



Field Inspection – California Specific Course Plan

Course Details

Certification:	Fire Inspector 1
CTS Guide:	Fire Inspector 1 Certification Training Standard (2014)
Description:	This course provides students with a basic knowledge of a Fire Fighter I’s field inspection roles and responsibilities specific to California including tents, canopies, and temporary membrane structures; fireworks and explosives; and wildland urban interface environments.
Designed For:	Entry-level Inspector
Prerequisites:	Fire Inspector 1A: Duties and Administration
Standard:	Complete all activities and formative tests. Complete all summative tests with a minimum score of 80%.
Hours:	Lecture: 14:00 Activities: 00:30 Testing: 1:30
Hours (Total):	16:00
Maximum Class Size:	30
Instructor Level:	Primary Instructor
Instructor/Student Ratio:	1:30
Restrictions:	None
SFT Designation:	CFSTES

Required Resources

Instructor Resources

To teach this course, instructors need:

- California Building Code
(International Code Council, current edition)
- California Fire Code
(International Code Council, current edition)
- California Public Resources Code 4290 and 4291 and Government Codes 51175 through 51189
(State of California, <http://leginfo.legislature.ca.gov/faces/codes.xhtml>)
- California Code of Regulations (CCR) Title 14 and Title 19
(Office of Administrative Law, <https://oal.ca.gov/>)
- NFPA 1123: Code for Fireworks Display
(National Fire Protection Association, current edition)
- NFPA 1126: Standard for the Use of Pyrotechnics Before a Proximate Audience
(National Fire Protection Association, current edition)
- *Laws and Regulations for Transportation, Use, and Storage of Fireworks in California*
(Office of the State Fire Marshal,
<http://osfm.fire.ca.gov/strucfireengineer/pdf/fireworks/FireworksHandbook2011.pdf>)

Online Instructor Resources

The following instructor resources are available online at

<https://osfm.fire.ca.gov/divisions/state-fire-training/cfstes-professional-certification/>:

- Wildland Hazard & Building Codes
 - http://calfire.ca.gov/fire_prevention/fire_prevention_wildland_codes.php
- Activity 3-1: Fireworks Classifications

Student Resources

To participate in this course, students need:

- California Building Code
(International Code Council, current edition)
- California Fire Code
(International Code Council, current edition)
- California Public Resources Code 4290 and 4291 and Government Codes 51175 through 51189
(State of California, <http://leginfo.legislature.ca.gov/faces/codes.xhtml>)
- California Code of Regulations (CCR) Title 14 and Title 19
(Office of Administrative Law, <https://oal.ca.gov/>)
- NFPA 1123: Code for Fireworks Display
(National Fire Protection Association, current edition)

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- NFPA 1126: Standard for the Use of Pyrotechnics Before a Proximate Audience (National Fire Protection Association, current edition)
- *Laws and Regulations for Transportation, Use, and Storage of Fireworks in California* (Office of the State Fire Marshal, <http://osfm.fire.ca.gov/strucfireengineer/pdf/fireworks/FireworksHandbook2011.pdf>)

Unit 1: Introduction

Topic 1-1: Orientation and Administration

Terminal Learning Objective

At the end of this topic, a student will be able to identify facility and classroom requirements and identify course objectives, events, requirements, assignments, activities, resources, evaluation methods, and participation requirements in the course syllabus.

Enabling Learning Objectives

1. Identify facility requirements
 - Restroom locations
 - Food locations
 - Smoking locations
 - Emergency procedures
2. Identify classroom requirements
 - Start and end times
 - Breaks
 - Electronic device policies
 - Special needs and accommodations
 - Other requirements as applicable
3. Review course syllabus
 - Course objectives
 - Calendar of events
 - Course requirements
 - Student evaluation process
 - Assignments
 - Activities
 - Required student resources
 - Class participation requirements

Discussion Questions

1. What is a formative test? What is a summative test?

Activities

1. To be determined by the instructor.

Topic 1-2: Fire Marshal Certification Process

Terminal Learning Objective

At the end of this topic, a student will be able to identify different levels in the Fire Marshal certification track and the courses and requirements for Fire Inspector 1 certification, and be able to describe the capstone task book and testing process.

