s pending file the changes or new facilities that cannot be included in the contract before advertising.
- If utility relocation or abandonment is concurrent with the highway project, include utility owners and the district utility coordinator in preconstruction conferences with the contractor. On larger projects with a number of utility relocations, it is advisable to schedule a separate meeting for each owner. In these meetings, discuss:
  - Special provision requirements.
  - The contractor’s schedule as it affects relocation work, project safety, and traffic control.
  - Potential problems.

Keep records of such meetings, and restate any decisions made through letters to all parties.

- Before allowing any change in the planned location of a utility facility or any excavation to determine the location of underground utility facilities, verify that such action complies with Chapter 17, “Encroachments and Utilities,” of the *Project Development Procedures Manual*.
- The district utility coordinator will advise the resident engineer when utility relocation work warrants full-time inspection. Keep records of utility relocation work on Form CEM-4601, “Assistant Resident Engineer’s Daily Report.” When inspection is full time, keep records for the following as complete as possible:
  1. Number of workers
  2. Equipment description

### 3. Hours worked

### 4. Materials salvaged

- When inspection is part time, record all detail consistent with observed activity. At a later date, the district Right of Way Unit will request these records to verify the utility owner's final bill.
- Keep the contractor advised of any utility work that will require a change in the contractor's work activities. Keep detailed records of any alleged or actual right-of-way delays related to utilities. Make recommendations to the district on any requests for time adjustments resulting from such delays. Refer to Section 3-804A (2), "Change Order Time Adjustments (Center Block)," of this manual for procedures for time extensions.
- The contractor is required to notify the resident engineer in writing of discovery of an underground facility not indicated on the plans or in the special provisions. In the absence of written notification from the contractor, document the location of the underground facility and include this documentation in a written confirmation sent to the contractor.
- Whenever the contractor has not received prior indication of an existing facility, change orders, including the repair of any damage, will be considered for approval. However, Caltrans will not pay for the repair of damage caused by negligence after the contractor was notified of the existence of a utility facility.
- Whenever underground facilities are discovered and they are not shown in the plans or the special provisions, notify the district utility coordinator. Instead of relocating the underground facility, the parties involved may reach an agreement with the utility owner about satisfactory protection of the facility before the contractor begins any physical work. If the contractor must protect the utility facility, prepare a change order to cover the payment for such work. The term "protection work," as used in contract administration, must include any work necessary to assure the utility's service, reliability, and ability to operate at approximately the same level as before any disturbance from construction activities. This work may include exploration to find exact locations, placement of barricades or warning devices, shoring, or even temporary bypass facilities or permanent relocation. However, this protection work will not include facility repairs for damage resulting from negligent equipment operation around properly protected facilities.
- Notify the district utility coordinator immediately when a utility facility is in conflict with the planned work. Follow up the notification in writing. Include drawings or plan sheets showing the location of the existing facility, the affected work, recommended action, and the estimated date when the conflict will begin to affect the contractor's work activities and time of completion. The district utility coordinator must arrange relocation work necessary to resolve the conflict.
- Determine whether facilities shown on the plans or specifications are being adequately protected from damage as required by the contract. Notify the contractor in writing of any inadequacies.

- When judging the extent of compliance required by the specifications, take into account the type of facility involved. Consider such things as the consequences of a potential accident. When consequences involve life and limb, do not permit work in such areas unless the contractor has made physical checks of the facility location. When working around hazardous facilities, do not assume calculations made from plans are accurate whether the plans were prepared by Caltrans or the utility owner.

### **3-519 Maintenance and Protection**

#### **3-519A General**

Section 5-1.37, "Maintenance and Protection," of the *Standard Specifications* requires the contractor to maintain and protect the work until Caltrans has granted maintenance and protection relief or has accepted the contract. This section also requires the contractor to prevent construction equipment that exceeds legal maximum weight limits from operating on completed or existing treated base, pavement, or structures.

If the highway in question is a state highway, Caltrans' maintenance forces will maintain the part of the existing highway outside of the limits necessary to construct the bid item work. If the highway in question (or highway part) is under the control of a local authority, either the local authority or Caltrans maintenance forces will maintain the part of the existing highway outside the limits necessary to construct the bid item work in accordance with the maintenance agreement between Caltrans and the local authority.

The maintenance superintendent, and the resident engineer must have a clear understanding of which portions of the highway Caltrans maintenance forces will continue to maintain during the project's construction. The following guidelines should be used when discussing roadway maintenance:

- If new work is required on an existing highway, the owner (Caltrans or the local authority) will continue to maintain the highway or portions of it until the contractor takes possession by erecting signs or begins bid item work. The owner will resume maintaining the highway or portions of it when the contractor is relieved from maintenance responsibility under Section 5-1.38, "Maintenance and Protection Relief," of the *Standard Specifications*.
- Often, on widening or improvement projects, existing highway facilities will be located outside the areas of work where no alterations, modifications, or replacements are planned. In these cases, except for repair of damage because of the contractor's operations, the owner will maintain the highway facility. If the new work consists of widening the existing highway's pavement or roadbed and the contractor's operations are restricted to a portion of the width of the roadway, the owner will continue maintaining the balance of the width.
- If damage caused by the public occurs to an existing facility within the construction limits and the work required to repair the damage is similar to the work being done by the contractor, the contractor may do the repairs.

- In case of emergency conditions within construction limits, the maintenance superintendent and the resident engineer should determine how to address the condition quickly and safely.
- Pay as extra work any work done by the contractor to maintain and repair damage to existing facilities, except for damage the contractor caused.

### 3-519B Load Limits

Except for special conditions described in Section 5-1.37, "Maintenance and Protection," of the *Standard Specifications*, all equipment hauling material over roads or streets open to public traffic to, from, or within the project must comply with weight limitations required by the California Vehicle Code Division 15. If the contractor wishes to move equipment that exceeds the size or weight limits, the contractor must provide necessary protective measures and repair any damage resulting from those overloads.

Refer to *Bridge Construction Records and Procedures*, Vol. 2, when the contractor requests moving or placing overloads on structures.

To enforce weight limitations for overloads hauled over public roads and streets, follow the procedure outlined below:

- Make sure contractors do not place or move equipment that exceeds the weight limits on or across a structure without written authorization.
- Coordinate with the project's structure representative on the review of all submittals requesting authorization to place on, or cross a structure with equipment that exceeds the weight limits. If a structure representative has not been assigned, coordinate the review through the bridge construction engineer. Structure Construction personnel will review the overload proposal in accordance with *Bridge Construction Records and Procedures* Vol. 2, Bridge Construction Memo 150-1.0, "Weight Overload Guidelines for Bridges on Construction Projects." After written authorization is provided, coordinate with the structures representative or bridge construction engineer to verify that the contractor's plan to move the overload on or across the structure is implemented in accordance with the authorized plan.
- Recognize that the most commonly used material transfer vehicles have axle loadings double the legal limit when empty, and triple the legal limit when loaded. When the contract requires the use of transfer vehicles or other types of heavy paving equipment, or the contractor at their option has determined they will use a material transfer vehicle, discuss at the prepaving and preconstruction conferences the contractor's plans to conform to the load limitation requirements.
- The assistant resident engineer receiving a weighmaster certificate indicating an overload may accept a load that is not more than 200 pounds over the legal gross weight. However, advise the contractor immediately that if the violation continues, Caltrans will refuse to accept such loads and will notify the California Highway Patrol.

- When a weighmaster certificate indicates that a load is more than 200 pounds over the legal gross weight, reject the load and notify the California Highway Patrol that overloads are being hauled.
- Prohibit rejected material from being used in the work unless the load is reduced and is again weighed to adhere to the legal gross vehicle weight.
- Record the identification of rejected weighmaster certificates in the daily report.

### 3-519C Damage by Public Traffic

Only in some cases will Caltrans pay to repair damage to completed permanent facilities caused by public traffic. Completed permanent facilities are any features constructed by the contractor that will become a permanent part of the project. Unless specifically provided for, Caltrans will not pay for damage to temporary facilities such as falsework and forms.

The facility need not be 100 percent complete for the contractor to be compensated, but it must be functional. Caltrans must not pay for damage from public traffic to facilities that are not considered functional yet. For example, guardrail posts or guide marker posts or a bridge still supported by falsework would not be considered functional. However, for a concrete barrier that only requires a specified light abrasive blast finish, Caltrans may pay for damage caused by public traffic because the barrier is functional.

Following are guidelines for determining payment for damage by public traffic:

- Whenever the resident engineer orders the pavement or deck of a structure opened to public traffic, the contractor is relieved of responsibility for damage to the completed permanent facilities caused by public traffic. The contractor will be relieved of responsibility whether the opening to public traffic occurs before the scheduled opening time, occurs as the natural sequence of events, or occurs as the result of a contract specification. The contractor will be relieved of responsibility for damage to completed permanent facilities caused by public traffic whether traffic is placed on new alignment not previously used by traffic or traffic is placed on new resurfacing opened after daily closures. Compensation for damage caused by public traffic is appropriate if the completed surfacing consists of an asphalt concrete base or leveling course.
- If the contractor requests an opening ahead of the normal schedule, the following applies:
  - When the opening does not conform to the specified or shown order of work, it must be covered by a change order approved by headquarters, in accordance with Section 5-3, "Change Orders," of this manual. If Caltrans will not compensate the contractor for damage to completed permanent facilities, the change order must state this fact.
  - When the opening does not conform to the specified or shown order of work, the resident engineer will normally base approval or disapproval of the change order on an evaluation of the benefit to public traffic. If the benefit is substantial, it is appropriate to approve the change order and compensation

in accordance with Sections 5-1.38, “Maintenance and Protection Relief,” 5-1.39, “Damage Repair and Restoration,” and 7-1.03, “Public Convenience,” of the *Standard Specifications*. If measurable benefits accrue to the contractor, make sure the change order provides a credit to Caltrans.

- If the benefits to public traffic are borderline or negligible, it is appropriate to approve the change order under the condition that the contractor be responsible for damage caused by public traffic. The contractor must acknowledge the condition in writing. Again, if measurable benefits accrue to the contractor, include a credit to Caltrans in the change order.
- If good reason exists for doing so, the resident engineer can refuse to approve a proposed opening.

When the contract temporarily routes public traffic closer to the facilities than the traffic will be after completion of the work, the contractor will be relieved of responsibility for damage to the completed permanent facilities caused by public traffic. For example, Caltrans will relieve the contractor of responsibility if damage occurs to a completed guardrail at the edge of the shoulder when the plans or special provisions require public traffic to be temporarily placed on the shoulder to facilitate construction.

### **3-520 Maintenance and Protection Relief**

The contractor may be relieved from maintaining and protecting certain completed portions or sections of the work under conditions specified in Section 5-1.38, “Maintenance and Protection Relief,” of the *Standard Specifications*.

Caltrans policy recommends relief for only those portions of the work specifically mentioned in the specifications unless a request for relief fully justifies exceptions.

For completed roadways, the specified length of 0.3 miles is the minimum practical length of completed main roadway on which to recommend relief from maintenance and protection. However, shorter units of completed work, such as on-ramps, off-ramps, frontage roads, or approaches to under-crossings and overcrossings, may also be eligible for maintenance and protection relief.

Do not recommend relief from maintenance and protection on a 0.3-mile section with exceptions within that length unless you provide a valid reason to support the recommendation. Exceptions must be defined in terms of longitudinal sections of highway or certain specified areas. For example, it is unacceptable to recommend maintenance and protection relief for a total project except for the inlet ditch to the right of stations 20+00 to 25+00. It is acceptable to recommend relief for the total project except for stations 15+00 to 27+00 (the section of highway that could be affected by the uncompleted ditch to the right of stations 20+00 to 25+00).

Completed bridges or other major structures may also receive maintenance and protection relief. For purposes of relief from maintenance and protection, the following describes what constitutes a “bridge or other major structure:”

- Section 1-1.07, “Definitions,” of the *Standard Specifications* indicates a structure will be considered a bridge if the plans or other portions of the contract so identify it.
- Other structures to be considered of major importance are culverts in excess of 6.5 feet in diameter or of approximate equivalent area.
- A facility not meeting the above criteria will be considered of major importance only if its final cost exceeds 5 percent of the original total bid for all of the bid items (including mobilization).
- Projects with noncontiguous locations may be accepted location by location, provided the work at each requested location is complete. Noncontiguous areas of work outside the right-of-way on major projects may also be accepted if the procedures outlined in Section 3-523C, “Work for Other Agencies or Owners,” of this manual have been followed.

Maintenance and protection relief excuses the contractor from responsibility for repair of damage from causes other than those resulting from the contractor’s own operations or from the contractor’s negligence. Before recommending a request for maintenance and protection relief, determine that the requested work will not be damaged as a result of incomplete adjoining work. For example, a roadway section may be complete while an upstream culvert remains incomplete. Water flowing past the uncompleted culvert may damage a portion of the requested roadway section.

Before recommending maintenance and protection relief, analyze each situation critically to determine if it qualifies in all respects. Indiscriminate recommendations for relief from maintenance and protection must not jeopardize the project’s proper completion. Once the contractor is relieved from maintaining and protecting a portion of the work, the contractor cannot be required to do more work on it except by agreement or to remedy defective work or materials.

If the engineer has any doubts about the requested area’s eligibility, deny the contractor’s request for relief from maintenance and protection. Inform the contractor in writing so no doubt exists as to the status of the contractor’s request and the nature of uncompleted work. Section 5-1.38, “Maintenance and Protection Relief,” of the *Standard Specifications* states that the portion of work must have been completed under the contract and to the engineer’s satisfaction before it becomes eligible for maintenance and protection relief.

For landscape projects, consider relief from maintenance and protection requests for non-plant establishment related items of work, such as for fences, curbs, sidewalks, asphalt concrete placed as island paving, and seal coats placed on islands, once the plant establishment period begins. Such items may not have a direct bearing on the success or failure of plant establishment, and it is unreasonable to require the contractor to maintain them. To be consistent with the policy for nonlandscape contracts, this type of relief from maintenance and protection responsibility will be granted for an entire group of items, not item by item. An item that protects the planting or is involved in plant establishment should not be submitted for



maintenance and protection relief. This category typically includes planter boxes, sprinkler systems, header boards, or mesh.

Safety roadside rest areas will not be accepted item by item but may be recommended as completed units.

Maintenance and protection relief denotes recognition of completed work. Therefore, the resident engineer must conduct a maintenance review of areas that will be granted maintenance and protection relief. Also, recommendations for this action on work for other public agencies or owners require the concurrence of these agencies and owners. Before recommending relief from maintenance and protection on such portions of the work, complete the procedures outlined in Sections 3-525C, "Work for Other Agencies or Owners," 5-006C, "90 Percent Review," and 5-006D, "Final Inspection Review," of this manual. In the communication recommending relief, include a statement that the agency authorities concur or, in the absence of such concurrence, include justification for relief.

For requests for relief from maintenance and protection, use Form CEM-0501, "Relief from Maintenance."

### **3-521 Requests for Information and Potential Claim Records**

#### **3-521A General**

During the course of the project, and up to receiving the proposed final estimate, the contractor must submit a contract dispute or protest in the form of a request for information. If the request for information leads to a dispute, the contractor must follow the three-part potential claim process specified in the contract. The three parts of the potential claim process are the initial potential claim record, the supplemental potential claim record, and the full and final potential claim record.

Verify that on all potential claims-related documents, the date and time of receipt, and the name of the person who received it are noted.

Verify that the request for information and potential claim documents are complete and timely. If the information is incomplete, notify the contractor of the deficiencies and request that the contractor resubmit the document with the complete information. If the contractor failed to submit the request for information or potential claim record within the specified time, notify the contractor that the submittal was not timely and state that this failure to comply with the procedure provided for in the contract is a waiver of the potential claim, a waiver of the right to a corresponding claim for the disputed work, and a bar to arbitration.

Some sample dispute response clauses are in Section 3-523E, "Sample Dispute Response Clauses," of this manual.

#### **3-521B Requests for Information**

The contractor may submit a request for information at any time to clarify contract provisions, notify the resident engineer of a change in condition, or file a protest. The

request for information must be in writing and delivered to the resident engineer (in person, by mail, or by email) by the contractor.

Using a request for information, the contractor may protest an approved change order not executed by the contractor, compensation for work specified in the change order, adjustment of contract time, Weekly Statement of Working Days, progress payment, delays, liquidated damages, or any decision by the resident engineer.

Note that not all requests for information will result in a potential claim.

Upon receipt of a request for information used as a protest, however, the resident engineer starts a section in Category 62, "Disputes," of the project records. Additional information, including related documents and correspondence will be included in this section.

