



Fire Prevention 1: Fire and Life Safety Inspections for the Company Officer

Course Plan

Course Details

Certification:	Company Officer
CTS Guide:	Fire Officer 2009
Description:	This course provides a basic knowledge of the Company Officer certification track and Capstone Task Book process. The student will be equipped with knowledge and skills related to the Company Officer's role in fire prevention, the relationship between life safety and building construction, the elements of a quality company inspection program, and how to address complex hazards encountered during an inspection.
Designed For:	The entry-level Company Officer
Prerequisites:	None
Standard:	Complete all summative tests with a minimum score of 80%.
Hours:	Lecture: 27:00 Activities: 3:30 Testing: 1:30
Hours (Total):	32
Class Size:	40
Instructor Level:	This course requires one primary instructor.
Instructor/Student Ratio:	1:40
Restrictions:	None
SFT Designation:	CFSTES

Required Resources

Instructor Resources

To teach this course, instructors need:

- California Fire Inspector's Guide
California Fire Chiefs Association, Current Edition
- Fire Prevention Applications for the Company Officer
Fire Protection Publications (FPP), First Edition, ISBN: 978-0-87939-384-7

Online Instructor Resources

The following instructor resources are available online at

<http://osfm.fire.ca.gov/training/SFTCurriculum.php>:

- Activity 2-1: Relationship between Historic and Modern Fire Problems
- Activity 2-5: Introduction to the California Fire Inspector's Guide
- Activity 4-2: Code Enforcement Violation Rating
- Activity 4-6: Performing Interior Company Inspections
- Fire Prevention 1 Student Supplement

Student Resources

To participate in this course, students need:

- California Fire Inspector's Guide
California Fire Chiefs Association, Current Edition
- Fire Prevention Applications for the Company Officer
Fire Protection Publications (FPP), First Edition, ISBN: 978-0-87939-384-7

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: Company Officer Certification Process

Terminal Learning Objective

At the end of this topic, a student will be able to identify different levels in the Company Officer certification track, the courses and requirements for Fire Prevention 1 certification, and be able to describe the Capstone Task Book process.

Enabling Learning Objectives

1. Identify the different levels of certification in the Fire Officer certification track
 - Fire Officer
 - Chief Officer
2. Identify the courses required for Fire Officer certification level
 - Command 1A
 - Fire Command 1B
 - Command 1C
 - Fire Prevention 1
 - Fire Investigation 1A
 - Fire Management 1
 - Training Instructor 1A
 - Training Instructor 1B
 - I-300
3. Identify any other requirements for Fire Prevention 1
4. Describe the Capstone Task Book process
 - Complete all prerequisites and course work
 - Submit fees and request Capstone Task Book
 - 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
 - Must be employed by a California Fire Agency in the position prior to submitting completed task book to State Fire Training

Discussion Questions

1. How many levels are there in the Fire Officer Certification track? What are they?

Activities

1. To be determined by the instructor.

CTS Guide Reference:

CTS 4-1

Unit 2: The Company Officer's Role in Fire Prevention

Topic 2-1: Relationship Between Historic and Current Fire Problems

Terminal Learning Objective

At the end of this topic, the student, given a tragic fire event, will be able to describe the purpose and value of a company inspection so that significant fire losses are analyzed where a company inspection could have had an impact and fire and life safety would have been improved.

Enabling Learning Objectives

1. Describe the purpose and value of a company inspection
 - Pre-fire evaluation
 - Identify hazards
 - Risk reduction (for civilian and firefighter safety)
 - 16 Firefighter Life Safety Initiatives (National Fallen Firefighters Foundation)
 - Community relations
 - Cost recovery
 - Liability
2. Describe opportunities that a Company Officer has to engage property owners and tenants to improve fire and life safety
 - Discuss mitigations options
 - Require correction action
 - Behavior modification
3. Analyze significant-loss fires where a company inspection could have had an impact

Discussion Questions

1. Given the lessons learned from historic fires, why do situations like the Station Nightclub Fire (Rhode Island, 2003) continue to occur?
2. What occupancy in your jurisdiction worries you the most? What suppression challenges does this occupancy pose? How can risk reduction make a difference in that occupancy?

Activities

Activity 2-1: Relationship Between Historic and Modern Fire Problems

CTS Guide Reference:

CTS 4-1

Topic 2-2: National Fire Incident Reporting System

Fire Prevention 1

Terminal Learning Objective

At the end of this topic, the student, given the AHJ's incident reporting system, will be able describe the National Fire Incident Reporting System (NFIRS) and the California Incident Reporting System (CAIRS), so that the need for NFIRS reporting is fulfilled.