Enabling Learning Objectives

1. Identify the different levels of certification in the Fire Inspector certification track
 - Fire Inspector 1

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- Fire Inspector 2
2. Identify the other Fire Prevention certification tracks
 - Plan Examiner
 - Fire Marshal
3. Identify the courses required for Fire Inspector 1
 - Fire Inspector 1A: Duties and Administration
 - Fire Inspector 1B: Fire and Life Safety
 - Fire Inspector 1C: Field Inspection
 - Fire Inspector 1D: Field Inspection – California Specific
4. Identify any other requirements for Fire Inspector 1
5. Describe the capstone task book process
 - Complete all prerequisites and course work
 - Submit application and fees to request capstone task book
 - Must be employed by a California Fire Agency as a Fire Inspector
 - Complete all job performance requirements included in the task book
 - Must have identified evaluator verify individual task completion via signature
 - Must have Fire Chief or authorized representative verify task book completion via signature
6. Describe the capstone testing process
 - Complete coursework
 - Schedule online capstone test
 - Schedule skills evaluation test

Discussion Questions

1. How many levels are there in the Fire Marshal certification track? What are they?

Activities

1. To be determined by the instructor.

Unit 2: Tents, Canopies, and Temporary Membrane Structures

Topic 2-1: Inspecting Tents, Canopies, and Temporary Membrane Structures

Terminal Learning Objective

At the end of this topic, a student given applicable codes and standards and jurisdictional policies will be able to inspect a tent, canopy, or temporary membrane structure to verify that it complies with applicable codes and standards, and identify, document, and report deficiencies in accordance with applicable codes and standards and jurisdictional policies.

Enabling Learning Objectives

1. Define the following terms:
 - Tent
 - Canopy
 - Temporary membrane structure

2. Identify the state requirements for tents, canopies and other temporary membrane structures (10 persons or greater)
 - Vehicle parking
 - Location on site
 - Structural requirements
 - Prohibited smoking
 - Fireworks and open flame
 - Fire extinguishers and other fire protection equipment
 - Fire safety personnel
 - Abatement of fire and panic hazards
 - Exit requirements
 - Cooking and heating equipment
 - Flame resistance
 - Labeling of tents
3. Identify when the California Building Code regulates a tent, canopy, or membrane structure
4. Observe, recognize problems with, and make decisions about tents, canopies, and temporary membrane structures

Discussion Questions

1. What is the difference between a tent and a canopy?
2. What occupant load requires the presence of fire safety personnel?
3. What canopy size does the code exempt from permitting and regulation?

Activities

1. To be determined by the instructor.

CTS Guide Reference: CTS 3-16

Unit 3: Fireworks and Explosives

Topic 3-1: Inspecting Safe and Sane Fireworks Retail Stands

Terminal Learning Objective

At the end of this topic, a student given applicable codes and standards and jurisdictional policies will be able to inspect a safe and sane fireworks stand in order to verify that fireworks displays and storage comply with applicable codes and standards, and identify, document, and report deficiencies in accordance with applicable codes and standards and jurisdictional policies.

Enabling Learning Objectives

1. Identify fireworks classifications
 - Dangerous
 - Safe and sane
 - Agriculture and wildlife
 - Model rocket motor

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- Emergency signaling devices
 - Exempt
 - Party popper
 - Snap caps and snappers
 - High power rocket motors
2. Identify codes and standards applicable to fireworks storage, display, and transportation
 - Storage
 - Code of Federal Regulations, Title 49, Part 173, Subpart C
 - California Code of Regulations, Title 13, Division 2, Chapter 6, Article 1
 - Display
 - California Health and Safety Code, sections 12552 and 12553
 - California Fire Code, Chapter 33
 - California Code of Regulations, Title 19, Division 1, Chapter 6
 - Transportation
 - Code of Federal Regulations, Title 49
 3. Describe types of licenses and permits required for fireworks storage and display
 4. Observe, recognize problems with, and make decisions about fireworks storage and display
 - Requirements contained in California Code of Regulations, Title 19
 - Associated permits
 - Electrical permit
 - State Fire Marshal retail sales permit
 - AHJ (authority having jurisdiction) permit
 - Electrical power sources
 - Verification of age of sellers
 - Prohibition of alcohol and narcotics
 - No smoking
 - Booth construction type and location
 - Onsite fire extinguishers
 - Exiting
 5. Apply codes and standards related to fireworks storage and display

Discussion Questions

1. Which fireworks are considered safe and sane?
2. Are safe and sane fireworks approved for use statewide?
3. When (dates and times) can someone sell safe and sane fireworks in California?
4. When might someone use an agriculture/wildlife firework?