The resident engineer references the contractor's request for information and must respond in writing within the time specified in the contract. A response should include acknowledgment that the request for information was received and may include the information requested, an invitation for further discussion, a request for clarification, or the anticipated date for a complete response.

### 3-521C Potential Claim Records

The contractor submits a written potential claim record when the contractor believes additional compensation is due in accordance with Section 5-1.43, "Potential Claims and Dispute Resolution," of the *Standard Specifications*. Follow the potential claim record process when protested issues and disputes are not resolved.

The contractor provides a unique identification number for each potential claim submitted. For supplemental potential claim records and full and final potential claim records, the contractor must certify each form with reference to California Government Code, Title 2, Sections 12650–12655, "False Claims Actions."

If a supplemental potential claim record or a full and final potential claim record is received without this certification or is otherwise incomplete or incorrectly filled out, notify the contractor in writing that it was not submitted in accordance with Section 5-1.43, "Potential Claims and Dispute Resolution," of the *Standard Specifications* and that the contractor is allowed 15 days to correct the deficiencies or withdraw the potential claim. If the corrected record is not provided in the required time, notify the contractor in writing that Caltrans will not consider the potential claim. Discuss this latter notification with the construction engineer.

If the nature, circumstances, or basis of the claim differs from the prior potential claim record, reject the record and return it with a letter indicating which component has changed.

#### *3-521C (1) Form CEM-6201D, Initial Potential Claim Record*

The initial potential claim record provides a notification to Caltrans of a disputed issue. This record provides the nature and circumstances of the dispute and gives the parties the opportunity to mitigate the associated costs with the goal of an early resolution.

When the contractor's initial potential claim record is not timely, Caltrans may be disadvantaged by limiting available corrective actions. The timeliness of the original initial potential claim record is one of the many considerations in evaluating a contractor's protest, especially when quantifying the contractor's damages and compensation requests.

### 3-521C (1a) Resident Engineer's Response to the Initial Potential Claim Record

The resident engineer's response to the initial potential claim record acknowledges the dispute, directs the contractor on how to proceed with the disputed issue, and informs the contractor of the contractual time requirements to submit the supplemental and full and final potential claim records.

The resident engineer must determine if the contractor's dispute has merit. If the dispute does have merit, the resident engineer must take appropriate action within the scope of the contract and within the resident engineer's authority to resolve the dispute. If the resident engineer cannot resolve the dispute or lacks the authority to act, the resident engineer should discuss the issue with the construction engineer and the structure construction engineer, if appropriate.

### 3-521C (2) *Form CEM-6201E, Supplemental Potential Claim Record*

The supplemental potential claim record provides justification for additional compensation and adjustments with references to the appropriate provisions of the contract. The record must also include the estimated costs and impacts to the schedule. The contractor must update the cost estimate or the impact to the schedule as soon as a change is recognized.

Upon receipt of Form CEM-6201E, "Supplemental Potential Claim Record," analyze the contractor's potential claim. This may involve discussing the potential claim with peers, subject matter experts, and district management.

Potential claims involving differing site conditions that lack merit must also include an internal review by a management review committee as referenced in Section 3-404, "Differing Site Conditions," of this manual.

### 3-521C (2a) Resident Engineer's Response to the Supplemental Potential Claim Record

Make sure the supplemental potential claim record is timely and is submitted on Form CEM-6201E, "Supplemental Potential Claim Record."

Once you receive a complete potential claim record submittal, evaluate it and provide a detailed response letter to the contractor within the time specified in the contract. The response letter must include the following sections:

- **Background**—Explain the circumstances that led to the dispute. Include only information such as events, dates, discussions, meetings, memos, and letters.
- **Contractor's Position**—Base the position on the information provided in the contractor's supplemental potential claim record. Use direct quotes from the

information provided by the contractor without attempting to interpret or clarify them.

- Resident Engineer's Position—State the merits of the potential claim clearly and concisely. Fully document the contract requirements such as permits, plans, specifications, and other requirements supporting the findings.
- If the potential claim is determined to have no merit, remind the contractor of the option to further pursue the potential claim as specified in the contract. Inform the contractor of the contractual time requirements for the alternative dispute resolution procedures and for submitting the full and final potential claim record.

When properly prepared, the response letter serves as the basis for the preliminary construction claim findings.

Follow the guidelines in Section 3-523D, "Documentation Guidelines for Disputes," in this manual.

### *3-521C (3) Form CEM-6201F, Full and Final Potential Claim Record*

Upon receipt of Form CEM-6201F, "Full and Final Potential Claim Record," evaluate it and respond within the time specified in the contract. Do not respond to the contractor if the full and final potential claim record is submitted after contract acceptance. Review and consider the information before processing the proposed final estimate.

### *3-521C (3a) Resident Engineer's Response to the Full and Final Potential Claim Record*

The requirements and format for the resident engineer's response to the full and final potential claim record are the same as outlined in Section 3-523C (2a), "Resident Engineer's Response to the Supplemental Potential Claim Record." Refer also to Section 3-523D, "Documentation Guidelines for Disputes," later in this section.

### 3-521D Documentation Guidelines for Disputes

The following are guidelines for keeping records and responding to requests for information and potential claim records:

- Check that reports and documents are factual and accurate. Use specific statements in daily reports. An entry such as, "Told the contractor that . . ." is not satisfactory, whereas "I told Foreperson Smith that . . ." is satisfactory. A general conclusion about the effect of a conversation is not helpful; a statement of the conversation is better.
- Answer letters containing questionable or erroneous statements made by the contractor in writing by refuting or correcting the contractor's statement.
- Put orders and decisions in writing. Confirm any important statement about the unacceptability of the work in writing. Before ordering the contractor to proceed with extra or additional work, obtain approval. If the contractor verbally informs

you of a dispute, advise the contractor to comply with the applicable requirements of the *Standard Specifications*. Include notes on verbal discussion in the resident engineer's daily report.

- Identify the issue and try to come to agreement with the contractor on a brief description of the dispute. Identify areas of agreement and disagreement within the issue. This will help to minimize the peripheral items that could cloud the dispute.
- The engineer's response to the contractor's supplemental potential claim record will serve as the basis for the Caltrans position paper in alternative dispute resolution proceedings.
- Focus on costs specific to the dispute, but do not discuss any funding availability, such as project contingency balance, with the contractor.
- If a dispute arises during the work's progress, keep accurate records of the operations to eliminate subsequent arguments related to work costs. During the progress of the disputed work, make regular tentative agreements for the labor, equipment, or material quantities involved.
- Take preconstruction and project progress photographs. Photographs and videos are valuable in confirming job conditions at a particular point in time. Dated pictures of areas where work is not underway may be as important as pictures of construction operations or completed work.
- Record the full names of all of the contractor's personnel involved in any dispute. These individuals may need to be located later. Information such as full names and addresses of the contractor's personnel are contained in the certified payrolls.
- Record equipment information such as description, model number, contractor's equipment number, size, and capacity to help calculate and confirm costs associated with disputes.

Category 62, "Disputes," of the project records must contain copies of all documents related to every dispute on the project including progress schedules. This information provides the basis for preparing the preliminary construction claim findings. Follow the procedures outlined in Section 5-102, "Organization of Project Documents," of this manual to provide a good basis for documenting claims.

### 3-521E Sample Dispute Response Clauses

Use the following sample clauses in responses to requests for information and potential claim records. Edit the clauses to fit the specific situation.

**3-521E (1) Request for Information for Notification of a Possible Differing Site Condition**

**3-521E (1a) General**

“I have received your request for information dated *[insert date]* providing notification of a possible differing site condition encountered at *[give location]*. It is my understanding that you believe the material encountered differs materially from that shown on the plans or is considered to be of an unusual nature . . .”

**3-521E (1b) If No Merit**

“I have investigated the material and the contract documents *[specify which documents]*, and have found that the material does not vary from that shown on the contract documents. Therefore, no additional cost or extension of contract time is warranted to complete the work.

“If you still believe a differing site condition exists, follow the procedures and processes described in Sections 5-1.42, ‘Requests for Information,’ and 5-1.43, ‘Potential Claims and Dispute Resolution,’ of the *Standard Specifications*.”

**3-521E (1c) If Merit**

“I have investigated the material and the contract documents *[specify which documents]*, and have found that the material does vary from that shown on the contract documents. Therefore, additional cost or extension of contract time may be warranted to complete the work.

“Please furnish me with the additional costs that may result from the increased work as a result of this differing site condition.”

**3-521E (1d) If Partial Merit**

“I have investigated the material and the contract documents *[specify which documents]*, and have found that the material from *[specify locations or stations]* does not vary from that shown on the contract documents and the material from *[specify locations or stations]* does vary from that shown on the contract documents. Therefore, additional cost or extension of contract time may be warranted to complete the work from *[specify locations or stations]*.

“Please furnish me with the additional costs for the work from *[specify locations or stations]* that may result from the increased work as a result of this differing site condition.”

**3-521E (2) Requests for Information to Protest a Time Adjustment Determination in a Change Order**

Use the following clauses in your response to a protest of time determination in a change order:

### 3-521E (2a) General

“I have received your request for information dated [*insert date*] to protest the time adjustment under Change Order No. [x]. I understand that you are protesting the determination of a time extension of [y] working days for this change and you believe you are entitled to a time extension of [z] working days.”

### 3-521E (2b) If No Merit

“My review of Change Order No. [x], anticipated work, and the progress schedule indicates that the work required by the change order does not affect the controlling operation [*if a critical path method (CPM) review was performed substitute “critical path” for “controlling operation”*]. Therefore, you are not entitled to an extension of contract time.

“If you still believe that a time extension is warranted, please provide documentation to support your position, either in narrative form or an analysis showing the effect of this work on the completion date of the project. Continue to follow the procedures and processes described in Sections 5-1.42, ‘Requests for Information,’ and 5-1.43, ‘Potential Claims and Dispute Resolution,’ of the *Standard Specifications*.”

### 3-521E (2c) If Merit

“My review of Change Order No. [x], anticipated work, and the progress schedule indicates that the work required by the change order affects the controlling operation [*if a CPM review was performed, substitute “critical path” for “controlling operation”*]. I have determined a time extension of [y] days associated with the work.

“Change Order No. [x] will be revised to reflect this adjustment of contract time. Please review and sign the revised change order if you agree with the change.”

### 3-521E (2d) If Partial Merit

“My review of Change Order No. [x], anticipated work, and the progress schedule indicates that the work required by the change order does not alter the controlling operation [*if a CPM review was performed substitute “critical path” for “controlling operation”*] as you have indicated. My review indicates that the timeline for the controlling operation [*if a CPM review was performed substitute “critical path” for “controlling operation”*] was lengthened by [*number of days or dates*]. Therefore, you are entitled to an extension of contract time by [y] days. Change Order No. [x] will be issued to provide an adjustment of contract time for [*number of days or dates*].

“If you still believe that an additional time extension is warranted, please provide documentation to support your position, either in narrative form or an analysis showing the effect of this work on the completion date of the project. Continue to follow the procedures and processes described in Sections 5-1.42, ‘Requests for Information,’ and 5-1.43, ‘Potential Claims and Dispute Resolution,’ of the *Standard Specifications*.”

### 3-521E (3) *Requests for Information to Protest a Weekly Statement of Working Days*

Use the following clauses in your response to a request for information to protest the determination of contract time in a Weekly Statement of Working Days:

#### 3-521E (3a) General

“I have received your request for information dated [*insert date*], to protest the Weekly Statement of Working Days No. [x]. It is my understanding that you are protesting the charging of [*specify day or days protested*] as a working day because [*specify the contractor’s reasons for protesting the days in question*].”

#### 3-521E (3b) If No Merit

“The Weekly Statement of Working Days was completed in accordance with Section 8-1.05, ‘Time,’ of the *Standard Specifications*. Our records indicate that you were working on the controlling operation more than 50 percent of the scheduled work shift in question. This constitutes a working day as defined in Section 1-1.07, ‘Definitions,’ of the *Standard Specifications*. If you believe that the day(s) in question should be considered nonworking days, please submit documentation in support of your protest. In the absence of such documentation, the Weekly Statement of Working Days No. [x] will remain unchanged.

“If you decide to pursue this as a potential claim, follow the procedures and processes described in Sections 5-1.42, ‘Requests for Information,’ and 5-1.43, ‘Potential Claims and Dispute Resolution,’ of the *Standard Specifications*.”

#### 3-521E (3c) If Merit

“I have reviewed the project records and have determined that [*insert date*] should be revised to indicate a nonworking day. Attached is the revised weekly statement of working days no. [x].”

#### 3-521E (3d) If Partial Merit

“Our records indicate that you were working on the controlling operation for the entire day on [*insert dates*] but not on [*insert dates*]. [*insert dates*] should be revised to indicate a nonworking day. Attached is the revised Weekly Statement of Working Days No. [x].

“The Weekly Statement of Working Days was completed in accordance with Section 8-1.05, ‘Time,’ of the *Standard Specifications*. Our records indicate that you were working on the controlling operation more than 50 percent of the scheduled work shift in question. This constitutes a working day as defined in Section 1-1.07, ‘Definitions,’ of the *Standard Specifications*. If you believe that the days in question should be considered nonworking days, please submit documentation in support of your protest. In the absence of such documentation, the revised Weekly Statement of Working Days No. [x] will remain unchanged.



“If you decide to pursue this as a potential claim, follow the procedures and processes described in Sections 5-1.42, ‘Requests for Information,’ and 5-1.43, ‘Potential Claims and Dispute Resolution,’ of the *Standard Specifications*.”

### 3-521E (4) *Potential Claim Record*

Use the detailed format and response guidelines in Section 3-523C, “Potential Claim Records,” of this manual in conjunction with the following clauses to respond to a potential claim record. Also, refer to Section 3-523C (1a), “Resident Engineer’s Response to the Initial Potential Claim Record,” 3-523C (2a), “Resident Engineer’s Response to the Supplemental Potential Claim Record,” and 3-523C (3a), “Resident Engineer’s Response to the Full and Final Potential Claim Record,” of this manual.

#### 3-521E (4a) General

“I have received your [*state initial, supplemental, or full and final*] potential claim record dated [*insert date*], regarding [*state the issue*]. It is my understanding that this potential claim is the result of a dispute over [*state the dispute and give background of the dispute*].

“I understand your position to be [*quote the contractor’s position as described in the potential claim record*].”

#### 3-521E (4b) If No Merit

“I have reviewed your [*state initial, supplemental, or full and final*] potential claim and based on the information you provided I find that it has no merit. [*Explain why in detail.*]

“If you decide to pursue this as a potential claim, follow the procedures and processes described in Sections 5-1.42, ‘Requests for Information,’ and 5-1.43, ‘Potential Claims and Dispute Resolution,’ of the *Standard Specifications*.”

#### 3-521E (4c) If Merit

“I have reviewed your [*state initial, supplemental, or full and final*] potential claim and based on the information you provided I find that it has merit. [*Explain why.*] Change Order No. [x] will be issued to address the points that have merit. Please provide me with the cost associated with your notice of potential claim for review and determination of compensation.”

#### 3-521E (4d) If Partial Merit

“I have reviewed your [*state initial, supplemental, or full and final*] potential claim and based on the information you provided I find that the following points have merit: [*List points and explain why in detail.*] The following points do not: [*List points and explain why in detail.*]

“If you decide to pursue this as a potential claim, follow the procedures and processes described in Sections 5-1.42, ‘Requests for Information,’ and 5-1.43, ‘Potential Claims and Dispute Resolution,’ of the *Standard Specifications*. Change

Order No. [x] will be issued to address the points that have merit. Please provide me with the cost associated with your notice of potential claim for review and determination of compensation.”

### 3-521E (4e) Request Additional Information

“I have reviewed your [*state initial, supplemental, or full and final*] potential claim record [*or request for information*]; however, I am unable to make a determination based on the information you provided. Please provide me with the following information so I can make a determination regarding your potential claim.”

## **3-522 Alternative Dispute Resolution Processes**

Alternative dispute resolution helps resolve disputes and potential claims, mitigate damages, and maintain project schedules.

The alternative dispute resolution processes are partnering, dispute resolution ladders, (DRL), dispute resolution advisor (DRA), and dispute resolution board (DRB). Their use is based on the size and duration of the contract. Refer to the special provisions and Sections 5-1.09, “Partnering,” and 5-1.43E, “Alternative Dispute Resolution,” of the *Standard Specifications* to determine which alternative dispute resolution process is appropriate for the contract.

In order for the alternative dispute resolution processes to be most effective, they must be set up and used in accordance with the applicable provisions. Set up partnering, the DRL, the DRA, or the DRB as quickly as possible within the time specified to assure timely referral and aid in resolution of dispute issues.