Enabling Learning Objectives

1. Describe the National Fire Incident Reporting System
2. Describe the California Incident Reporting System
3. Identify the need for and benefits of NFIRS reporting
 - U.S. Fire Administration reports
 - Data collection for risk analysis
 - Reporting tied to grant distribution and FEMA funding
 - Behavior modification

Discussion Questions

1. What is the importance of writing accurate NFIRS reports?
2. How would you affect change to improve NFIRS report deficiencies?

Activities

1. Using U.S. Fire Administration civilian fatality reports from the last 10 years identify trends that company inspections could address to reduce loss of life. (Instructor to develop)

CTS Guide Reference:

CTS 4-7

Topic 2-3: Community Risk Analysis

Terminal Learning Objective

At the end of this topic, the student, given an identified community risk, will be able to describe the components of a community risk analysis so that the risk is identified and risk control and decision points are initiated.

Enabling Learning Objectives

1. Describe the components of a community risk analysis
 - Scoping and screening
 - Event identification
 - Frequency analysis
 - Consequence analysis
 - Risk estimation
 - Risk control and decision point
 - Monitoring performance
2. Describe the Company Officer's role in community risk analysis

Fire Prevention 1

- Short-term feedback (impacts frequency analysis)
 - Long-term feedback (impacts scope and screening)
3. Describe the community risk analysis' relation to
- Civilian casualties
 - Firefighter casualties
 - Property loss

Discussion Questions

1. How can a good community risk analysis reduce the number of non-mandatory inspections in your jurisdiction?

Activities

1. To be determined by instructor.

CTS Guide Reference:

CTS 4-1

Topic 2-4: Basic Elements of Fire and Life Safety Education and Public Relations

Terminal Learning Objective

At the end of this topic, the student, given a public education assignment, will be able to present a fire and life safety education program so that presentation methods for various activities and the five-step public education process are utilized.

Enabling Learning Objectives

1. Describe fire and life safety education programs
 - Risk reduction programs
 - Multicultural programs
 - School programs
 - Senior programs
2. Describe presentation methods for various activities
 - News affiliates
 - Printed press
 - Schools
 - Neighborhood associations
 - Housing authorities
 - Grant providing entities
 - Restaurants
 - Grocery stores (particularly chains)
 - Chambers of commerce
 - Economic development programs
 - Libraries

Fire Prevention 1

- Civic groups
- Adult literacy programs
- 3. Describe the five-step public education process
 - Identification
 - Selection
 - Design
 - Implementation
 - Evaluation

Discussion Questions

1. How does fire and life safety education impact fire department operations?
2. What prevention programs currently exist in your jurisdiction?

Activities

1. Divide the students into groups and assign each group a specific occupancy. Have each group apply risk analysis to the five-step public education planning process for its assigned occupancy. (Instructor to develop)

CTS Guide Reference:

CTS 4-1

Topic 2-5: Using The *California Fire Inspector's Guide*

Terminal Learning Objective

At the end of this topic, the student, given the *California Fire Inspector's Guide*, will be able to identify the purpose of and sources for the *California Fire Inspector's Guide* so that various permit types, abbreviations and definitions, and the layout and format of occupancy requirements are identified.

Enabling Learning Objectives

1. Identify the purpose of the *California Fire Inspector's Guide*
2. Identify the sources for the *California Fire Inspector's Guide*
 - Current California Fire Code and Building Code
 - CCR Title 19
 - Other state laws
3. Describe the various types of permits
 - Permit issuance
 - Types of permits
 - Operational
 - Construction
4. Describe abbreviations and definitions used in the *California Fire Inspector's Guide*
 - Typical abbreviations
 - Classes of flammable and combustible liquids

Fire Prevention 1

- Occupancy classifications
- Construction types
- 5. Describe the layout and format of different occupancy requirements
 - Occupancy descriptions
 - Fire extinguisher requirements
 - Means of egress requirements
 - Housekeeping requirements
 - Electronic requirements
 - Flammable liquids
 - Miscellaneous requirements
 - Cooking equipment
 - Fire apparatus access
 - Address identification

Discussion Questions

1. What issues might you come across that might not be addressed by the *California Fire Inspector's Guide*?

Activities

1. Activity 2-5: Introduction to the *California Fire Inspector's Guide*

CTS Guide Reference:

CTS 4-1

Topic 2-6: Authority and Responsibility for Company Inspections and Related Activities

Terminal Learning Objective

At the end of this topic, the student, given various statutes and codes, will be able to identify their authority and responsibility for performing company inspections so that the correct California statutes within the health and safety and public resource code(s), the California Code of Regulations, Titles 19 and 24, and local codes and ordinances are identified.