Activities

1. Activity 3-1: Fireworks Classifications

CTS Guide Reference: CTS 3-17

Topic 3-2: Inspecting Public Fireworks Displays

Terminal Learning Objective

At the end of this topic, a student given applicable codes and standards and jurisdictional policies will be able to inspect a public fireworks display in order to verify that fireworks storage, handling, and use comply with applicable codes and standards, and identify, document, and report deficiencies in accordance with applicable codes and standards and jurisdictional policies.

Enabling Learning Objectives

1. Identify codes and standards applicable to public fireworks displays
2. Describe types of aerial fireworks
3. Describe types of licenses and permits required for public fireworks displays
 - Insurance
 - Licensed operator
 - Local permit
4. Describe fire and life safety aspects related to public fireworks displays
 - Firing methods
 - Mortars and aerial shells
 - Personal protective equipment
 - Post display procedures
 - Safety tools and equipment
 - Site location requirements
 - Storage requirements
5. Observe, recognize problems with, and make decisions about public fireworks displays
 - Well secured to prevent movement
 - Angled if necessary to permit proper trajectory and landing
 - Undamaged and in good condition
 - Properly sized for launch tube
 - Properly and completely loaded
6. Apply codes and standards related to public fireworks displays

Discussion Questions

1. What is considered an aerial display?
2. Who can operate a public display of fireworks?
3. Where would you find the shell size as related to the mortar? (California Code of Regulations, Title 19, Division 1, Chapter 6, Article 15, Section 999)

Activities

1. To be determined by the instructor.

CTS Guide Reference: CTS 3-18

Topic 3-3: Inspecting Proximate Fireworks Displays

Terminal Learning Objective

At the end of this topic, a student given applicable codes and standards and jurisdictional policies will be able to inspect a proximate fireworks or special effects display in order to verify that fireworks storage, handling, and use comply with applicable codes and standards, and identify, document, and report deficiencies in accordance with applicable codes and standards and jurisdictional policies.

Enabling Learning Objectives *

1. Describe proximate fireworks and special effects
2. Identify codes and standards applicable to proximate fireworks or special effects displays
3. Describe types of licenses and permits required for proximate fireworks or special effects displays
4. Describe fire and life safety aspects related to proximate fireworks or special effects displays
 - Display requirements
 - Physical hazards
 - Storage requirements
 - Types of devices
 - General requirements for handling and use (NFPA 1126)
 - Specific requirements for various types of pyrotechnics
 - Fallout spheres
 - Distance from audience and other structures
 - Distance from overhead objects such as curtains, beams, etc.
 - Items projecting into the space of the sphere
 - Musicians, actors, or other participants within the sphere while device is fired
5. Observe, recognize problems with, and make decisions about proximate fireworks or special effects displays
6. Apply codes and standards related to proximate fireworks or special effects displays

Discussion Questions

1. What is considered close proximity?
2. Can you discharge fireworks inside a building?
3. What are the greatest concerns related to special effects shoots?
4. When should local authorities prohibit a special effects shoot?
5. What is the role of a fire safety officer at a special effects shoot?
6. What training is available to qualify an inspector to properly oversee a special effects event?

Activities

1. To be determined by the instructor.

CTS Guide Reference: CTS 3-19

* This topic does not include buildings and facilities used for motion picture, television, and commercial production.

Unit 4: Wildland Urban Interface

Topic 4-1: Inspecting Exterior Hazard Abatement on an Existing Property

Terminal Learning Objective

At the end of this topic, a student given applicable codes and standards and jurisdictional policies will be able to inspect exterior hazards abatement on an existing property in order to verify compliance with applicable codes and standards, and identify, document, and report deficiencies and mitigation measures in accordance with applicable codes and standards and jurisdictional policies.