### 3-522A Partnering-Facilitated Dispute Resolution

As one of the alternative dispute resolution processes, partnering is used to develop and maintain trust and collaboration among project team members. Using partnering best practices provides a process for the project team to resolve project issues and prevent them from becoming disputes. Refer to Section 5-1.09, “Partnering,” of the *Standard Specifications*, and Section 3-504, “Partnering,” of this manual for further guidance.

If facilitated dispute resolution is included in the partnering charter for the project and the project team is no longer having a productive dialogue regarding a dispute, discuss with the contractor the use of facilitated dispute resolution as a way to reestablish productive dialogue. Schedule facilitated dispute resolution within the timelines provided in Section 5-1.43E(3)(d), “DRB Traditional Dispute Meeting,” of the *Standard Specifications*. Partnering-facilitated dispute resolution is not a substitute for any other contract requirement or administrative claims procedure or provision. Refer to Chapter 7, “Resolving Disputes,” of the *Field Guide to Partnering on Caltrans Construction Projects* for further direction and guidance.

### 3-522B Dispute Resolution Ladder

Projects with bids less than \$3 million may use the partnering dispute resolution ladder (DRL). The optional DRL process will be included in the special provisions or can be added with a no cost change order.

The DRL is an optional part of the alternative dispute resolution process. If used, the DRL runs concurrently with requests for information and potential claim records. It is not a substitute for any other contract requirement or administrative claims procedure or provision.

#### *3-522B (1) Dispute Resolution Ladder—Establishment*

- At the preconstruction conference, kickoff partnering workshop, or any time before contract acceptance, the resident engineer offers the contractor the option of using a DRL as an alternative dispute resolution process. When accepted by the contractor, the resident engineer should document the DRL by filling out Form CEM-6208, “Dispute Resolution Ladder Establishment,” which lists the names, titles, and contact information for Caltrans and contractor personnel. Caltrans’ dispute resolution ladder, in ascending order, is as follows:
  - Field Level—Inspector
  - Level 1—Resident Engineer
  - Level 2—Construction Engineer
  - Level 3—Construction Manager, Office Chief, or Deputy District Director of Construction, as designated by the Deputy District Director of Construction.

The resident engineer and the contractor’s representative may use Form CEM-6209, “Elevation of a Dispute,” to define the dispute before elevating it.

The resident engineer does not pay the contractor’s costs for participating in the DRL process.

#### *3-522B (2) Dispute Resolution Ladder—Operation*

A dispute will be advanced up the ladder when an agreement between the parties on a defined level cannot be reached within the time specified. A dispute can be elevated sooner if both representatives on the defined level agree and the representatives at the next higher level concur.

### 3-522C Dispute Resolution Advisor and Dispute Resolution Board

A DRA or a DRB is used on a project with at least 100 working days. A DRA is an experienced neutral party that Caltrans and its contractor use to help resolve disputes on contracts with a total bid of \$3 million to \$10 million. A DRB is a three-member board of knowledgeable neutral parties that Caltrans and the contractor use to resolve disputes on contracts with a total bid of more than \$10 million.

Use of a DRA or DRB allows knowledgeable and experienced board members who are not directly involved with the contract to review and analyze a dispute and provide their recommendations. Although these recommendations are not binding,

they are valuable in helping to resolve disputes before disputes become claims. These recommendations become important if the dispute is carried over to arbitration.

Disputes are documented in a potential claim record. They must be referred to the DRA or DRB, and a dispute meeting must be held within the timelines specified. Generally, it is not in Caltrans' best interest to wait to have a dispute heard. Rarely do disputes get smaller as time passes. Furthermore, memories fade with time, and project personnel often move on. Adhering to the timelines is key to resolving disputes as quickly and as fairly as possible. For DRA and DRB suggested operating procedures and traditional dispute meeting timelines, refer to:

<https://dot.ca.gov/programs/construction/dra-information-and-candidate-list>

<https://dot.ca.gov/programs/construction/drb-information-and-candidate-list>

If a contractor is not adhering to the specified timelines for referring a dispute to the DRA or DRB, remind the contractor, in writing, of the contractual requirement to do so. If a contractor indicates a wish to defer having the dispute meeting, a new date can be arranged if the resident engineer agrees to the request. If not, remind the contractor of the contractual requirements regarding the timelines for having a dispute meeting.

The Division of Construction's alternative dispute resolution (ADR) engineer maintains the DRA and DRB websites and a list of prequalified member candidates.

### *3-522C (1) Establishment*

When contractually required, the parties establish and use the DRA or DRB as part of the administrative dispute resolution and potential claims process. Early establishment of the DRA and DRB is important for resolving disputes as they occur. Delays may affect the ability of the DRA or DRB to accurately analyze disputes without a baseline reference.

Use the following procedure to select the best candidates from the prequalified lists. Links to the lists can be found under "Dispute Resolution" at the Division of Construction's internet website.

1. Review the list of names and associated summaries of experience to find the most qualified candidates for the particular project.
2. Select a candidate with the knowledge and work history that best match the type of project.
3. Select a candidate with dispute resolution experience in the areas with the largest potential for dispute.
4. Contact the Division of Construction field coordinator and ADR engineer for guidance and additional information about the prospective candidates.
5. Contact the candidates, provide them with the project information, and determine their desire and availability to serve. If a candidate is willing and available to serve, request a disclosure statement with an updated résumé.

The Division of Construction field coordinator must approve the candidates nominated by Caltrans and the third DRB candidate. The division field coordinator must also approve candidates not on the Caltrans prequalified list.

Nominating a DRA or DRB candidate not on the prequalified list requires that the candidate has completed training by the Dispute Resolution Board Foundation. In addition, the candidate needs to have a minimum of 10 years of experience in or directly related to public works, heavy-highway construction projects with, or on behalf of, federal, state (particularly Caltrans), or local government agencies. The experience must be any combination of the following:

1. Supervisor, manager, or executive in public-works heavy-highway construction contracts with emphasis in resolving disputes arising out of those contracts.
2. Attorney representing parties in litigating or arbitrating public-works, heavy-highway construction contract claims.
3. Judge or arbitrator adjudicating or otherwise resolving public-works, heavy-highway construction contract claims.

Require the candidate to submit a candidate application and send the application to the ADR engineer who processes it. A link to the application can be found at the Division of Construction website. If the candidate is approved and agrees, the candidate is added to the prequalified list by the ADR engineer.

Submit the names, disclosure statements, and résumés of the dispute resolution candidates to the contractor at the preconstruction conference, and ask the contractor to do the same. Jointly with the contractor, review the disclosure statements and résumés of the potential DRA or DRB candidates for qualifications and possible conflicts of interest. Jointly select the most qualified candidates as the DRA or DRB members in accordance with the specifications.

Upon selection, promptly notify the DRA or DRB member in writing, with a courtesy copy to the contractor. Notify the candidates not selected that they are no longer under consideration for the project.

The Dispute Resolution Advisor (DRA) shall complete Form CEM-6206, "Dispute Resolution Advisor (DRA) — Establishment Report," upon establishing the DRA and email it to the resident engineer and to the alternative dispute resolution (ADR) engineer at [ADR.Engineer@dot.ca.gov](mailto:ADR.Engineer@dot.ca.gov).

For the DRB, require the first two approved members to nominate the third member and provide the appropriate documentation for the third member's approval. Once there is approval of all three members, the DRB chair shall complete Form CEM-6202, "Dispute Resolution Board (DRB) — Establishment Report," upon establishing the DRB and email it to the resident engineer and the ADR engineer at [ADR.Engineer@dot.ca.gov](mailto:ADR.Engineer@dot.ca.gov).

Sign the DRA or DRB agreement as soon as you have established the members. The *Dispute Resolution Advisor Agreement* and the *Dispute Resolution Board Agreement* are available through the Division of Construction website.

### *3-522C (2) DRA or DRB Member Replacement*

With 15 days' notice, a DRA or DRB member may be replaced, or the member may voluntarily resign. Caltrans or the contractor may terminate the service of a member who fails to comply fully with all required employment and financial disclosure conditions of the DRA or DRB membership.

If Caltrans wants to replace the DRA or Caltrans-nominated DRB member, the resident engineer discusses the proposal with district management. If district management concurs, the district submits its recommendation to the Division of Construction's field coordinator for approval before notifying the advisor or board member and the contractor.

When the need arises, a replacement member is nominated and approved using the appropriate contractual selection process. In the case of a board member, if the previous member was the chair, the new board must agree on a new chair. In the case of an impasse, the two original DRB members may select the chair by blind draw. Caltrans, the contractor, and the DRA or DRB members sign a revised agreement. The replacement process begins immediately upon receiving a notice of termination and is completed within 15 days.

### *3-522C (3) Operation*

Alternative dispute resolution is for the benefit of both parties to the contract, so either party may refer a dispute to the DRA or DRB.

As a complement to the agreement, the DRA or DRB chair may produce operating procedures with details for conducting meetings. Work with the DRA or DRB and the contractor to reach an equitable agreement on the meeting process for the individual project circumstances. Verify that the operating procedures comply with all the contract requirements and the DRA or DRB agreement before approving them.

For projects with federal funding, notify the Federal Highway Administration (FHWA) representative when an issue is referred to the DRA or DRB. Coordinate with the FHWA representative on full-oversight projects to assure that the agency participates in any related change order. Give the FHWA representative the date of dispute resolution meetings, information regarding the dispute, and the DRA's or DRB's recommendation.

### *3-522C (3a) Informal Dispute Meetings*

The informal meeting is meant for small, uncomplicated disputes. The informal meeting is optional and is meant to reduce the duration and effort needed to hear a dispute. All parties must agree that the informal process is appropriate for resolving the dispute. The informal dispute process parallels the traditional process.

Typically, very little documentation is provided at an informal dispute meeting. The parties generally just tell their story to the DRA or DRB members and await the recommendation, which should come the same day as the meeting. Use of the informal process must not delay the hearing of a dispute using the traditional process.

### 3-522C (3b) Traditional Dispute Meetings

The traditional dispute meeting must be used for more complex issues or those issues that were not resolved informally. A traditional dispute meeting is mandatory if the contractor wishes to pursue the dispute.

The contractual time period for submitting the position paper and having a dispute meeting is in the specifications and agreements. Remind the contractor of the contractual time period for referring disputes to the DRA or DRB when responding to the supplemental potential claim record.

When a dispute is referred to a DRA or DRB, prepare the position paper for submittal to the contractor and the DRA or DRB in advance of the oral presentation at the meeting. Present an effective position paper, because the recommendation may be introduced in arbitration proceedings. Remember, the purpose of the position paper is to persuade the DRA or DRB that your position complies with the contract.

Use the following format for the position paper:

- Table of Contents.
- Description of the dispute—A summary paragraph defining both the nature of the dispute, as agreed upon with the contractor, and the clearly defined basis for denying compensation.
- Background or chronology of the dispute—The history of the issue in a narrative format including the facts, presented in a nonjudgmental manner. This section must include a description of any partial or attempted resolutions.
- Contractor's stated position—As stated in the contractor's potential claim records, other written materials, or oral communications. Quoted segments are most effective when supplemented by exhibits. Present this section in a nonjudgmental manner and do not elaborate on the contractor's previously stated position.
- Caltrans' position—State the logical flow of information and the relevant contractual requirements that resulted in the determination of no merit. All supporting information must be referenced within this section and included in the exhibit section.
- Summary—A concluding paragraph stating why contractually and factually there is no merit to the contractor's dispute. The summary must be a strong absolute statement of Caltrans' position requesting that the DRA or DRB find in Caltrans' favor. Avoid expressing feelings or beliefs within this section.
- Exhibits—A number of exhibits for illustrating and clarifying the contractual and technical requirements. Number and tab exhibits. When compiling the written position paper, provide complete information related to the dispute including those exhibits used within the oral presentation at the dispute meeting. Failure to provide certain exhibits will likely result in the DRA or DRB disallowing related items within the oral presentation. Distribute written position papers in accordance with the contract.

Submit a draft written position paper to the construction engineer and peers for review and comment in advance of the formal dispute meeting. These internal reviews provide an opportunity to improve the position paper and benefit Caltrans by informing management of dispute issues.

The oral presentation given during the dispute meeting is important to effectively put forward Caltrans' position. Begin preparing for the presentation well in advance of the dispute meeting. Hold a mock presentation at least a week in advance of the dispute meeting to allow incorporation of comments from attendees. Attendees at the mock presentation should include the resident engineer, construction engineer, structure representative, bridge engineer, and construction field personnel. Other attendees may include technical experts, district construction claims engineer, construction manager, Division of Construction field coordinator, and others with dispute resolution board experience, depending on the size and complexity of the issue under consideration.

The objective of the mock presentation is to further examine the contractor's position, to review the basis of Caltrans' determination of no merit, and to rehearse Caltrans' presentation including potential rebuttal statements. During the mock presentation, it is advisable that an experienced participant, not directly involved in the contract, provides constructive criticism of Caltrans' position and the rebuttal of the contractor's position.

Typically, either the resident engineer or structure representative gives the presentation to the DRA or DRB depending on the dispute issue. Other personnel associated with the project may provide additional evidence. Use of experts not associated with the contract is not allowed unless requested by the DRA or DRB. All parties must agree to the use of a technical specialist in advance.

The dispute meeting will follow the procedure outlined in the dispute resolution agreement and any operating procedures agreed to by all of the parties involved.

### 3-522C (3c) Dispute Resolution Board Progress Meetings

In addition to the specific dispute meetings, there are mandatory initial and follow up progress meetings. The DRB progress meetings give members the opportunity to gain knowledge of the progress of work. Hold the first meeting at the start of the project. Each progress meeting must include a site visit allowing the DRB members to view construction operations, construction work completed, and areas where construction work must begin before the next meeting. A representative from both the contractor and Caltrans must attend all progress meetings. The minimum frequency of the progress meetings is stated in the *Standard Specifications* and in the DRB agreement; however, the frequency of meetings may be increased if the work is proceeding quickly. The agenda of a typical progress meeting is contained within the DRB agreement. At a minimum, the agenda should include a discussion of the following:

- Status of change orders
- Status of the work in terms of expended time and dollars



- Summary of potential claims

Promptly prepare and circulate progress meeting minutes to the parties for revision and approval.

### *3-522C (4) DRA or DRB Recommendations and Responses*

Upon receiving a DRA's or DRB's recommendation regarding a dispute, provide a copy to the Division of Construction's field coordinator and ADR engineer.

Discuss the recommendation with the construction engineer and begin preparing the Caltrans response once the DRA or DRB issues its recommendation to the parties.

Although the recommendation is nonbinding, the parties must respond to the DRA or DRB and the other party within the time specified so it is clear if the dispute is resolved or remains unresolved. Accept or reject a recommendation in accordance with the following:

1. Acceptance of a recommendation that finds in favor of Caltrans is delegated to the district.
2. Acceptance of a recommendation in the contractor's favor is delegated to the district, however the district should discuss acceptance with the field coordinator if the issue is of statewide concern.
3. Rejecting a recommendation in the contractor's favor is delegated to the deputy district director of construction. The deputy district director of construction will review and discuss the reasoning for the proposed response and get concurrence from the construction field coordinator before the resident engineer notifies the DRA or DRB and the contractor.

The Dispute Resolution Advisor (DRA) shall complete Sections 1 through 5 of Form CEM-6207, "Dispute Resolution Advisor (DRA)—Dispute Meeting Report," within 15 days of the dispute meeting and email it to the resident engineer and the alternative dispute resolution (ADR) engineer at [ADR.Engineer@dot.ca.gov](mailto:ADR.Engineer@dot.ca.gov). The resident engineer shall complete Section 6 of this form and email to [ADR.Engineer@dot.ca.gov](mailto:ADR.Engineer@dot.ca.gov). Section 7 is for DRA and resident engineer's comments.

The Dispute Resolution Board (DRB) chair shall complete Sections 1 through 5 of Form CEM-6204, "Dispute Resolution Board (DRB)—Dispute Meeting Report," within 35 days of the dispute meeting and email it to the resident engineer and the ADR engineer at [ADR.Engineer@dot.ca.gov](mailto:ADR.Engineer@dot.ca.gov). The resident engineer shall complete Section 6 of this form and email to [ADR.Engineer@dot.ca.gov](mailto:ADR.Engineer@dot.ca.gov). Section 7 is for DRB chair and resident engineer's comments and to notify the Division of Construction's ADR engineer of each party's acceptance or rejection of the recommendation.