Enabling Learning Objectives

1. Describe California statutes
 - Health and Safety Code
 - Public Resources Code
2. Describe the California Code of Regulations
 - Title 19: Public Safety
 - Title 24, Part 2: California Building Standards Code
 - Title 24, Part 9: California Fire Code
3. Describe local codes and ordinances that affect fire prevention activities

Fire Prevention 1

4. Describe the International Code Council
5. Describe national standards used in prevention
 - NFPA 10
 - NFPA 25
 - NFPA 72
6. Describe the responsibilities of a Company Officer conducting inspections
 - Conduct the inspection
 - Document findings
 - Communicate the findings to responsible party
 - Take action to correct or mitigate the violation
 - Follow up

Discussion Questions

1. From where does a Company Officer get the authority to conduct inspections?
2. What is the difference between a code and a standard?
3. What are some local regulations in your jurisdiction that you use in the course of your duties?

Activities

1. To be determined by instructor.

CTS Guide Reference:

CTS 4-1

Unit 3: Relationship Between Life Safety and Building Construction

Topic 3-1: Occupancy Classifications and Related Hazards

Terminal Learning Objective

At the end of this topic, the student, given the *California Inspector's Guide* and an occupancy, will be able to identify occupancy classifications, target hazards, and potential hazards associated with each occupancy classification, so that all hazards, including hazardous materials, are identified, approved forms are completed, and approved action is initiated.

Enabling Learning Objectives

1. Identify occupancy classifications
 - Assembly
 - Business
 - Education
 - Factory/industrial

Fire Prevention 1

- Institutional (care and detention)
 - Mercantile
 - Residential
 - Storage
 - Utility/miscellaneous
2. Describe how to handle structures with mixed use occupancies
 - Most restrictive requirements
 - Incidental use
 - Required separations
 3. Identify potential hazards associated with each occupancy classification
 - Extinguishers
 - Means of egress
 - Housekeeping
 - Electrical
 - Miscellaneous
 4. Identify target hazards
 - Amusement buildings
 - Atriums
 - Care facilities
 - Covered malls
 - High-piled storage
 - High-rise buildings

Discussion Questions

1. What is the difference between occupancy and use?
2. What are the implications of a change in occupancy use?
3. What would you do if you discovered a change in occupancy use during an inspection?

Activities

1. Using pictures of different occupancy uses have students determine (size up) occupancy, use, and potential hazards. (Instructor to develop)

CTS Guide Reference:

CTS 4-2

Topic 3-2: Building Construction Types and Fire Behavior

Terminal Learning Objective

At the end of this topic, the student, given an occupancy, will be able to identify building construction types and describe fire behavior associated with different types of building construction so that the information is documented on approved AHJ forms.

Fire Prevention 1

Enabling Learning Objectives

1. Identify building construction types
 - Types I-V
 - Fire-resistive rated
 - Nonfire-resistive rated
2. Describe fire behavior associated with different types of building construction
 - Fire separation
 - Building height and area
 - Occupancy

Discussion Questions

1. How does a building's occupancy impact building construction type?
2. How does a building's size impact fire behavior?

Activities

1. Have students identify past fires that were impacted by building construction. (Instructor to develop)

CTS Guide Reference:

CTS 4-3

Topic 3-3: Developing a Preincident Plan

Terminal Learning Objective

At the end of this topic, the student, given an occupancy, and the policies and forms of the AHJ, will develop a preincident plan by identifying construction, alarm, detection, and suppression features that contribute to or prevent the spread of fire, heat, and smoke throughout the building or from one building to another.

Enabling Learning Objectives

1. Describe the purpose of preincident planning
2. Describe the preincident planning process
 - Identify facilities and buildings
 - Conduct a preincident survey
 - Manage preincident data
3. Describe the preincident survey process
 - Prepare for a preincident survey
 - Conduct a preincident survey
 - Preincident survey drawings and symbols
 - Written reports and documentation
4. Describe the process to follow when a preincident survey reveals a fire code violation
5. Develop a preincident plan for the following types of occupancies:
 - Public assembly

Fire Prevention 1

- Educational
- Institutional
- Residential
- Business
- Industrial
- Manufacturing
- Storage
- Mercantile
- Special properties

Discussion Questions

1. How can preincident planning help you identify hazards related to building construction?
2. What conditions can you identify during a company inspection to improve decision making on the fireground?
3. Why is preincident knowledge so important?