Enabling Learning Objectives

1. Describe the wildland urban interface environment
2. Identify the history of fire in the wildland urban interface environment
3. Describe the consequences of severe wildland fire conditions on unmitigated wildland urban interface areas
 - Interface conflagrations will exceed fire suppression resource capabilities
 - Life loss
 - Property loss
 - Environmental impact
 - Economic impact
4. Identify factors impacting wildland fire behavior
 - Fuel
 - Topography
 - Weather
 - Heat transfer
 - Direct flame contact
 - Convection
 - Radiation
 - Ember transfer
 - Structure to structure
 - Fuel and fire laddering
 - Crown fire migration
5. Define fire hazard severity zone classifications
 - Moderate
 - High
 - Very High
6. Identify responsibility areas, including:
 - Local Responsibility Area (LRA)
 - State Responsibility Area (SRA)

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- Federal lands
- 7. Describe methods for dealing with fire hazards associated with wildland urban interface environment
 - Prescriptive construction requirements found in California Building Code, Chapter 7A
 - Prescriptive fuel modification
 - Performance-based design
 - Master-planned communities
 - Construction features
 - Engineered fuel modification zone
- 8. Describe the components of a vegetation management plan
 - Defensible space
 - Size, distance and zones
 - Fuel modification
 - Changing existing plant materials
 - Fuel reduction
 - Reducing the amount of existing vegetation
 - Wildland urban interface maintenance
 - As required by the AHJ or in accordance with a fuel management plan
- 9. Observe, recognize problems with, and make decisions about exterior hazard abatement
- 10. Apply codes and standards related to wildland urban interface environment.

Discussion Questions

1. What does WUI stand for?
2. How do weather conditions impact fire behavior?
3. How is fuel loading measured in a wildland urban interface environment?
4. What is aspect?
5. What are the types of fire transfer?
6. What are the differences between an SRA and an LRA?
7. Can an SRA be within city limits?
8. In which severity zones do the requirements of CBC chapter 7A apply?
9. What are the components of a vegetation management plan?
10. What are the components of a master-planned community in a WUI environment?
11. What construction features does chapter 7A of CBC modify for structures in a WUI environment?

Activities

1. To be determined by the instructor.

CTS Guide Reference: CTS 4-1

Time Table

Segment	Lecture Time	Activity Time	Total Unit Time
Unit 1: Introduction			
Topic 1-1: Orientation and Administration			
Lecture	00:30		
Activity 1-1: To be determined by instructor		00:00	
Topic 1-2: Fire Marshal Certification Process			
Lecture	00:30		
Activity 1-2: To be determined by instructor		00:00	
Unit 1 Totals	1:00	00:00	1:00
Unit 2: Tents, Canopies, and Temporary Membrane Structures			
Topic 2-1: Inspecting Tents, Canopies, and Temporary Membrane Structures			
Lecture	1:00		
Activity 2-1: To be determined by instructor		00:00	
Unit 2 Totals	1:00	00:00	1:00
Unit 3: Fireworks and Explosives			
Topic 3-1: Inspecting Safe and Sane Fireworks Retail Stands			
Lecture	3:00		
Activity 3-1: Fireworks Classifications		00:30	
Topic 3-2: Inspecting Public Fireworks Displays			
Lecture	2:30		
Activity 3-2: To be determined by instructor		00:00	
Topic 3-3: Inspecting Proximate Fireworks Displays			
Lecture	2:30		
Activity 3-3: To be determined by instructor		00:00	
Unit 3 Totals	8:00	00:30	8:30
Unit 4: Wildland Urban Interface			
Topic 4-1: Inspecting Exterior Hazard Abatement on an Existing Property			
Lecture	4:00		

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Segment	Lecture Time	Activity Time	Total Unit Time
Activity 4-1: To be determined by instructor		00:00	
Unit 4 Totals	4:00	00:00	4:00
Lecture, Activity, and Unit Totals:	14:00	00:30	14:30

Course Totals

Segment Type	Time
Total Lecture Time (LT)	14:00
Total Activity Time (AT)	00:30
Total Testing Time (TT)	1:30
Total Course Time	16:00