A request for clarification of the recommendation will only be considered if made within the time specified in the contract. Any request for clarification of a DRA or DRB recommendation needs to be discussed with the Division of Construction's field coordinator before its submittal. Requests for clarification are warranted when the recommendation fails to thoroughly explain the rationale for the recommendation,

when the DRA or DRB has not stated Caltrans' position accurately, or when the contractual provisions have been disregarded.

A request for reconsideration of an issue may be made, and will only be considered, if new evidence concerning the dispute is provided and the request is made within the time specified. Reconsideration requests must be discussed with the Division of Construction's field coordinator before submittal.

### **3-523 Final Inspection and Contract Acceptance**

#### **3-523A General**

As a project's completion approaches, schedule appropriate reviews with maintenance, traffic, and safety personnel. Before the final inspection, give the contractor a written list of items needing attention.

To resolve any potential problems on interstate projects, request that a field engineer from the FHWA review the project before the day of final inspection. The objective is to prevent last-minute delays in contract acceptance.

In accordance with Section 5-1.46, "Final Inspection and Contract Acceptance," of the *Standard Specifications*, the resident engineer must do a final inspection of the contract work.

Maintain a record of the final inspection in the resident engineer's daily report. The record should include a statement similar to the following:

"I made a final inspection of the project today and determined that all contract work has been completed."

Or

"[Name] made the final inspection today and agreed that all contract work has been completed."

Time the final inspection so that the recommendation for contract acceptance will not be delayed pending the inspection.

#### **3-523B Contract Acceptance**

On the day project work is completed in accordance with the requirements of the *Standard Specifications*, special provisions, plans, and approved change orders, notify the district construction office recommending district acceptance of the contract. Refer to Section 5-1.46, "Final Inspection and Contract Acceptance," of the *Standard Specifications*.

For recommendations of acceptance, use Form CEM-6301, "Contract Acceptance." Once this form has been approved by the deputy district director on behalf of the director, provide a copy of the completed form to the contractor. The contract acceptance recommendation, approval and notification process should be completed within 2 business days. Follow the same procedure for accepting emergency contracts.

### 3-523C Work for Other Agencies or Owners

As a courtesy, when any work performed under the contract is for other agencies or owners, ask for the concurrence of these entities in the acceptability of the work. Include the concurrence of others such as local agencies, other state agencies, utility companies, and school districts.

Also, ask for concurrence from another party or agency if it finances a state highway project or a portion of the project. The district must arrange a joint field inspection with the owner or agency. In writing and in advance (usually 30 days), notify the owner or agency when the facility will be ready for final inspection. Time the inspection so that concurrence for acceptance is available at the time of recommending the acceptance of the contract or relief from maintenance and protection to the director. However, do not withhold recommendations for acceptance or relief merely because an outside agency will not concur.

The letter notifying the owner or agency of readiness for inspection should include:

- A reference to the cooperative agreement or other agreement.
- A statement that the inspection is to determine whether work is in compliance with plans, the agreement, or both.
- The date of the inspection.
- A request that, when an inspection reveals no deficiencies, the agency's authorized representative responsible for performing the inspection will confirm in writing that the agency agrees to accept the work.
- A statement that failure by the agency to inspect or confirm acceptance in writing will be deemed acceptance of the work as constructed.

If the size or complexity of the work warrants such an action, the resident engineer and an agency representative should make a preliminary joint inspection to correct minor deficiencies before the final inspection described above.

Write a record of the preliminary and final joint field inspections. Note what actions were necessary to complete the work to the agency representative's satisfaction. Record if the agency representative is satisfied with the completeness of the work but declines to concur in writing.

### 3-523D Asset Delivery Report

For State Highway Operation and Protection Program (SHOPP) major projects, complete an asset delivery report using Form CEM-6305, "Asset Tracking at Contract Acceptance Form." The form should be in the resident engineer pending file with prepopulated assets at contract award, but is also available at:

<https://assetmgt.onramp.dot.ca.gov/asset-tracking-guidance-and-form-construction-completion-cca#overlay-context=>

This form tracks originally scoped project assets through project delivery. Changes in scoped assets are to be captured so they can be properly reported and managed.

Retain a copy of the completed form in the project records and transmit copies to the project manager and the district's asset manager.

### **3-524 Guarantee**

#### **3-524A General**

The contractor must perform corrective work because of a substantial defect as part of the guarantee if all of the following can be demonstrated:

1. The substantial defect existed in the contractor's work based on the specifications.
2. The substantial defect existed when the contract work was accepted.
3. A reasonable inspection by the resident engineer during construction would not have revealed the defect.

If the resident engineer cannot demonstrate the substantial defect is the responsibility of the contractor, the corrective work cannot be completed as part of the contract.

If a substantial defect is identified, the resident engineer will discuss the substantial defect with district management and the Division of Construction field coordinator. Send a letter to the contractor describing the substantial defect to be remedied. Any correspondence with the contractor regarding corrective work and the substantial defect must include the following language:

"Your refusal may result in a review of your responsibility to perform future work with Caltrans."

The contractor can perform corrective work without obtaining an encroachment permit.

The contractor may dispute the need for the corrective work but is nevertheless contractually bound to perform the necessary repairs. If the proposed final estimate has not been issued, the contractor can file an exception in response to the proposed final estimate once it is issued. Otherwise, the contractor must file for arbitration pursuant to Section 10240.1 of the Public Contract Code. The contractor has 90 days from the completion of the corrective work or the end of the guarantee period, whichever is later, to file for arbitration.

The end of the guarantee period is 1 year from contract acceptance and will not be suspended or extended based on any corrective work being required or performed.

#### **3-524B Work Not Completed by Contractor**

If the contractor refuses to perform the corrective work or if the corrective work requires an immediate response, Caltrans will perform the corrective work. The district may complete the corrective work with its own forces, day labor, by informal contract or by director's order. Discuss this process with district management and the Division of Construction field coordinator.

The contractor is liable to the state for the costs to Caltrans resulting from the contractor's failure to complete the corrective work. The resident engineer will need to maintain records on corrective work expenditures to expedite billing.

The resident engineer will send the detailed billing to the Division of Accounting, abatements section, with instructions to prepare the accounts receivable bill and to mail it to the contractor. If the contractor is not available, the bill should be mailed to the surety.

## **Chapter 4**

## **Construction Details**

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- Section 11    Welding**
- 4-1101    General**
- 4-1102    Before Work Begins**
- 4-1103    During the Course of Work**
- 4-1104    Level of Inspection**
- 4-1105    Payment**



### Section 11 Welding

#### 4-1101 General

Section 11, “Welding,” of the *Standard Specifications* describes the requirements for welding where welding is specified to comply with an American Welding Society welding code. A primary purpose of this section is to assure quality control for welding items of work. Other sections also cover welding requirements such as Sections 48, “Temporary Structures”; 49, “Piling”; 52, “Reinforcement”; 55, “Steel Structures”; 56, “Overhead Sign Structures, Standards, and Poles”; and 60, “Existing Structures,” of the *Standard Specifications*.

This manual section provides guidance for inspecting and monitoring the contractor’s quality control activities involving welding that must meet the requirements of Section 11 of the *Standard Specifications*. The activities include handling correspondence, submittals, reports, quality control plans and records, and certificates of compliance, along with sampling, testing, and inspection of work in progress.

For details about welding, refer to Engineering Service’s *Bridge Construction Records and Procedures* manual at:

<https://dot.ca.gov/programs/engineering-services/manuals>

#### 4-1102 Before Work Begins

Before work begins, take the following steps:

- Verify that the contractor has assigned a qualified quality control manager and inspection personnel.
- Meet with the welding quality control personnel to discuss the requirements for submitting welding quality control plans.
- Inform the welding quality control personnel that their quality control activities may at times need to be coordinated with Caltrans’ ongoing quality verification activities, as described throughout this manual.

#### 4-1103 During the Course of Work

During the course of work do the following:

- Verify that the required quality control personnel perform duties as specified. Ensure that correspondence, submittals, reports, quality control plans and records, and certificates of compliance are handled as specified.
- Until the engineer, typically the structures representative, authorizes the proper submittals, do not permit welding of any type on materials permanently incorporated in the work. Refer to the *Bridge Construction Records and Procedures* manual, Vol. 2, Section 180, “Welding,” for guidelines.



- Make sure the contractor submits the time and location of quality control sampling and testing with sufficient notice to allow Caltrans staff to witness quality control sampling and testing.
- Ensure that welding follows the authorized Welding Quality Control Plan and verify that it is carried out by certified welders.
- Ensure that appropriate nondestructive testing is done by certified welding inspectors and testing inspectors to Caltrans' standards and in a timely manner.
- Refer to Chapter 6, "Sampling and Testing," of this manual for additional guidance in ensuring materials and workmanship comply with specifications.

#### **4-1104 Level of Inspection**

Level of inspection for welding work activities is as described in Chapter 1, Section 7, "Inspection and Testing," of the *Construction Quality Assurance Program Manual*, at:

<https://dot.ca.gov/programs/construction/publications>

Also see Section 180.0, Attachment 1, "Bridge Welding Code AWS D1.5," of the *Bridge Construction Records and Procedures Manual, Vol. 2* at:

<https://dot.ca.gov/programs/engineering-services/manuals/bridge-constr-records-proc-manual-vol2>

#### **4-1105 Payment**

For measurement and payment details, review contract specifications.

## Section 3 Change Orders

### 5-301 General

### 5-302 Change Order Policy

### 5-303 Purpose of Change Orders

### 5-304 Initiation of Change Orders

### 5-305 Preliminary Considerations

### 5-306 Change Order Content

#### 5-306A Specifications

#### 5-306B Description of Work

#### 5-306C Methods of Payment

##### 5-306C (1) Increases and Decreases in Bid Items at Bid Item Unit Prices

##### 5-306C (2) Payment Adjustment

##### 5-306C (2a) Adjustments for Increased or Decreased Quantities

##### 5-306C (2b) Deferred Bid Item Adjustments

##### 5-306C (2c) Exemption from Adjustment

##### 5-306C (2d) Adjustments for Work-Character Changes

##### 5-306C (3) Extra Work

##### 5-306C (3a) Extra Work at Agreed Prices

##### 5-306C (3b) Extra Work at Force Account

#### 5-306D Adjustments to Time of Completion

#### 5-306E Change Order Standard Clauses

#### 5-306F Work Designated as Extra Work in the Specifications

#### 5-306G Change Order Format

### 5-307 Change Order Memorandum

#### 5-307A Contents of the Memorandum

#### 5-307B Change Order Category Codes

Table 5-3.1. Change Order Type (Character 1) (1 of 2)

Table 5-3.1. Change Order Type (Character 1) (2 of 2)

Table 5-3.2. Specification or Physical Asset (Character 2) (1 of 2)

Table 5-3.2. Specification or Physical Asset (Character 2) (2 of 2)

Table 5-3.3. Source Document (Characters 3 and 4) (1 of 2) (Use **Table 5-3.3** only when the first character code is *C* or *D* from **Table 5-3.1**)

Table 5-3.3. Source Document (Characters 3 and 4) (2 of 2)

Table 5-3.4. Dispute Disposition (Characters 3 and 4) (Use **Table 5-3.4** only when the first character code is *E*, *F*, *G*, or *H*, from **Table 5-3.1**, representing a Dispute Resolution)

5-307C Coordination and Concurrence by Others

5-307C (1) Project Development

5-307C (2) Project Management

5-307C (3) Structures

5-307C (4) Materials

5-307C (5) Traffic

5-307C (6) Maintenance

5-307C (7) Right of Way

5-307C (8) Environmental

5-307C (9) Locally Funded Projects

**5-308 Federal Highway Administration Change Order Requirements**

5-308A Projects of Division Interest

5-308A (1) Federal Highway Administration Approval Requirements – Major Change Orders

5-308A (2) Federal Highway Administration Approval Requirements–Minor Change Orders

5-308A (3) FHWA Denial

5-308B Delegated Projects

5-308C FHWA Major Change Order Approval Process

**5-309 Federal Segregation Determination on Change Orders**

**5-310 Locally Funded State Highway Projects**

**5-311 Change Order Approval Process**

5-311A Division of Construction Approval

5-311A (1) Change Order Determinations

Table 5-3.5. Division of Construction's Change Order Direction (1 of 2)

Table 5-3.5. Division of Construction's Change Order Direction (2 of 2)

5-311B District Approval Limitations

5-311C Prior Authorization to Proceed

**5-312 Substantiation**

5-312A Engineering Analysis

5-312B Contractual Analysis

5-312C Cost Analysis

5-312D Time Impact Analysis

**5-313 Executed Change Order Copy Distribution**

**5-314 Value Engineering Change Proposals**

Figure 5-3.1 Change Order Decision-Making Flowchart

### Section 3 Change Orders

#### 5-301 General

A change order is a legally binding document used to make changes to the contract. Form CEM-4900, "Change Order," is used for change orders. Form CEM-4903, "Change Order Memorandum," must be prepared for each change order.

This section describes the use of Forms CEM-4900 and CEM-4903, describes California Department of Transportation (Caltrans) policies for change orders, and provides guidelines for writing change orders and memorandums.

#### 5-302 Change Order Policy

The authority for Caltrans to make changes to a contract is in Section 3-403, "Changes and Extra Work," of this manual. Work that is outside the scope of an existing contract should be done in a separate contract. However, in special situations it may be added to an existing contract if:

- A director's order has been approved for the new work in accordance with Deputy Directive 26-R2, "Use of Director's Orders," dated July 2009, available at:  
<https://admin.onramp.dot.ca.gov/deputy-directives>
- The Division of Construction chief concurs with adding new work to the existing contract by co-signing the director's order.
- On Projects of Division Interest (PoDI) for which the major contract change order approval has been retained by the Federal Highway Administration (FHWA), the FHWA transportation engineer approves the change as outlined in Section 5-308, "Federal Highway Administration Change Order Requirements," of this manual.
- On locally funded state highway projects, the contributing agency agrees to the change as outlined in Section 5-310, "Locally Funded State Highway Projects," of this manual.
- The contractor proposes a safety enhancement involving a positive protection measure that the Division of Construction accepts in accordance with the procedure outlined in Section 3-405, "Value Engineering," of this manual.
- The contractor agrees to the change.

District construction personnel should consider the following in determining if the proposed change is within the scope of the original contract. Answering "yes" to any of the following questions indicates that the new work may be outside the scope of the original contract:

- Is the type of work for the proposed change significantly different from other types of work within the original contract?

- Is it necessary for the prime contractor or a subcontractor to mobilize specialized forces and equipment to perform the work of the proposed change?
- Will the estimated cost of the proposed work, when combined with all other changes, be outside the approved contract allotment?
- Does the proposed change represent a significant deletion to the original contract?
- Does the proposed change significantly delay completion of the contract when compared to the number of original contract working days?
- Is the proposed change outside the original contract limits?
- Can the project be completed as contemplated at the time of bid without the proposed change?

Answering the previous questions assists in determining if a proposal is within the scope of the existing contract. However, analysis of all the facts and circumstances of the proposed change or new work is required to make a final determination. When district construction is uncertain if the new work is within the scope of the original contract, the district construction deputy director must consult the appropriate Division of Construction field coordinator for determination.

When new work resulting from a director's order may be accomplished best by adding to an existing contract, the district submits a request to the Division of Construction chief to co-sign the order. After the director's order is approved, district personnel may process a change order incorporating the new work, in accordance with the procedures described in Section 5-311, "Change Order Approval Process," of this manual.

Increased change order delegation applies only to districts with a Division of Construction approved district change order quality control plan. Any district without the approved district quality control plan, must comply with the following delegation:

District construction personnel may approve all change orders, except those requiring Division of Construction approval. Division of Construction approval is required on the following types of change orders:

- Any change order that has a total absolute value exceeding \$200,000.

Example:

A change order containing a \$50,000 decrease of items, a \$20,000 increase of items, and \$150,000 of extra work at force account would require Division of Construction approval:

$$|-\$50,000| + |\$20,000| + |\$150,000| = |\$220,000|$$

- Any change order that increases the cost of anticipated supplemental work listed in the detail estimate by more than \$200,000.
- Once any of the above cost thresholds is reached, each associated supplemental change order will also require Division of Construction approval.
- Any change in the following:

1. Method of payment
  2. Method of materials processing
  3. Type or quality of materials to be furnished, excluding those for minor changes to building facilities contracts
  4. Proprietary material for which specific or blanket approval has not been previously received
  5. Specifications, except as follows:
    - a. "Lane Requirements and Hours of Work" charts
    - b. Addition of approved standard special provisions
    - c. Any editing of an approved standard special provision, in accordance with its instructions.
- Any change resulting in a time adjustment of more than 10 percent of original working days or more than 19 working days, whichever is greater.
  - Any change order that compensates the contractor for field or home office overhead costs as the result of a final audit report issued by the Independent Office of Audits and Investigations.