Activities

1. Develop a preincident plan that includes:
 - Building construction
 - Facility drawings
 - Fire protection systems and features
 - Fuel loading
 - Special hazards and safety concerns
 - Utility control locations
 - Ventilation systems
 - Water supplies
(Instructor to develop)

CTS Guide Reference:

CTS 4-4

Unit 4: Elements of a Company Inspection Program

Topic 4-1: Importance of Conducting a Fire Inspection

Terminal Learning Objective

At the end of this topic, the student, given an occupancy, will be able to identify the three goals of a company inspection and describe how inspection goals relate to suppression operations and issues that arise from inconsistent inspections so that all hazards, including hazardous materials, are identified, approved forms are completed, and approved action is initiated.

Fire Prevention 1

Enabling Learning Objectives

1. Identify the three goals of a company inspection
 - The building is safer than when the officer arrived
 - Ensuring the building is in compliance with adopted codes
 - Educating or increasing the public awareness about fire safety practices
2. Describe how inspection goals relate to suppression operations
 - Life safety
 - Property protection
 - Business continuity
 - Environmental protection
3. Describe issues that arise from inconsistent inspections
 - Confusion about requirements between inspectors and business owners
 - Unabated hazards
 - Differences between a company inspection and a preincident survey

Discussion Questions

1. How does a building's occupancy impact building construction type?
2. How does a building's size impact fire behavior?

Activities

1. Have students identify past fires that were impacted by building construction. (Instructor to develop)

CTS Guide Reference:

CTS 4-3

Topic 4-2: Code Enforcement and Appeal Process

Terminal Learning Objective

At the end of this topic, the student, given an occupancy with identified code violations, will be able to describe the role of the Company Officer in regards to code enforcement and the code enforcement appeal process by determining violation severity, initiating a compliance process, and applying the AHJ's appeals process.

Enabling Learning Objectives

1. Describe the role of the Company Officer in regards to code enforcement
 - Identify code violations
 - Determine violation severity
 - Routine
 - Imminent
 - Transient
 - Initiate compliance process
 - Voluntary

Fire Prevention 1

- Legal
- 2. Describe the code enforcement appeal process
 - Appeal the findings within the fire department up to and including the fire code official
 - Petition of the fire code official through the appeal process

Discussion Questions

1. How would you gain compliance for a routine violation in a mercantile occupancy?
2. What actions would you take if the responsible party had not complied upon reinspection?
3. What actions would you take if the responsible party refused to comply?
4. What factors prevent Company Officers from enforcing code violations?

Activities

1. Activity 4-2: Code Enforcement Violation Rating

CTS Guide Reference:

CTS 4-7

Topic 4-3: Construction Features that Affect Fire, Heat, and Smoke Spread in a Building

Terminal Learning Objective

At the end of this topic, the student, given an occupancy, will be able to identify construction features designed to limit fire, heat, and smoke spread so that deficiencies are identified and documented on approved AHJ forms.

Enabling Learning Objectives

1. Identify construction features designed to limit fire, heat, and smoke spread
 - Fire walls
 - Fire barriers
 - Fire partitions
 - Fire doors
 - Vertical openings
 - Interior finishes
 - Roofing
 - Draft stops and smoke vents

Discussion Questions

1. What are some typical violations related to construction features designed to limit fire spread?

Fire Prevention 1

Activities

1. To be determined by instructor.

CTS Guide Reference:

CTS 4-3

Topic 4-4: Fire Inspection Records, Reports, and Forms

Terminal Learning Objective

At the end of this topic, the student, given the AHJ's records, reports, and forms, will be able to complete all required records, reports, and forms so that all qualitative information, legal documentation requirements, narrative requirements, and correction plans are documented.

Enabling Learning Objectives

1. Identify the need for data and the importance of qualitative information
 - Trends
 - Legal means of accountability
2. Identify legal documentation requirements
 - Authority
 - Violation
 - Description of hazard and mitigation
 - Location
 - Disposition of hazard
 - Code name and year
 - Code section number
 - Signature of reporting party
 - Right to appeal
3. Identify narrative requirements
4. Identify plan of correction
 - Request for plan of correction
 - Schedule follow-up inspection

Discussion Questions

1. How would you gain compliance for a routine violation in a mercantile occupancy?
2. What actions would you take if the responsible party had not complied upon reinspection?
3. What actions would you take if the responsible party refused to comply?
4. What factors prevent Company Officers from enforcing code violations?

Activities

1. To be determined by instructor.

Fire Prevention 1

CTS Guide Reference:

CTS 4-7

Topic 4-5: Conducting a Company Fire Inspection

Terminal Learning Objective

At the end of this topic, the student, given an occupancy, will be able to describe the procedures of the AHJ for conducting fire inspections so that all hazards, including hazardous materials, are identified, approved forms are completed, and approved action is initiated.

Enabling Learning Objectives

1. Describe the role of the Company Officer in regards to code enforcement
 - Coordinate with the Fire Prevention Bureau
 - Review prior inspections, violations, and compliance
 - Review applicable site-specific code requirements
 - Review existing preincident plan
 - Gather inspection notices and checklists
 - Gather California Fire Inspector's Guide
 - Make an appointment (if necessary)
 - Gather equipment
 - Review professional appearance and proper identification
2. Describe the various methods of communication for inspection compliance
 - Interpersonal skills
 - Listening skills
 - Elements of the communication model
 - Nonverbal communication
3. Identify basic equipment and materials needed for an inspection
4. Describe how to conduct a company inspection
 - Meet with responsible representative
 - Introductions
 - State inspection purpose
 - Gain voluntary entry
 - If responsible party denies entry, introduce the Fire Prevention for Inspection Warrant Process
 - Verify a preincident plan
 - Verify occupancy type
 - Determine if there is an obvious change in use or occupancy
 - Inspect the building in an orderly manner (systematic approach)
 - Verify operational permits
 - Review inspection findings and compliance requirements with responsible representative (educate in area of fire and life safety)

Fire Prevention 1

- Schedule reinspections when necessary
- Deal with immediate hazards
- 5. Identify required documentation
 - Department-approved inspection notice
 - Document:
 - Address of inspection premise
 - Date inspected
 - Observed violations
 - Corrective actions
 - Time allowed for compliance
 - Code sections, if applicable
 - Name, shift, and station of fire department member conducting the inspection
 - Use clear handwriting, proper grammar, and correct spelling
 - Identify penalties for failure to correct, and verbally review this with responsible representative
 - Big picture:
 - Others will read and use the document
 - The initial inspection can become part of the legal process

Discussion Questions

1. How does the See vs. City of Seattle decision in the U.S. Supreme Court (1967) impact inspections today?
2. What is a professional appearance?
3. What are the benefits and drawbacks of making an inspection appointment?
4. How do you respond to a business owner when asked why a previous inspector did not enforce a violation?
5. How do you deal with a technical question that you cannot answer?

Activities

1. To be determined by instructor.

CTS Guide Reference:

CTS 4-7

Topic 4-6: Inspecting the Exterior of a Structure

Terminal Learning Objective

At the end of this topic, the student, given an occupancy, will be able to describe the procedures of the AHJ for conducting fire inspections on the exterior of a structure so that all hazards, including hazardous materials, are identified, approved forms are completed, and approved action is initiated.

Fire Prevention 1

Enabling Learning Objectives

1. Describe how to inspect occupancy access and egress
 - Verify approved fire department access
 - Keys
 - Switches
 - Access codes
 - Identified and maintained fire lanes
 - Visible and legible address numbers
 - Exit discharge
 - Apparatus access
2. Describe how to inspect for hazards with flammable liquids and compressed gases
 - Flammable liquid storage cabinets or reduced storage
 - Flammable liquids stored away from exits, stairs, or corridors
 - Identified and secured compressed gas cylinders
 - Lids on flammable liquid storage containers not in immediate use
 - Spilled flammable liquids
3. Describe how to inspect exterior hazards
 - Clearance between a dumpster and combustible walls, eaves, or openings
 - Clearance between occupancy and combustible vegetation
 - Clearance from egress points
 - Clearance to adjoining occupancies
 - Fire breaks
 - Weed abatement
 - Waste on the premises
4. Describe the storage and disposal of fuels, ashes, and coals

Discussion Questions

1. What items should be inspected on the exterior of a structure related to access and egress?
2. What type of operations on the outside of a building can impact the fire and life safety of individuals inside the building?