With increased change order delegation, the Division of Construction takes on the role of performing quality assurance on all change orders.

### **5-303 Purpose of Change Orders**

Use change orders to change any part of the original contract. In addition, change orders are used for administrative and other purposes. The following are some of the reasons for writing change orders:

- To change contract plans, specifications, or both.
- To describe the work and method of payment for work stipulated in the contract to be paid as extra work.
- To authorize an increase in extra work funds necessary to complete a previously authorized change.
- To make payment adjustments.
- To implement a value engineering change proposal or a construction evaluated research proposal. Refer to Section 3-5, "Control of Work," of this manual for a discussion of value engineering change proposals.
- To clarify terms of the contract.
- To resolve disputes or potential claims before the proposed final estimate, or exceptions (claims) after the proposed final estimate, and to pay for contract claim determinations. For the use of change orders in the dispute resolution process, refer to Section 5-4, "Disputes," of this manual.

### **5-304 Initiation of Change Orders**

The resident engineer usually determines the need for and initiates a change order. However, the contractor, other Caltrans units, or outside agencies or individuals may request changes. Other Caltrans units requesting a change order must clearly document the need for the change and provide information sufficient to demonstrate that the requested change meets Caltrans policy for making changes to the contract. For all changes requested by any person except the contractor, indicate "Change Requested by Engineer" on Form CEM-4900, "Change Order."

### **5-305 Preliminary Considerations**

When preparing to write a change order, consider the following:

- Is the proposed change order necessary to complete the work as contemplated at the time the plans and specifications were approved?
- What is the overall effect on the planned work?
- Are there sufficient unobligated contingency funds? If additional funds are required, can they be obtained soon enough to prevent delays? Refer to Section 5-2, "Funds," of this manual for the procedure for obtaining additional funds.
- Will the contract time be affected?
- What are the effects of adjusting contract time?
- When a project is nearing completion, give careful consideration to the effect the change will have on the time of completion. Changes near the end of a contract tend to extend the time of completion more than changes made earlier. Late changes may adversely affect the contractor's schedule, delay public use of the facility, and disrupt the planned use of Caltrans personnel.
- If the adjustment of time of completion is deferred, how will the adjustment be determined?
- Will the proposed change order affect or change the contractor's planned method of performing the work?
- Is the proposed work already covered in the contract?
- Will the ordered change cause a work-character change?
- If a payment adjustment resulting from a work-character change is deferred, how will the adjustment be determined?
- Is timely coordination with other affected Caltrans units possible? Does the proposed change adhere to existing permit conditions, environmental mitigation requirements, local agency and utility obligations, and right-of-way agreements? Does the proposed change require new coordination, permits, or agreements?
- Will the proposed change affect maintenance operations? Does the maintenance superintendent have concerns with the proposed change?

- Will the contractor cooperate in providing timely cost estimates for extra work at agreed price and cost information for payment adjustments? Should you make cost estimates and determinations and present them to the contractor?
- Will the ordered change require a Cost Effectiveness/Public Interest Finding for the use of patented or proprietary materials or equipment;, or mandatory use of a borrow or disposal site?
- What methods of payment should be used?

To avoid misunderstanding and obtain full agreement, discuss with the contractor all elements of a change, including the method of compensation and the effect on time. Failure to identify elements requiring consideration may lead to protest.

### **5-306 Change Order Content**

The change order must be clear, concise, and explicit. When appropriate, it must include the following:

- What is to be done
- Location and limits of proposed work
- Applicable specification changes and references to specifications
- The proposed change order's effect on time of completion
- Method and amount of compensation

#### 5-306A Specifications

The specifications for bid item work already included in the contract will apply to added bid item work. You do not need to repeat or reference specifications for added work that is clearly shown to be bid item work.

In the change order, completely describe extra work. Include directly or by reference the specifications for extra work, whether paid for at agreed price or at force account. The contractor must complete this extra work exactly as it is specified in the change order.

The contract may include some supplemental work specifically designated as extra work. For an example, refer to Sections 12-1.01, "General"; 12-1.03, "Construction"; and 12-1.04, "Payment," of the *Standard Specifications*.

#### 5-306B Description of Work

The change order must clearly describe added work or other changes to the contract. Include appropriate references to special provisions, contract plans, *Standard Plans*, or *Standard Specifications*. Decide whether a written statement clearly defines the proposed change or if plans or drawings need to be included.

The contractor normally chooses the method of performing extra work, subject to the resident engineer's approval for labor, equipment, and materials for force account work. If, for any reason, the engineer wants to control the method of performing the work, the method must be specified in the change order.



On plans attached to a change order, show pertinent dimensions and the scale or label the plans “not to scale.” Plainly mark reduced reproductions “Reduced Plans, Scales Reduced Accordingly.” When using existing plan sheets, clearly show the difference between new work, work already included in the contract, and changed or eliminated work. A simple sketch on a letter-sized sheet will more clearly depict the change than a hard-to-spot revision to an existing sheet of the original plans. An 8.5-inch by 11-inch attachment is always preferable to a full-size contract plan sheet.

Section 6735, “Preparation, signing, and sealing of civil engineering documents,” of California’s Professional Engineers Act, requires that all civil engineering plans and specifications that are permitted or that are to be released for construction shall bear the signature and seal or stamp of the licensee and the date of signing and sealing or stamping. All final civil engineering calculations and reports shall bear the signature and seal or stamp of the licensee, and the date of signing and sealing or stamping. Plans or specifications attached to a proposed change order must meet this requirement, with the exception that a licensed civil engineer does not need to sign revisions already covered by *Standard Plans*, *Standard Specifications*, standard special provisions, previously engineered drawings, or minor changes not requiring calculations or determinations by a licensed engineer.

Show the Caltrans contract number, sheet number, and change order number on plans or other documents made a part of a change order. Include all attachments with each distributed copy of a change order.

#### 5-306C Methods of Payment

When writing a change order, the resident engineer often can choose the payment method for added or changed work. The following lists, in order of preference, the payment methods:

1. Bid item unit prices; refer to Section 5-306G, “Change Order Format,” of this manual.
2. Bid item unit prices with a payment adjustment at agreed unit price or lump sum; refer to Sections 5-306C (2), “Payment Adjustment”; 5-306C (2a), “Adjustments for Increased or Decreased Quantities”; and 5-306C (2b), “Deferred Bid Item Adjustments,” of this manual.
3. Payment at agreed unit price or lump sum; refer to Sections 5-306C (2d), “Adjustments for Work-Character Changes”; 5-306C (3), “Extra Work”; and 5-306C (3a), “Extra Work at Agreed Prices,” of this manual.
4. Force account; refer to Section 5-306C (3b), “Extra Work at Force Account,” of this manual.

When a bid item has a work-character change, the resident engineer may delete the entire bid item, or the portion of it affected by the change, and pay for the entire work at force account. A preferred choice is to determine a correct and equitable payment adjustment to the bid item unit price. A payment adjustment providing for increased or decreased costs because of the work-character change allows the contract price to

remain unchanged. Before resorting to force account payment, resident engineers must make every effort to make payment adjustments or negotiate agreed prices.

Refer to Section 3-901, "General," of this manual for methods of payment. Section 3-904, "Payment Adjustments," of this manual describes how the various methods of payment are used in change orders.

#### *5-306C (1) Increases and Decreases in Bid Items at Bid Item Unit Prices*

Changes in planned work or adding or decreasing work will often result in increases or decreases in bid item quantities. Except for bid items designated in the Bid Item List as final pay quantities, show changes in bid item quantities as estimates on a change order. Calculate the estimated increases or decreases that will result from the work as changed by the change order. The actual quantity paid for each bid item will be determined by the method specified for measuring each bid item quantity. For guidelines on measuring bid item quantities, refer to Section 3-9, "Payment," of this manual.

Show changes in the quantity of bid items that are designated as final pay quantities as fixed amounts added to the quantity shown in the Bid Item List. If a portion of a final pay item quantity is eliminated, the final pay quantity will be revised in the amount represented by the eliminated portion of the item of work quantity. For a standard clause for revised final pay quantities, refer to "Change Order Standard Clauses" at:

<https://dot.ca.gov/programs/construction/change-order-information>

For the method of indicating changes in bid item quantities, refer to Section 5-306G, "Change Order Format," of this manual and the change order examples at:

<https://dot.ca.gov/programs/construction/change-order-information>

Increases and decreases or estimated increases or decreases in bid items at contract prices may be executed unilaterally or with the contractor's agreement.

#### *5-306C (2) Payment Adjustment*

For the definition of payment adjustments, refer to Section 3-904, "Payment Adjustments," of this manual. Section 3-4, "Scope of Work," of this manual discusses payment adjustments for increased or decreased quantities and for work-character changes.

Payment adjustments usually involve estimating the cost of work or determining the actual cost of work performed. The following explains how to estimate or determine such costs.

Verify the contractor's records of item cost by comparing labor and equipment charged to the item by the contractor to the labor and equipment shown on the daily reports. Charge equipment to the item cost in accordance with the force account method. Exclude downtime and apply the correct force account rental rates. Exclude any overhead costs and any items that should be charged to other work.

Sometimes a contractor may submit cost estimates based on the billing from a specialist plus a markup. When the work is of such a nature that it would qualify under Section 9-1.05, "Extra Work Performed by Specialists," of the *Standard Specifications*, calculate the

adjustment on this basis. Check that the specialist rate or billing is in line with the firm's usual charges.

For bid item overrun and underrun adjustments, when the contractor does not furnish sufficient and timely cost information, issue a unilaterally approved change order adjusting the item. Base the adjustment on your cost determination. This approved change order establishes the time allowed for protest and helps avoid delays.

Even though the contractor may have agreed to pay a fixed price to others for an item of work, use a force account-based adjustment of the item price. Use a force account cost determination even when the work is subcontracted, unless the item of work was performed by a specialist, as defined in Section 9-1.05, "Extra Work Performed by Specialists," of the *Standard Specifications*.

For large and complex adjustments, request auditing assistance from the Independent Office of Audits and Investigations through the Division of Construction. Refer to procedures in Section 5-410, "Audits," of this manual.

#### 5-306C (2a) Adjustments for Increased or Decreased Quantities

As soon as it is known that a bid item quantity will vary from the Bid Item List by more than 25 percent, consider the method of adjustment that will be used. Make daily reports for the item with the same degree of detail used in force account daily reports. Doing so will identify any necessary adjustment. When required, make payment adjustments for increased or decreased quantities as soon as the contractor completes work on a bid item. Refer to Section 3-904, "Payment Adjustments," of this manual.

You may calculate adjustments by analyzing the performance of a portion of an item, provided the portion is typical of the item as a whole.

Verify a contractor's records by comparing them with Caltrans records. Where more extensive auditing is required, request the assistance of the Independent Office of Audits and Investigations. When examining the contractor's records to determine the cost of equipment used, consider only the hours worked. Force account equipment rental rates must be used regardless of what rate the contractor may have used. When verifying the contractor's records, eliminate supervision and overhead costs and any costs properly chargeable to other work.

When making adjustments, use Caltrans records to determine the amounts of labor, equipment, and materials. The verified contractor's records may supplement the Caltrans records, or in some instances, you may need to use only the verified contractor's records. The resident engineer must use good judgment when reconciling differences between the contractor's and the engineer's records to arrive at a reasonable and equitable adjustment.

An item that has been adjusted under the provisions of Section 4-1.05B, "Work-Character Changes," of the *Standard Specifications*, may later become eligible for further adjustment under Section 9-1.06, "Changed Quantity Payment Adjustments," of the *Standard Specifications*. In making the quantity payment adjustment, deduct or add

payments made for work-character change adjustment to determine the contractor's total cost of the work.

#### 5-306C (2b) Deferred Bid Item Adjustments

Upon completion of the changed work, promptly resolve all deferred item adjustments.

If a bid item adjustment will not be made, you do not need to write a supplemental change order. In this case, a letter from the contractor is sufficient. File a copy of the contractor's letter with the original change order that deferred the adjustment.

#### 5-306C (2c) Exemption from Adjustment

Unless requested in writing by the contractor, do not adjust a bid item when the total pay quantity is less than 75 percent of the Bid Item List. You also do not need to adjust, unless requested in writing by the contractor, if the value based on the contract price for the units of work in excess of 125 percent is less than \$5,000, as shown in Section 9-1.06B, "Increases of More than 25 Percent," of the *Standard Specifications*. As soon as a final bid item quantity is known, decide whether to make the adjustment. Unless an obvious imbalance exists between the bid item unit price and actual cost, do not make the adjustment. Inform the contractor in writing whether Caltrans will adjust the bid item price.

#### 5-306C (2d) Adjustments for Work-Character Changes

Section 3-403A, "Work-Character Changes" of this manual defines work-character changes.

Payment adjustments for work-character changes may be unit or lump sum adjustments. Normally, a lump sum adjustment is only applied to a lump sum bid item.

A work-character change payment adjustment requires a force account determination of the cost of an entire item as changed and a force account estimate of the cost of the work as planned.

When only a portion of the work has changed, separate the changed portion of the work from the unchanged portion. Perform a force account analysis of the cost of the changed portion, and make payment at the contract price plus a separate payment for the added work or credit for any deleted work.

Do not eliminate a bid item and pay for the work at agreed price or force account unless the change is so extensive that the original item no longer applies.

There can be no work-character change unless there was an executed change order. At times, it will not be possible to come to an immediate agreement with the contractor regarding an adjustment in compensation. You may need to complete the entire item before adjusted costs can be determined. In such cases, provide for payment at bid item prices, and defer adjustment in the initial change order. Include an appropriate deferment clause.

#### 5-306C (3) Extra Work

For the definition of extra work and guidelines for using extra work in change orders, refer to Section 3-4, "Scope of Work," of this manual. Before designating additional work as

extra work, make sure that it cannot be paid for as a bid item, a combination of bid items, or a bid item with a payment adjustment.

### 5-306C (3a) Extra Work at Agreed Prices

For guidelines for determining and paying for extra work at agreed price, refer to Section 3-9, "Payment" of this manual.

File with the contract records any calculations made to determine extra work at agreed price. These calculations are subject to audit and must be in such a form that they clearly substantiate and justify the amount paid for extra work. Instead of showing all the calculations necessary to substantiate extra work at agreed price in the change order memorandum, you may include a statement that such calculations are on file in the project records.

When a subcontractor is to perform extra work at agreed price, include the subcontractor markup in the agreed price calculations. For subcontractor markup guidelines, refer to Section 3-9, "Payment," of this manual.

Agreed prices may be unit prices or lump sum. Before an agreed price may be used to pay for extra work, the resident engineer and the contractor must agree on compensation. The contractor must execute the change order providing for extra work at agreed price.

After the extent of extra work has been determined, ask the contractor to submit a proposed agreed price. Analyze the contractor's proposed price using the force account method. You may also initially determine a proposed agreed price based on a force account analysis and present it to the contractor. When you have reached agreement, process the change order and retain in the project files the records fully justifying the agreed price.

Verify that payments of agreed lump sum prices do not exceed the amount authorized on the change order. Agreed unit prices can be applied to an estimated number of units in the change order. Although the unit price remains fixed, the number of units paid may vary from the estimated number.

When extra work consists entirely of work that neither the contractor nor any of the subcontractors would normally perform, the work is considered "specialist work," and the contractor should obtain three bids for the extra work. Determine the agreed price by taking the lowest bid and adding the markup, as described in Section 9-1.05, "Extra Work Performed by Specialists," of the *Standard Specifications*.

When this method is used, verify that the work is accurately and completely described when bids are solicited. The same description of the work must be used in the change order. If the contractor or a subcontractor includes a bid along with independent firms, you must make an analysis using the force account method. The contractor's or subcontractor's bid will be acceptable only if the analysis can justify it. If the contractor or a subcontractor is capable of performing the extra work, the work is not considered "specialist work."

For examples of change orders with extra work at agreed price, refer to the change order examples at:

<https://dot.ca.gov/programs/construction/change-order-information>

#### 5-306C (3b) Extra Work at Force Account

Pay for extra work at force account under the following conditions:

- When the work cannot be estimated within reasonable limits of accuracy
- When the resident engineer and the contractor are unable to agree on a unit or lump sum price for the work
- When the contractor refuses to sign a change order

For guidelines for paying for extra work at force account, refer to Section 3-9, “Payment,” of this manual. For examples of change orders with extra work paid for on a force account basis, refer to the change order templates at:

<https://dot.ca.gov/programs/construction/change-order-information>

#### 5-306D Adjustments to Time of Completion

For a discussion of time of completion and adjustments to time, refer to Section 3-804, “Time,” of this manual.