Activities

1. To be determined by instructor.

CTS Guide Reference:

CTS 4-5

Topic 4-7: Inspecting the Interior of a Structure

Terminal Learning Objective

At the end of this topic, the student, given an occupancy, will be able to describe the procedures of the AHJ for conducting fire inspections of the interior of a structure so that

Fire Prevention 1

all hazards, including hazardous materials, are identified, approved forms are completed, and approved action is initiated.

Enabling Learning Objectives

1. Describe how to inspect occupancy egress
 - Means of egress system
 - Occupancy load signs
 - Appropriate number of exits
 - Exit door opens without a key or special knowledge
 - Locked/latched doors with panic hardware
 - Main exit sign/emergency lighting
 - Non-operable exit door hardware
 - Obstructed exits, doors, aisles, corridors, and stairways
 - Door swing and operation
 - Sign over main exit door
 - Storage in unprotected stairway
2. Describe how to inspect fire separation hazards
 - Attic access
 - Scuttle openings closed
 - Fire walls and fire barriers
 - Maintained self- or automatic-closing fire-rated assemblies
 - Penetration in fire-resistive construction
3. Describe how to inspect electrical hazards
 - Clear space to electrical panels
 - Cover plates for all junction boxes
 - Covers and spacers for electrical panels
 - Exposed wiring and splices
 - Extension cords, overloaded outlets, and grounding
 - Over-current protection
 - Permanent wiring for fixed and stationary appliances
4. Describe how to inspect for hazards with flammable liquids and compressed gases
 - Flammable liquid storage cabinets or reduced storage
 - Flammable liquids stored away from exits, stairs, or corridors
 - Identified and secured compressed gas cylinders
 - Lids on flammable liquid storage containers not in immediate use
 - Spilled flammable liquids
5. Describe how to inspect housekeeping conditions
 - Combustible storage from boiler, mechanical, and electrical room
 - Lint/debris behind washers and dryers, and inside ducts
 - Metal or approved noncombustible trash container with self-closing lid

Fire Prevention 1

- Storage arranged to provide egress
 - Storage distance between ceiling and sprinkler heads
 - Waste on the premises
6. Describe how to inspect cooking equipment
- Defective and/or dirty plenums, vents, flues, or chimneys
 - Excessive grease (storing and removing)
 - Overheated equipment

Discussion Questions

1. What items should be inspected on the interior of a structure related to access and egress?
2. How would you enforce transient violations in a large retail establishment?

Activities

1. Activity 4-6: Performing Interior Company Inspections

CTS Guide Reference:

CTS 4-7

Topic 4-8: Inspecting Fire Alarm Detection and Notification Systems

Terminal Learning Objective

At the end of this topic, the student, given an occupancy, will be able to describe the procedures of the AHJ for conducting an inspection of fire alarm detection and notification systems so that all deficiencies are identified, approved forms are completed, and approved action is initiated.

Enabling Learning Objectives

1. Identify types of fire alarm detection and notification systems
 - Manual
 - Automatic
 - Combination
 - Audio
 - Visual
 - Voice
2. Identify fire alarm and detection and notification system features
 - Fire alarm control unit
 - Normal
 - Alarm
 - Supervisory
 - Trouble
 - Annunciator panel
 - Initiating devices

Fire Prevention 1

- Visual and audio notification devices
- 3. Identify smoke and fire control features
 - Alarm-activated smoke control
 - Ventilation systems
 - Fire doors
- 4. Describe how to inspect fire alarm systems
 - Operable
 - Serviced
 - Maintained

Discussion Questions

1. What action should a Company Officer take if an inspection reveals an inoperable alarm?
2. How could a supervisory alarm affect operations of a fire protection system?

Activities

1. To be determined by instructor.

CTS Guide Reference:

CTS 4-3

Topic 4-9: Inspecting Fire Protection Systems and Equipment

Terminal Learning Objective

At the end of this topic, the student, given an occupancy, will be able to describe the procedures of the AHJ to conduct an inspection on fire protection system and equipment so that all deficiencies are identified, approved forms are completed, and approved action is initiated.