A change order may specify a positive, negative, or no adjustment to time of completion.

Whenever you can estimate an adjustment to time with reasonable accuracy, try to reach agreement with the contractor. Enter the amount of the time adjustment on the change order, including when there is no adjustment. Regardless of the amount of time actually required to perform the changed work, the agreed adjustment becomes binding on both parties. File with the contract records the calculations and other data used to determine adjustments to time.

If you cannot determine or agree on an adjustment of time in the initial change order, you may defer the adjustment. When doing so, write “deferred” on the time adjustment line and include a time adjustment deferred clause in the change order.

As soon as the change order work is completed, determine the appropriate time adjustment. If you cannot reach agreement with the contractor, issue a unilaterally approved supplemental change order adjusting time.

On contracts with internal time limits or multiple time limits, make sure that any change order that includes a time adjustment contains a statement that identifies the applicable time limits of the adjustment. If an internal milestone date will change, but total time remains unaffected, specify the new date in the change order and indicate there is no time adjustment because of the change.

Periodically during the progress of the change order work, resolve deferred time adjustments. Do so by issuing a supplemental change order covering time allowable. If it is an extensive deferment, resolve the time allowed to a current date, with part of the deferment continued for subsequent work. Your objective is to resolve deferred time adjustments as soon possible. Timely resolution of time deferments allows the contractor to efficiently schedule remaining work to complete the project within the time limits.

The resident engineer may not unilaterally decrease time unless this is permitted by the specifications. Otherwise, the contractor must agree to changes that reduce time. Without this agreement, you can do one of two things:

1. Do not recommend approval of the change if no benefit exists for Caltrans.
2. If substantial benefits exist for Caltrans, issue a unilaterally approved change order with no time adjustment.

#### 5-306E Change Order Standard Clauses

Information on change order standard clauses is available at:

<https://dot.ca.gov/programs/construction/change-order-information>

The examples show standard clauses for situations found in change orders. Customize standard clauses to reflect what is appropriate for the change order being written.

#### 5-306F Work Designated as Extra Work in the Specifications

The *Standard Specifications* and the special provisions describe certain work and specify that it is to be paid for as extra work. In some cases, supplemental funds are set aside to pay for this extra work. Make an independent cost estimate of the work for which the supplemental funds were provided. This estimate must be as accurate as possible.

Refer to the specific section of the specifications that identifies the extra work for the change order. Also, describe the exact work to be performed.

Traditionally, Change Order No. 1 provides for extra work specified for public traffic and public convenience. This change order must be limited to the following:

- Work designated as extra work in the specifications
- Work related to the needs of public traffic or for public convenience

Refer to the change order template “Maintain Traffic” at:

<https://dot.ca.gov/programs/construction/change-order-information/change-order-templates>

This change order indicates the method for incorporating specified extra work into a change order. Note that the change order template is written as extra work at force account. You may also pay for specified extra work as extra work at agreed price if the extent of the work can be accurately determined. This approach is illustrated in the change order template, “Flaggers,” which provides for payment for flaggers at an agreed unit price. Payment for flaggers at an agreed price may be written as a separate change order or combined with the other traffic related work paid for as extra work at force account.

#### 5-306G Change Order Format

The example change orders at the Division of Construction’s website follow the generally accepted format for writing change orders. The following describes the format:

- Describe the work or change that will cause increases and decreases to bid item quantities. Refer to any attached drawings or documents (sheets \_\_ and \_\_ of \_\_). If the bid item work cannot be described separately from other work, describe the entire work at this stage. Describe work paid for by other methods in the appropriate sections of the change order. The intent is that the change order clearly specifies the work paid for by each payment method.
- Show the increases and decreases in bid item quantities. Include the percent of the Bid Item List represented by this change. Also show the accumulated percent change to date from the original quantity in the Bid Item List.
- Write clauses for situations resulting from increases or decreases or estimated increases or decreases in bid item quantities, including deferred adjustments or actual payment adjustments for overruns or underruns.
- Write clauses for adjustments or deferred payment adjustments because of any cause. Describe the work or change causing the adjustment or deferred adjustment. Show the amounts of adjustments if not deferred.
- Describe work to be paid for as extra work at agreed price. Show the price as agreed. Agreed prices may be fixed unit prices and an estimated or actual number of units, or agreed prices may be fixed lump sums.
- Describe the work to be paid for as extra work at force account. Show the estimated cost of the extra work.
- Write time deferment or time adjustment clauses.

### **5-307 Change Order Memorandum**

Include with all change orders sufficient documentation of the scope and reasons for the change. For this purpose, use Form CEM-4903, "Change Order Memorandum," with any necessary attachments. The memorandum is intended for interdepartmental use only. Do not send the memorandum to the contractor.

The memorandum must be sufficiently complete to enable a person unfamiliar with the details of the project to review the change order and understand the justification for the work, the reasonableness of the compensation, and the time adjustment provisions.

#### 5-307A Contents of the Memorandum

The memorandum must:

- State what the change order provides. Supplemental change orders should also include a description of the original change order.
- Explain the need for the change, including the contractual basis of the change. When a different Caltrans unit requests a change, the correspondence requesting the change should also justify the need for the change. Attach supporting letters to the memorandum.
- State the reasons a particular method of payment was chosen. Include a complete cost analysis, or state that the cost analysis is on file with the project records. The statement should include the method used in making the cost analysis.



- Explain the reasons the ordered change causes any change in the character of the work. To substantiate any additional compensation due, you may need to provide a summary of events leading to the change.
- State the extent of coordination and concurrence. If agreement with any district unit cannot be obtained, indicate specific discussions that would influence a decision for approval. Refer to Section 5-307C, “Coordination and Concurrence by Others,” of this manual.
- If prior approval of the change order has been obtained, state the name of the person who granted prior approval and the date.
- Show the unobligated balance of funds available to finance the change order. The resident engineer must verify that available funds are not exceeded. For obtaining additional funds, refer to Section 5-2, “Funds,” of this manual.
- Show the total authorized funds to date, as well as the dollar amount of a supplemental change order.
- Indicate when funds for supplemental work shown in the detail estimate of job cost are used in the change order.
- For major changes on federal PoDI, indicate the name and date of discussion and concurrence, if any, by the FHWA transportation engineer. Refer to Section 5-308, “Federal Highway Administration Change Order Requirements,” of this manual. For details relating to federal funding to be shown on the change order memorandum, refer to Section 5-309, “Federal Segregation Determination on Change Orders,” of this manual.
- For change orders involving participation by local agencies, identify the portion of the work that is applicable to the contributing agency.
- For a change order that is to be unilaterally approved, explain why the contractor will not sign or why the contractor’s signature is not required. Attach a copy of any correspondence from the contractor regarding the change order.
- Include justification for a time adjustment. Describe the method used to determine time adjustments. State the controlling activity during the delay period. Whenever possible, and when resolving a previously deferred time adjustment, indicate the specific working days in which there were delays and represent the period of the time adjustment. By indicating the specific working days, you make sure other time adjustments do not cover the same time period.
- Indicate the cumulative time adjustments and total number of change orders with unreconciled deferred time.

#### 5-307B Change Order Category Codes

The resident engineer is responsible for assigning a four-letter code to every change order to indicate the main reason for the change. Preferably, there should only be one issue per change order. For change orders with multiple distinct issues, assign the coding based on the one issue that has the greatest effect on the project. Assign the coding

according to the reason for the change, not according to how the problem was corrected. To determine the code, the resident engineer may use the change order code generator from:

<https://dot.ca.gov/programs/construction/change-order-information/caltrans-cco-code-generator>

The resident engineer should enter this code on Forms CEM-4903, “Change Order Memorandum,” and CEM-4901, “Change Order Input.”

The change order code will identify one or more discrete pieces of information about the change:

1. The type of change order (first character).
2. The specification that authorizes the change, or the physical asset affected by the change (second character).
3. The source document that led to the need for a change (third and fourth characters).
4. The disposition of a dispute resolution (third and fourth characters).

Administrative change orders, such as accelerations, and changes that are anticipated and authorized by existing administrative specifications, require only minimal coding information. Consequently, extra coding positions will be assigned a default character placeholder, the letter Z. Assign characters from left to right, as subsequent character code selection is dependent on the preceding characters.

**Character 1:** Change Order Type:

Use the codes in Table 5-3.1, “Change Order Type (Character 1),” to categorize the change order according to its general type; for example, administrative or dispute resolution. Coding for dispute resolution takes precedence over coding for any other potential scenario. After selecting the first character code, use the corresponding directions on Table 5-3.1 to complete the coding for the remaining three characters.

**Character 2:** Specification or Physical Asset:

Next, based on your selection for the first character code, and using the directions within Table 5-3.2, “Specification or Physical Asset (Character 2),” select the code that most accurately identifies the appropriate administrative specification, or the affected physical asset. Enter this code as the second character. In the case of a change order that is strictly for acceleration, with no physical change in the planned work (the first character code is a B); then the second character code is defaulted to a placeholder Z character.

**Characters 3 and 4:** Source Document or Dispute Disposition:

If the change order is needed to bring about a plan or specification change (the first character code is C or D), use Table 5-3.3, “Source Document (Characters 3 and 4),” to identify the pair of character codes that together best describe the original document that created the need for the change order. The reason for the change may be from:

- Constructability issues, errors, conflicts, or inconsistencies.
- The introduction of improved products, means, or methods.

- Any other reason, provided that the change will affect some physical aspect of the planned work.

If the change order is for a dispute resolution (first character code from Table 5-3.1 is E, F, G, or H), use Table 5-3.4, “Dispute Disposition (Characters 3 and 4),” to assign the third and fourth characters. Begin by selecting the code for the third character that most closely identifies the time frame before the dispute was resolved. The milestones for the third character are listed chronologically. For the fourth character, choose a code from Table 5-3.4 that most accurately explains how the dispute was resolved, such as entitlement, negotiated settlement, and arbitration award, full or partial resolution.

If the change order type was administrative (first character code is either A or B), then the third and fourth character codes are defaulted to Zs. However, when the first character code is A and the second character code is W, choose the third and fourth character codes from Table 5-3.5 “Other Supplemental Work.”

General Examples:

Change orders that are strictly for constructive accelerations when there is no change to the final configuration of a planned permanent physical asset are all coded “BZZZ.” No additional coding information is necessary.

When a change order resolves a dispute based on contract administration, and there was no change to the planned work on some permanent physical asset:

1. The first character will be either E or G (refer to Table 5-3.1).
2. The second character represents the disputed administrative specification. Choose this character from the upper portion of Table 5-3.2.
3. The third and fourth coding characters are selected depending on when and how the dispute was resolved. Choose these characters from Table 5-3.4, “Dispute Disposition.”

When a change order is authorized by an administrative specification and there is no formalized dispute involved:

1. The first character will be A (refer to Table 5-3.1).
2. Select the second character from the upper portion of Table 5-3.2.
3. If the second character is W, select the third and fourth characters from Table 5-3.5, otherwise the third and fourth characters will both default to the placeholder letter Z. No other coding information is necessary in this example.

Table 5-3.1. Change Order Type (Character 1) (1 of 2)

Reason for Change Order	Type of Change Order	Code	Description
Administrative	Contract or Supplemental Work	A	<p>Change order used to pay for work or adjustments already authorized by specifications (supplemental work, quantity adjustments, and other).</p> <p>(Use only the specification codes from the upper portion of Table 5-3.2 for the second character, and Zs for the third and fourth characters. However, when the second character is W, use Table 5-3.5 for the third and fourth characters.)</p>
Administrative	Acceleration	B	<p>Change order used to accelerate certain planned work. Describe the reason for acceleration in the transmittal memo, such as public convenience, staging coordination, or delay mitigation.</p> <p>(Use only Zs for subsequent code characters 2, 3, and 4.)</p>
Plan or Specification Change	Non-VECP	C	<p>Change order needed to change plans or specifications for reasons unrelated to a value engineering change proposal (VECP).</p> <p>(Use only the physical asset codes from Table 5-3.2 for the second character, and Table 5-3.3 for the third and fourth characters.)</p>
Plan or Specification Change	VECP-Related	D	<p>Change order needed to change plans or specifications because of a VECP.</p> <p>(Use only the physical asset codes from Table 5-3.2 for the second character, and Table 5-3.3 for the third and fourth characters.)</p>
Dispute Resolution	Potential Claim	E	<p>Change order either fully or partially resolves certain potential claim records because of a dispute over contract administration.</p> <p>(Use the specification codes from the upper portion of Table 5-3.2 for the second character, and Table 5-3.4 for the third and fourth characters.)</p>

Table 5-3.1. Change Order Type (Character 1) (2 of 2)

Reason for Change Order	Type of Change Order	Code	Description
Dispute Resolution	Potential Claim	F	<p>Change order either fully or partially resolves certain potential claim records because of a dispute over an ordered change that affected some physical asset.</p> <p>(Use either the physical asset codes from the lower portion of Table 5-3.2 for the second character, and Table 5-3.4 for the third and fourth characters.)</p>
Dispute Resolution	Claim	G	<p>Change order either fully or partially resolves certain contract claims because of a dispute over contract administration.</p> <p>(Use the specification codes from the upper portion of Table 5-3.2 for the second character, and Table 5-3.4 for the third and fourth characters.)</p>
Dispute Resolution	Claim	H	<p>Change order either fully or partially resolves certain contract claims because of a dispute over an ordered change that affected some physical asset.</p> <p>(Use the physical asset codes from the lower portion of Table 5-3.2 for the second character, and Table 5-3.4 for the third and fourth characters.)</p>

Table 5-3.2. Specification or Physical Asset (Character 2) (1 of 2)

<b>Code</b>	<b>Section (only when the first character code is A, E, or G)</b>	<b>Standard Specifications Section Name</b>
A	9-1.06	Changed Quantity Payment Adjustments
B	7-1.04	Public Safety
C	4-1.06	Differing Site Conditions (23 CFR 635.109)
D	7-1.02K	Labor Code
E	7-1.03	Public Convenience
F	8-1.10	Liquidated Damages
G	8-1.07	Delays
H	5-1.36C	Nonhighway Facilities
I	9-1.17C	Proposed Final Estimate
J	12-1	Temporary Traffic Control— - General
K	80-15.02,83-11.03B	Reconstruct Fences, Reconstruct Metal Bridge Railings
L	4-1.05B	Work-Character Changes
M	19-1.03B	Unsuitable Material
N	19-2.03F	Slides and Slipouts
O	20-1.03C	Roadside Clearing
P	10-6, 87-21.03B	Watering, Maintaining Existing Electrical Systems
Q	9-1.07	Payment Adjustments for Price Index Fluctuations
R	5-1.43E(1)	Alternative Dispute Resolution—General
S	9-1.03	Payment Scope
T	4-1.07C	Value Analysis Workshop
U	5-1.09	Partnering
V	6-2 and 6-2.02	Quality Assurance, Quality Control
W	Various	Other listed Supplemental Work (Describe in transmittal memo) (Use only if no other code describes this supplemental work and use Table 5-3.5 when the first character is A and the second character is W)
X	Other	Other (Describe the “other” specification in transmittal memo)
Z	Default	(Use only when the first character is B)

Table 5-3.2. Specification or Physical Asset (Character 2) (2 of 2)

<b>Code</b>	<b>Affected Permanent Physical Asset (use this portion of Table 5-3.2 only when the first character code is C, D, F, or H)</b>
A	Building (such as maintenance facilities, pump stations)
B	Electrical (such as signals, lighting, communications, electrical systems)
C	Drainage (such as culvert, subsurface, roadway drainage, gutters, lined ditches)
D	Earthwork (such as excavation, embankment, soil stabilization, slope protection, erosion control)
E	Landscaping (such as plants, irrigation)
F	Materials (such as borrow or disposal sites, surplus, salvage)
G	Property (such as fence, survey monument, easements, right-of-way obligations)
H	Structure (vehicle or pedestrian)
I	Base, subbase, shoulder backing
J	Surfacing (pavement, pavement reinforcing, shoulders, sidewalks)
K	Traffic control devices (such as barriers, railing, signing, delineation)
L	Utility
M	Wall (such as retaining, sound, aesthetic)
X	Other (Describe the "other" affected permanent physical asset in transmittal memo)
Z	Default (Use only when the first character is B)

Table 5-3.3. Source Document (Characters 3 and 4) (1 of 2)  
 (Use **Table 5-3.3** only when the first character code is *C* or *D* from **Table 5-3.1**)