Enabling Learning Objectives

1. Describe how to inspect fire extinguishers
 - Verify extinguisher placement and operability
2. Describe how to inspect fire protection systems
 - Certification test for sprinkler/standpipe system
 - Control valves secured in open position
 - Serviced and maintained sprinkler heads and fire department connection caps including
 - Spare Sprinkler heads
 - Appropriate signage
 - Compatible wrenches
 - Serviced and maintained sprinklers, standpipes, hydrants, fire department connections, and post indicator valves
 - Sprinkler coverage in unprotected areas
 - Non-permitted construction

Fire Prevention 1

- Small room rule
- Electrical vaults
- Minimum clearance for access/use of fire appliances and equipment
- Serviced and maintained (records and tags) hood and duct fire suppression systems and associated portable Type K fire extinguishers
 - Verify appliance coverage
- 3. Describe how to inspect cooking equipment
 - Serviced and maintained suppression system
 - Proper placement
 - Special portable fire extinguisher requirements

Discussion Questions

1. What is the timeframe for a current service tag on a sprinkler system?
2. What is the timeframe for a current service tag for a hood extinguishing system?
3. When should a brand new extinguisher be tagged?

Activities

1. To be determined by instructor.

CTS Guide Reference:

CTS 4-7

Topic 4-10: Inspection Follow-up Procedures

Terminal Learning Objective

At the end of this topic, the student, given a completed fire inspection, will be able to correct fire hazards and code violations so that compliance with identified code violations have been obtained.

Enabling Learning Objectives

1. Describe the process of correcting fire hazards/code violations
 - Establish reinspection date and time based on the hazard level
 - Primarily outstanding violations
 - Discovery of a new violation
 - Procedures for partial compliance
2. Describe follow-up documentation
 - Inspection forms
 - Emails
 - Faxes or scans
3. Describe procedures for Failure to Comply
 - Explain potential criminal/civil penalties/liabilities
 - Closure until mitigated/in compliance
 - Rights of appeal/appeal process

Fire Prevention 1

- Refer to Fire Prevention Office (bureau/division) for further resolution/action

Discussion Questions

1. What would be an acceptable response for failure to comply with servicing a fire extinguisher?
2. What liabilities does the fire department carry for failure to do a follow up inspection?

Activities

1. To be determined by instructor.

CTS Guide Reference:

CTS 4-7

Topic 4-11: Standby Life Safety Duty

Terminal Learning Objective

At the end of this topic, the student, given an assigned fire watch, will be able to perform a fire watch so that documentation associated with standby life safety duties are completed.

Enabling Learning Objectives

1. Describe the situations that require a fire watch
 - Impairments
 - Special events
2. Describe fire watch duties
 - Fire protection system activation
 - Fire department notification
 - Evacuation
 - Occupant load enforcement
 - Extinguish fires
3. Describe documentation associated with standby life safety duties
 - Record keeping
 - Permits
 - Insurance

Discussion Questions

1. How would you have handled the Station Nightclub Fire (Rhode Island, 2003) if you were doing standby?
2. What ethical issues may arise during standby life safety duties?

Activities

1. To be determined by instructor.

CTS Guide Reference:

CTS 4-7

Unit 5: Complex Hazards

Topic 5-1: Inspecting Complex Hazards and Fire Safety Requirements

Terminal Learning Objective

At the end of this topic, the student, given an occupancy, will be able to describe the procedures of the AHJ for conducting fire inspection of complex hazards so that all hazards, including hazardous materials, are identified, approved forms are completed, and approved action is initiated.

Enabling Learning Objectives

1. Identify complex hazards and fire safety requirements associated with storage facilities
 - Bulk
 - High-piled
 - Palletized
 - Tire
 - Waste handling
2. Identify complex hazards and fire safety requirements related to high-heat-producing equipment
 - Incinerators
 - Boilers
 - Heating equipment
 - Industrial furnaces and ovens
3. Identify complex hazards and fire safety requirements related to tents and membrane structures
 - Cooking equipment
 - Vehicles
 - Generators
 - Heaters
 - Combustible decorations
4. Identify complex hazards and fire safety requirements related to hazardous processes
 - Verify fire code permit
5. Identify complex hazards and fire safety requirements related to fuel dispensing
 - Motor vehicle
 - Piers
 - Aircraft

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Discussion Questions

1. What are some unique fuel dispensing facilities or locations in your jurisdiction?
2. Why do some Company Officers avoid doing complex hazard inspections?

Activities

1. To be determined by instructor.

CTS Guide Reference:

CTS [4-1]

Topic 5-2: Hazardous Materials

Terminal Learning Objective

At the end of this topic, the student, given an occupancy, will be able to describe the procedures of the AHJ for conducting fire inspections in occupancies containing hazardous materials so that all hazards, including hazardous materials, are identified, approved forms are completed, and approved action is initiated.