<b>Characters 3 and 4</b>	<b>Type</b>	<b>Purpose</b>
AA	Agreement	Cooperative
AB	Agreement	Permit
AC	Agreement	Right-of-way obligation
CA	Certificate	Environmental clearance
CB	Certificate	Right-of-way clearance
GA	Survey	Data/control
GB	Survey	Detailed cross-sections
MA	Materials	Log of test borings
MB	Materials	Information handout, brochure
PA	Plan	Construction detail
PB	Plan	Contour grading
PC	Plan	Electrical
PD	Plan	Elevation view
PE	Plan	Environmental mitigation
PF	Plan	Erosion control
PG	Plan	Foundation
PH	Plan	General cross-sections
PI	Plan	Irrigation
PJ	Plan	Layout/plan view
PK	Plan	Mechanical
PL	Plan	Pavement delineation
PM	Plan	Planting
PN	Plan	Profile
PO	Plan	Schedule of materials
PP	Plan	Signage
PQ	Plan	Standard Plans
PR	Plan	Substructure
PS	Plan	Superelevation
PT	Plan	Superstructure



Table 5-3.3. Source Document (Characters 3 and 4) (2 of 2)

<b>Characters 3 and 4</b>	<b>Type</b>	<b>Purpose</b>
PU	Plan	Typical section
PV	Plan	Utilities
SA	Specification	Special Provision
SB	Specification	Standard Specifications
TA	Temporary Plan	Construction area signs
TB	Temporary Plan	Construction easements
TC	Temporary Plan	Construction staging
TD	Temporary Plan	Electrical
TE	Temporary Plan	Erosion control
TF	Temporary Plan	Environmentally sensitive area
TG	Temporary Plan	Lane closure chart
TH	Temporary Plan	Standard Plans
TI	Temporary Plan	Water pollution control or prevention
TJ	Temporary Plan	Traffic handling
TK	Temporary Plan	Traffic management plan
AX	Any of Above	Other specific document (describe in transmittal memo)
CX	Any of Above	Other specific document (describe in transmittal memo)
GX	Any of Above	Other specific document (describe in transmittal memo)
MX	Any of Above	Other specific document (describe in transmittal memo)
PX	Any of Above	Other specific document (describe in transmittal memo)
SX	Any of Above	Other specific document (describe in transmittal memo)
TX	Any of Above	Other specific document (describe in transmittal memo)
XX	Other	Other (describe in transmittal memo)
ZZ	Default	When the first character is either A or B

Table 5-3.4. Dispute Disposition (Characters 3 and 4)  
 (Use **Table 5-3.4** only when the first character code is *E, F, G, or H*, from **Table 5-3.1**, representing a Dispute Resolution)

<b>Character 3 Potential Claims, Claims</b>	<b>When Character 1 is</b>	<b>Chronological Milestone</b>
A	E or F	Before a Differing Site Condition Management Review Committee hearing
B	E or F	Before a Dispute Resolution Board hearing
C	E or F	Before the Construction Contract Acceptance date
D	E or F	Before the Proposed Final Estimate date
E	G or H	Before a Board of Review hearing
F	G or H	Before an Arbitration Filing
G	G or H	Before the Arbitration Hearing
H	G or H	Before the Arbitrator's Decision
I	G or H	After the Arbitrator's Decision

<b>Character 4 Resolution Authority</b>	<b>Description</b>
A	Entitlement, Partial Resolution (Describe unresolved issues in transmittal memo)
B	Entitlement, Full Resolution
C	Negotiated Settlement, Partial Resolution (Describe unresolved issues in transmittal memo)
D	Negotiated Settlement, Full Resolution
E	Arbitration Award, Partial Resolution (Describe unresolved issues in transmittal memo) (Use only when first character code from <b>Table 5-3.1</b> is <i>G or H</i> )
F	Arbitration Award, Full Resolution (Use only when first character code from <b>Table 5-3.1</b> is <i>G or H</i> )
X	Other (Describe in transmittal memo)

Table 5-3.5 Other Supplemental Work (Characters 3 and 4)  
 (Use **Table 5-3.5** only when the first character code is A and the second character code is W from Table 5-3.2 is W)

<b>Characters 3 and 4</b> (use only when first two characters are AW)	<b>Specification</b>	<b>Purpose</b>
AB		Incentive Payment (A+B Bidding)
JT	SSP 40-1	Just-In-Time Training (JITT)
BP	SS 14-6.03	Bird Protection
WS	SS 13-5.04 and 13-6.04, 13-7.03D	Water Pollution Control Maintenance Sharing
WA	SS 13-1.03A	Additional Water Pollution Control
SS	SS 13-3.01D(4)	Stormwater Sampling and Analysis
DA	SS 5-1.43E(2)	Dispute Resolution Advisor (use ARZZ for Dispute Resolution Board Meetings)
HS	nSSPs 39-2.01A(4)(i)(iii) and 39-2.04A(4)(c)(iii)	HMA Smoothness Incentives
CS	nSSP 40-1	Concrete Smoothness Incentives
HP	nSSPs 39-2.09 and 39-2.10	HMA Statistical Pay Factors
ZZ		Other Supplemental work not listed above

### 5-307C Coordination and Concurrence by Others

Secure recommendation or concurrence from affected functional units and other agencies. Concurrence is evidence of agreement but does not constitute approval of a change order. Process all change orders for approval as described in Section 5-311, “Change Order Approval Process,” of this manual.

Use district procedures for circulating change orders for concurrence. If contacted parties are unresponsive, in the change order memorandum, state the facts of the circulation process to assure the proposed change is appropriate. Obtaining concurrence should not delay the project.

The following lists some of the Caltrans functional units and reasons for seeking their concurrence.

#### *5-307C (1) Project Development*

The project engineer must concur with all design-related change orders, including plan or specification changes and value engineering change proposals. You may obtain design assistance from the project engineer on some of the more complex design changes. Remember that the project engineer is the engineer of record, and unless the project engineer is consulted, the resident engineer may not know why some design decisions were made.

By coordinating with the project engineer on all design and specification change orders, a continuous and informal “constructability review” process develops. Cooperation between design and construction personnel will result in better plans and specifications and fewer change orders. Cooperation may also reduce potential for construction delays, effects on the contractor, and claims.

#### *5-307C (2) Project Management*

For change orders with the following conditions, obtain concurrence from the project manager:

- Potential for significant delays to the planned work
- Unanticipated large project cost increases, including those requiring a request for additional funds
- Changes that may be considered outside the scope or intent of the planned work
- Changes that may require a Cost Effectiveness/Public Interest Finding

The project manager’s duties relating to change orders include the following:

- Monitoring project costs
- Expediting decisions by functional units as needed, so there is no delay or other adverse effect on the contractor’s activities

### 5-307C (3) Structures

Where changes are to be made that involve structures, Structure Construction determines the need for the change, the intent or content of the change order, and any methods or restrictions for doing the work. The resident engineer is responsible for administration, including processing the change order for approval. The structure construction engineer and other personnel in the Division of Engineering Services may need to concur. For procedures for obtaining concurrence for structure change orders, refer to Section 7-0.0, "Contract Change Orders," of the *Bridge Construction Records and Procedures* manual, Vol. 1.

### 5-307C (4) Materials

The district materials engineer, as well as the project engineer, must concur with all change orders that change or modify material specifications. Also, seek concurrence from the district materials engineer for proposed changes in structural section, slope rates, installation of subsurface drains, removal of unsuitable material, erosion control, and repair of slides and slipouts.

### 5-307C (5) Traffic

Obtain concurrence from the appropriate traffic engineer in the district for change orders affecting traffic management plans, hours of work, detours, signing, delineation, highway lighting, traffic signals, illuminated signs, guardrail, barriers, or any other traffic control device or facility. Clear any proposed special sign with the district traffic design engineer.

### 5-307C (6) Maintenance

Obtain written concurrence from the appropriate maintenance region manager for changes affecting maintenance facilities, lands and buildings, and maintenance activities. Written concurrence from the appropriate maintenance engineer is required for all change orders affecting the use of maintenance funds.

### 5-307C (7) Right of Way

Obtain concurrence from the district Right of Way Unit for any changes to right-of-way contracts or agreements, right-of-way fencing or alignment, or gates.

Contact the district Right of Way Unit for assistance with any required rights-of-entry permits, permanent or temporary construction easements, or agreements.

The district utility coordinator must concur with all changes involving utility work. The district utility coordinator must also make proposed revisions to Right of Way Form RW 13-04, "Notice to Owner." For information about coordinating utility work, refer to Section 3-518C, "Nonhighway Facilities," of this manual.

### 5-307C (8) Environmental

For environmental concerns and requirements, refer to Chapter 7, "Environmental Stewardship," of this manual. Contact the district environmental unit for assistance and concurrence with any change affecting environmental considerations or requirements or affecting obligations or commitments to other agencies.

The environmental document on any project is valid only for the work described by the document and shown on the plans submitted for environmental approval. For any work proposed in addition to or as a deviation from the approved work, consult with the district Environmental Unit. Significant changes may require amended or additional environmental approval or permits. The types of changes that may require additional consultation and approval include the following:

- New materials sites
- New haul or access roads
- Previously unidentified clearing and grubbing and hazardous materials
- Increases in earthwork
- Unforeseen utility relocation
- Diversion or extraction of water from a stream not covered by a Lake and Streambed Alteration Agreement, more commonly known as a “1602 permit,” from the California Department of Fish and Wildlife
- Use of disposal sites not specified in the contract
- Revision to allowable work windows

#### *5-307C (9) Locally Funded Projects*

For guidelines for processing change orders on locally funded projects, refer to Section 5-310, “Locally Funded State Highway Projects,” of this manual.

### **5-308 Federal Highway Administration Change Order Requirements**

Change orders written for projects with federal funding participation must comply with the Code of Federal Regulations and Federal Highway Administration (FHWA) contracting requirements.

#### 5-308A Projects of Division Interest

Projects of Division Interest (PoDI) are subject to FHWA oversight requirements. Oversight requirements are determined on a project-by-project basis and are documented in the Project Oversight Agreement (POA). Refer to California’s *Stewardship and Oversight Agreement*, available at:

<https://www.fhwa.dot.gov/federalaid/stewardship/>

Early and frequent communication with the FHWA transportation engineer is essential to ensure full compliance with all federal requirements.

#### *5-308A (1) Federal Highway Administration Approval Requirements – Major Change Orders*

As documented in the POA, major change orders may require FHWA approval. If required, the resident engineer must obtain approval before proceeding with a proposed change. If the total extent of the change order work cannot be determined before work begins, FHWA may give a conditional approval on Form FHWA CA-358(c). For additional

information on the change order approval process, see Section 5-308(C), “FHWA Major Change Order Approval Process,” of this manual.

Written and signed FHWA approval is required for any of the following major change orders:

- Any change order that has a total absolute value exceeding \$500,000, including supplemental work items.

Example:

A change order containing a \$150,000 decrease of items, a \$120,000 increase of items, and \$250,000 of extra work at force account would require FHWA approval:

$$|-\$150,000| + |\$120,000| + |\$250,000| = |\$520,000|$$

- Change in project limits beyond the limits set in the environmental document.
- Change that may be considered outside the scope of work or intent of the planned work (same requirement as in Section 5-302, “Change Order Policy,” and criterion requiring Project Management concurrence in Section 5-307C (2), “Project Management,” of this manual).
- Change resulting in a time adjustment of 30 or more working days. Additionally, if time is increased by more than 20 percent of the original working days, then that change and each subsequent change order that increases time must be approved.
- In addition, pursuant to Title 23 Code of Federal Regulations, “Changes and extra work,” (23 CFR 635.120(f)), proposed changes and extra work involved in federally non-participating operations that may affect the design or participating construction features of a project require FHWA concurrence. For a list of change order items that are, in general, federally non-participating, refer to:

<https://dot.ca.gov/programs/construction/change-order-information>

#### *5-308A (2) Federal Highway Administration Approval Requirements—Minor Change Orders*

Change orders other than those previously listed are considered minor. Approvals for all minor change orders are delegated to Caltrans, even on PoDI projects.

#### *5-308A (3) FHWA Denial*

When FHWA declines participation in a change order, the district can proceed with the change order by justifying it in the change order memorandum. The project manager must concur with the change in funding.

#### 5-308B Delegated Projects

Projects not meeting criteria for PoDI are considered delegated projects from FHWA. Caltrans is delegated the authority to administer these contracts. Resident engineers are not required to coordinate with the FHWA transportation engineer. However, discussions for technical guidance are encouraged. For delegated projects, FHWA will verify compliance with federal regulations with program and process reviews.

### 5-308C FHWA Major Change Order Approval Process

For each criterion listed in Sections 5-308A (1), “Federal Highway Administration Approval Requirements—Major Change Orders” of this manual, the resident engineer contacts the FHWA transportation engineer and provides documents as necessary.

The resident engineer must submit Form CEM-4900, “Change Order,” and Form CEM-4903, “Change Order Memorandum,” to the FHWA transportation engineer for approval of the change order. For a change order that affects contract time, the FHWA transportation engineer may ask for the time impact analysis. The FHWA transportation engineer will indicate approval on Form CEM-4903 by signature in the appropriate box in the “Concurred By” section of the form. In the “Federal Participation” section, check the appropriate box and provide an explanation when required:

- Participating: Full federal participation
- Participating in Part: Partial federal participation; provide explanation for this decision
- None: No federal participation provided; not a federally funded project
- Nonparticipating (Maintenance): Project Funded by Caltrans Maintenance; no federal participation provided
- Nonparticipating: FHWA will not participate in the change order; provide explanation for this decision

FHWA approval is required before the change order work begins. If there is an urgent need to start the work, a two-step approval process can be used.

Step 1: Form FHWA CA-358, “Record of Prior Approval for Major Contract Change Order,” will be submitted and approved by FHWA before the work is started.

Step 2: CEM-4900 and CEM-4903 will be submitted to and approved by FHWA as soon as possible after the work has started.

### **5-309 Federal Segregation Determination on Change Orders**

The resident engineer is responsible for managing project construction costs within the current construction allotment. Funds for a project may come from more than one source, such as from state highway funds, local funds, and federal funds. For a change order, the resident engineer must identify and segregate the funds required from each source. Show the proper distribution of change order funding on Form CEM-4903, “Change Order Memorandum.” For more information on project funding, refer to Section 5-2, “Funds,” of this manual.

At the beginning of the project, the resident engineer should receive the federal detail estimate with an estimate for each category of funds and the applicable limits of federal eligibility. If you do not receive this detail estimate, contact the project manager. In some cases, the FHWA transportation engineer has a color-coded plan title sheet for more complex multiple-funded projects.

Funding sources for a change order may be different from the funding sources indicated in the detail estimate for a particular project. If the change order funding percentages are



the same as the detail estimate, simply mark the “Change Order Funded Per Contract” in the “Federal Segregation” section on Form CEM-4903.

A change order may not be eligible for participation from one or more of the funding sources, depending upon the location and the work to be performed. In this case, mark the “Change Order Funded as Follows” box and indicate the percentage of each funding source’s participation in the appropriate box. If this box is left blank or is incorrect, Caltrans may lose federal funds that should have been secured on this project. For additional information on nonparticipating cost items, refer to FHWA Nonparticipating Cost Items at:

<https://dot.ca.gov/programs/construction/change-order-information>

For example, a change order written for a project funded from both federal and other sources may not be eligible for federal participation. In this case, the cost of the change order must be distributed between the other funding sources. In the box in the lower right-hand portion of Form CEM-4903, show the percentage of participation by each funding source.

### **5-310 Locally Funded State Highway Projects**

Generally, participation will be based on Caltrans’ original agreement with the contributing agency.

Before making changes that affect work for contributing agencies, verify that such changes are within the scope of the agreement. If not, take action (usually through the district local project’s unit) to have the agreement modified.

In the margin of the headquarters and district copies of change orders covering the work, obtain the signature of an authorized representative of the affected agency.

Include in the change order memorandum sufficient information to identify the portion of the work that is applicable to the contributing agency. As soon as the change order and memorandum are approved, send the Division of Accounting, Accounts Receivable and Program Accounting sections a copy.

### **5-311 Change Order Approval Process**

Caltrans must approve a change order, and whenever possible, the contractor should sign it. When the contractor signs a change order, it is referred to as “executed.” If the contractor declines to sign the change order, then Caltrans may, in some cases, approve it unilaterally.

So that the contractor will execute the change order, make every effort possible to reach agreement. However, do not delay the work by waiting for the contractor to respond. If necessary, submit the change order for unilateral approval. Receipt by the contractor of an approved change order establishes a time for protest.

When the contractor does not agree with the method or amount of the payment and time adjustment, the resident engineer processes the change order using extra work at force account.

If the contractor disagrees with extra work at unit price, extra work at lump sum, or increase in contract items with a payment adjustment, the resident engineer writes the change order using extra work at force account. If the contractor declines to accept the change order within 7 working days, draft and process it unilaterally.

If the contractor agrees with the extra work unit of measurement and method of payment but disagrees with the effect on time proposed by the resident engineer, execute the change order using deferred time.

Deferred time change orders are to be closed out within 21 working days of the completed change order work. If the contractor does not execute the change order to resolve deferred time, a unilateral change order must be processed within an additional 7 working days to close out the deferred time change order.

If the change order is not protested within the specified time, it is considered an executed change order. Refer to Section 5-1.06, "Protests," of the *Standard Specifications*, and Section 3-403, "Changes and Extra Work," of this manual.

You may routinely submit for approval without the contractor's signature any supplemental change orders written solely to increase force account funds. However, if the extent or type of work covered in the supplemental change order differs from that included in the original, consider writing a separate change order instead of a supplemental change order. If a supplemental change order is written, submit it to the contractor for acceptance.

On sensitive or complex change orders, districts are encouraged to submit a draft copy to the Division of Construction for review and recommendation before preparing the final version of the change order. In following this practice, also discuss the work with the contractor.

Before issuance of the proposed final estimate, resolving entitlement for potential claims is delegated according to Table 5-4.2, "Claims Resolution Authority—Entitlement," of this manual.

#### 5-311A Division of Construction Approval

Construction personnel in districts with approved change order quality control plans may approve all change orders, except those requiring Division of Construction approval. Division of Construction approval is required on:

- Any change order that has a total absolute value exceeding \$500,000.

Example:

A change order containing a \$150,000 decrease of items, a \$120,000 increase of items, and \$250,000 of extra work at force account would require Division of Construction approval:

$$|-\$150,000| + |\$120,000| + |\$250,000| = |\$520,000|$$

When the original change order plus supplements to the original change order have a total absolute value exceeding \$500,000, Division of Construction approval is required on the supplement exceeding the limit.

Before the contractor is allowed to begin work included in a nondelegated change order, the Division of Construction must approve the change order or grant authorization to proceed with the associated work.

#### *5-311A (1) Change Order Determinations*

The Division of Construction sometimes receives requests from the districts to review and approve change orders that contradict policy, delegation, and change order approval criteria. These requests are sometimes received after the district has approved the change order and the contractor has performed the work or the contract has been accepted. In each situation, the Division of Construction change order engineer issues a review determination. Additional criteria include:

1. Change order work started without the Division of Construction's authorization to proceed
2. Change order not initiated by the district before the work has been completed
3. Deferred time change orders not processed in a timely manner

The Division of Construction will track these change orders and report performance to the Division of Construction chief. This information may be used to re-evaluate the appropriate level of change order delegation of authority to the district.

These change orders are divided into two categories: "ratify post performance" and "unauthorized direction," and are shown in Table 5-3.5, "Division of Construction's Change Order Direction." This table explains scope and subsequent actions for change orders that require Division of Construction approval. This direction is communicated in a Division of Construction fax or email addressed to the district change order desk: [CCO.Desk.HQ@dot.ca.gov](mailto:CCO.Desk.HQ@dot.ca.gov).

Table 5-3.5. Division of Construction's Change Order Direction (1 of 2)

Direction	Direction Scope	District Action
To Proceed with the Work	Division of Construction authorization to proceed is required for change order work authorized before full execution of the change order. This written work authorization by the engineer is to be used only in an extenuating circumstance. The authorization is complete and satisfactorily prepared by the district.	Authorize the change order work in writing in accordance with Section 4-1.05, "Changes and Extra Work," of the <i>Standard Specifications</i> . Prepare change order and obtain Division of Construction's issue and approve direction within 7 working days. Execute the change order as soon as possible; no later than 21 working days.
To Issue and Approve	Division of Construction approval granted on the basis of a satisfactorily prepared change order and change order transmittal memorandum.	Approve the change order in accordance with Division of Construction direction including any required minor revisions or conditions noted in a fax or email from the Division of Construction.
To Revise - Not Authorized	Changes are required before Division of Construction approval will be granted.	Revise the change order in accordance with the Division of Construction direction. Submit for reconsideration or elevate the issue for resolution to the district construction division chief and the assistant Division of Construction chief.
To Process in the District	Division of Construction approval for this change order is not required. Authority to approve the change order has been delegated to the district.	Approve the change order in the district.
Ratify Post Performance	District administration of the change order committed the Division of Construction to a course of action without required approvals.	Review internal change order procedures and implement measures to assure future transgressions are prevented.

Table 5-3.5. Division of Construction's Change Order Direction (2 of 2)

Direction	Direction Scope	District Action
Request for Information	Additional information is required for the Division of Construction to evaluate the change order.	Collect the requested information and transmit it to the Division of Construction. The district may elect to revise the change order and resubmit it when the additional information is provided.
Void	Changes that are authorized or executed by the district outside their delegated authority and that are fatally flawed; including provisions that violate state law or federal law.	Void the change order.
Change Order Approved in Headquarters	Division of Construction originated and approved a change order without district involvement. Often used to expedite arbitration or other payments to the contractor.	Process the change order by entering it in the contract administration system and flagging the change order for payment.
Unauthorized	The district exercised authority outside of policy or delegation. The change order contradicts policy, delegation, or approval criteria. The contractor may have performed the work without authorization to proceed. The district may not have initiated the change order before the work was completed.	Review internal change order procedures and implement measures to prevent future transgressions.
Other	Category used for all situations that cannot be classified above.	Division of Construction approval is not granted. District complies with instructions provided in the Division of Construction fax or email.

### 5-311B District Approval Limitations

Districts may not delegate below the level of region construction division chief or district construction deputy director the “Approval Recommended” signatures on Division of Construction-approved change orders.

Only a region construction division chief or district construction deputy director may approve change orders for value engineering change proposals. Approval authority is determined by considering each element of the value engineering change proposal in the context of the delegation criteria listed above. Project engineer concurrence for all revisions of standard or project specific design elements is required before approving change orders to implement all value engineering change proposals.

District approval of the following types of change orders may not be delegated below the level of a region construction division chief or district construction deputy director:

- Project limit modifications
- Acceleration of the contract work through a decrease of contract time
- Order of work revisions
- Revision of the contract staging requirements

District approval of the following types of change orders may not be delegated below the level of construction manager:

- Those that include deferred time
- “Lane Requirements and Hours of Work” charts
- Addition of approved standard special provisions
- Any editing of an approved standard special provision, in accordance with its instructions

District approval of other types of change orders may not be delegated below the level of senior-level resident engineer or construction engineer. Within this delegation, senior-level resident engineers or construction engineers may be given written authority to approve change orders that increase the contract cost or approved supplemental work by as much as \$50,000.

### 5-311C Prior Authorization to Proceed

A “prior authorization to proceed” with change order work should be issued only because of extenuating circumstances.

Whoever holds change order delegated authority as stated in this section must recommend approval for all change orders requiring prior authorization to proceed.

In addition to writing and dating the prior authorization to proceed, the engineer must include the following information:

- Change order number reserved for the work
- Estimated value of the work

- Proposed method of payment
- Estimated duration of the work
- Estimated contract time adjustment needed to perform the work
- Estimated time required to execute the associated change order

Document in the resident engineer's daily report the date, time, and name of the division change order engineer or person who provided authorization to proceed. The change order should be submitted to the contractor for approval within 7 working days of the date of the prior authorization to proceed. If the contractor does not execute the change order within an additional 7 working days, a unilateral change order must be processed within 21 working days.

The district should have procedures for prior authorization to proceed actions in accordance with this section. The district procedures should clearly designate the roles and responsibilities of the staff involved in preparing and approving change orders.

### **5-312 Substantiation**

Each change order must be carefully considered, analyzed, and documented in the project records. For things to consider when preparing to write a change order, refer to Section 5-305, "Preliminary Considerations," of this manual.

#### 5-312A Engineering Analysis

Conduct an engineering analysis for each change to the contract plans and specifications. Consider the effect of each change on the entire project and related facilities.

Change orders must meet all engineering and design standards unless a design exception is approved by the Division of Design. The project engineer who stamped the project plans is the engineer of record for the project and must concur with all engineering changes.

#### 5-312B Contractual Analysis

Determine the contractual basis and authority to issue each change order. Include this information in the transmittal memorandum and change order. Use Figure 5-3.1, "Change Order Decision-Making Concept Flowchart," to assist you in this determination.

#### 5-312C Cost Analysis

Prepare an independent force account or bid item cost analysis for comparison with the contractor's estimated cost. Accept the contractor's estimated cost only if it is justified by this analysis. Do not include costs for disputed work. Include subcontractor markups in the cost estimate when a subcontractor will be performing extra work paid for by unit price, payment adjustment, or lump sum. For subcontractor markup guidelines, refer to Section 3-9, "Payment," of this manual.

File in the project records any calculations made to determine extra work at unit price, payment adjustment, or lump sum. These calculations substantiate and justify the amount

paid for extra work and are therefore subject to audit. Either show these calculations in the change order memorandum or include a statement that the calculations are on file in the project records.

### 5-312D Time Impact Analysis

A time impact analysis (TIA) illustrates the effect of each change on the scheduled completion date or an internal milestone. The contractor submits a written TIA to the resident engineer with each time adjustment request. Review the TIA for logic and duration effects to determine the time adjustment, or perform an independent TIA to determine the time adjustment. Refer to Section 8-1.02D (8), "Time Impact Analysis," of the *Standard Specifications* for more information regarding TIA submittals. For an example of a TIA reference on Form CEM-4903, "Change Order Memorandum," refer to the example "Compensation for Critical Delay (Payment Adjustment)" at:

<https://dot.ca.gov/programs/construction/change-order-information>

### **5-313 Executed Change Order Copy Distribution**

For all contracts, one copy of each executed authorization to proceed, change order, and corresponding memorandum is electronically scanned and transmitted to the Division of Construction file server.

Combine each executed authorization to proceed or change order and change order memorandum for each contract change, supplemental change, and authorization to proceed into a single Adobe Acrobat file using the following filename convention:

Contract No. CCO No. or ATP No. Supplemental No. Approval Date

Examples:

04-012024 ATP 002 S00 11-20-06.pdf

04-012024 CCO 002 S02 11-27-06.pdf

Transmit the file directly to the Division of Construction file server using the centralized access provided to each district. Transmit approved change orders at least once a week. This is part of the Division of Construction Quality Assurance Plan process.

Send an email notification to the change order engineer upon transfer of any information to the Division of Construction file server.

For PoDI, districts are delegated authority to send one copy of each approved change order and corresponding change order memorandum directly to the FHWA transportation engineer assigned to the district or program administering the contract. The method of document transfer to the FHWA transportation engineer will be negotiated between the district and the FHWA transportation engineer on a case-by-case basis.

The FHWA transportation engineer:

- May issue a determination of funding ineligibility or modify the level of funding participation for any reviewed change order.
- Will communicate all funding eligibility findings and will return the change order to the district.



- Will notify districts of all changes in federal participation before issuance of a final voucher.

Districts are responsible for updating the Contract Administration System (CAS) for federal participation information on change orders.

### **5-314 Value Engineering Change Proposals**

For procedures for a value engineering change proposal, refer to Section 3-405, “Value Engineering,” of this manual.

Prepare value engineering change proposal change orders as a complete package, with no deferred time or deferred cost considerations.

Give careful attention to the clauses in the change order covering payment. Value engineering change proposal change orders may involve any combination of bid item work, payment adjustments, and extra work at agreed price.

Prices for bid items might not represent the costs of doing either the planned or changed work as computed on a force account basis. In this case, in addition to increases and decreases at contract prices, include payment adjustments to reflect the actual force account cost of increases and decreases in bid item quantities. Also, in the analysis of cost savings, consider adjustments based on a 25 percent overrun or underrun.

Value engineering change proposal change orders must include a payment adjustment that supplements other payments to result in a net return of either 50 or 60 percent of the net savings to the contractor. Determine the adjustment in the following manner:

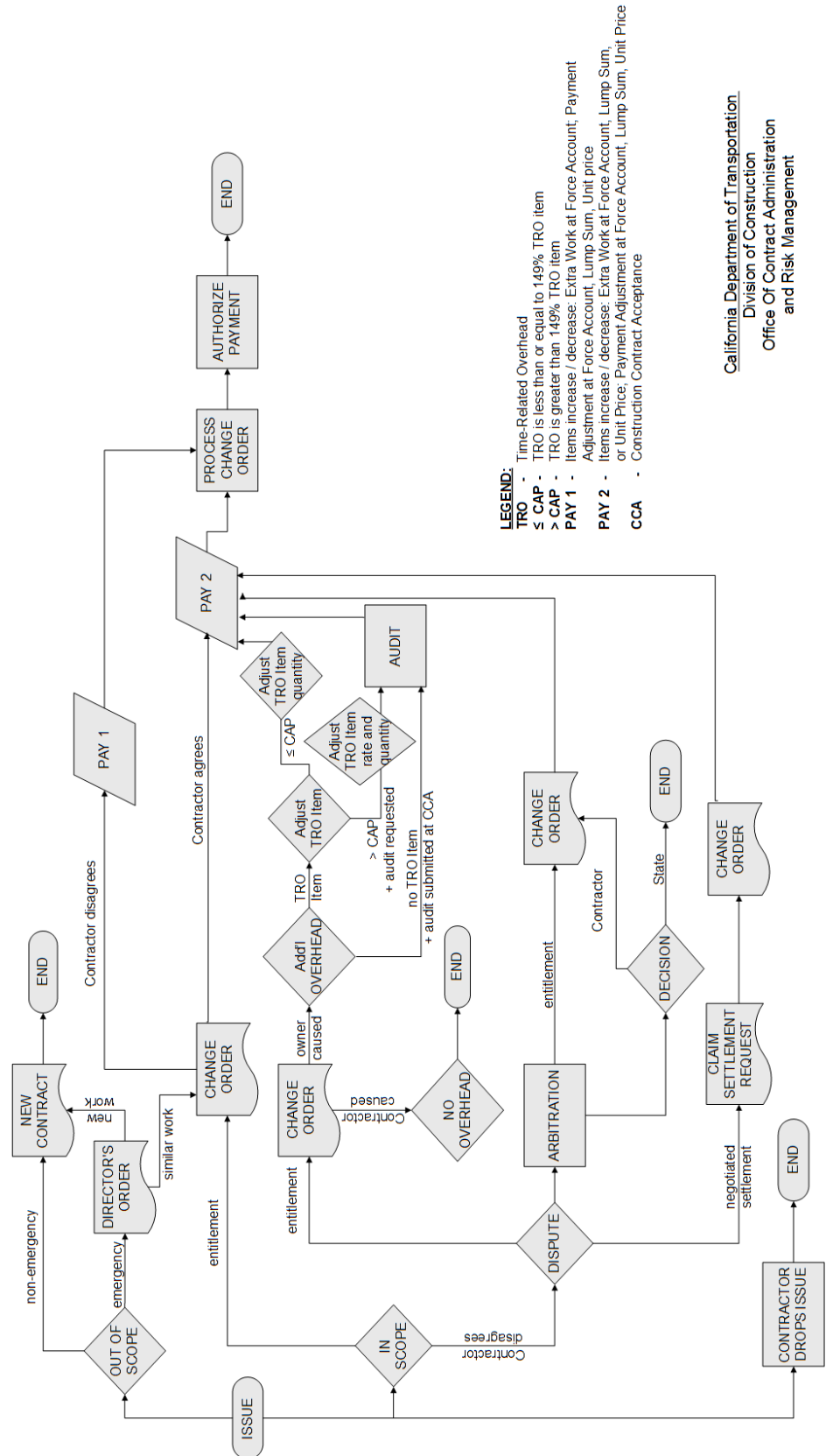
- Determine the total decrease in construction cost. This decrease will be the sum of increases and decreases in bid items at bid item unit prices, payment adjustments including work-character change adjustments, and extra work at agreed price.
- Provide for a payment adjustment that results in a credit from the contractor for either 40 or 50 percent of the net savings as allowed by the specifications.

Time adjustments associated with a value engineering change proposal are shared equally, including any time-related overhead item values. Exclude these dollar values in determining the net savings.

For examples of value engineering change proposal change orders, refer to the examples at:

<https://construction.onramp.dot.ca.gov/contract-administration-information/change-orders>

Figure 5-3.1 Change Order Decision-Making Flowchart



California Department of Transportation  
 Division of Construction  
 Office of Contract Administration  
 and Risk Management