Enabling Learning Objectives

1. Describe required documentation for storing hazardous materials
 - Hazardous Materials Inventory Sheets (HMIS)
 - Material Safety Data Sheets (MSDS)
 - Permits
2. Describe hazardous materials markings, labels, and placards
 - Legibility
 - Visibility
 - NFPA 704
3. Describe hazardous materials storage, handling, and use considerations
 - Acceptable containers
 - Maximum Allowable Quantities (MAQ) for occupancy type
 - Compressed gas cylinder safety
 - Ignition hazards
 - Location
 - Secondary containment
 - Separation of incompatibles
 - Storage cabinets
 - Ventilation

Discussion Questions

1. What tools are available to you to resolve questions or issues related to hazardous materials during an inspection?
2. How does the presence of hazardous materials in any occupancy change a company inspection?

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3. Which occupancies are allowed to store hazardous materials?

Activities

1. To be determined by instructor.

CTS Guide Reference:

CTS 4-1

Topic 5-3: Inspections in the Wildland Urban Interface Environment

Terminal Learning Objective

At the end of this topic, the student, given an occupancy, will be able to describe the procedures of the AHJ for conducting fire inspections within the Wildland Urban Interface so that all hazards are identified, approved forms are completed, and approved action is initiated.

Enabling Learning Objectives

1. Define wildland urban interface (WUI)
2. Identify current threats and risks
 - Interface mix
 - Occluded interface mix
 - Classic interface
3. Identify wildfire causes
 - Climate
 - Topography
 - Geography
 - Vegetation
 - Animal life
 - Pollution
4. Describe the risk factors associated with WUI incidents
 - High intensity wildland fires
 - Drain on federal resources
 - Fire prevention measures difficult to implement
5. Describe the fire and life safety education and prevention tools suited to the WUI environment
6. Describe the California requirements for WUI fire areas
 - Fire protection plans
 - Fire hazard severity zones
 - Local agency very high fire hazard severity zone
 - State Responsibility Area (SRA)
 - Wildfire exposure
 - WUI fire area
 - Local regulations and standards

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- Vegetation management
- Fuel modification zones
- Defensible space and clearances around structures
- Improving structural survivability
- Emergency access and road standards

Discussion Questions

1. What factors influence wildland fires?
2. What are the California requirements for vegetation clearance around structures?
3. As a Company Officer how would you inspect a residence located within the WUI environment?

Activities

1. To be determined by instructor.

CTS Guide Reference:

CTS 4-1

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Time Table

Segment	Lecture Time	Activity Time	Total Unit Time
Unit 1: Introduction			
Topic 1-1: Orientation and Administration			
Lecture	0:15		
Activity 1-1: To be determined by instructor		00:00	
Topic 1-2: Company Officer Certification Process			
Lecture	0:15		
Activity 1-2: To be determined by instructor		00:00	
Unit 1 Totals	00:30	00:00	1:00
Unit 2: The Company Officer's Role in Fire			
Topic 2-1: Relationship Between Historic and Current Fire Problems			
Lecture	2:00		
Activity 2-1: Relationship Between Historic and Modern Fire Problems		1:30	
Topic 2-2: National Fire Incident Reporting System			
Lecture	0:30		
Activity 2-2: Using U.S. Fire Administration civilian fatality reports from the last 10 years identify trends that company inspections could address to reduce loss of life.		00:00	
Topic 2-3: Community Risk Analysis			
Lecture	0:30		
Activity 2-3: To be determined by instructor		00:00	
Topic 2-4: Basic Elements of Fire and Life Safety Education and Public Relations			
Lecture	1:00		

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Segment	Lecture Time	Activity Time	Total Unit Time
Activity 2-4: Divide the students into groups and assign each group a specific occupancy. Have each group apply risk analysis to the five-step public education planning process for its assigned occupancy. (Instructor to develop)		00:00	
Topic 2-5: Using The <i>California Fire Inspector's Guide</i>			
Lecture	1:00		
Activity 2-5: Activity 2-5: Introduction to the <i>California Fire Inspector's Guide</i> (Developed by State Fire Training)		0:30	
Topic 2-6: Authority and Responsibility for Company Inspections and Related Activities			
Lecture	1:00		
Activity 2-6: To be determined by instructor.		00:00	
Unit 2 Totals	6:00	2:00	9:30
Unit 3: Relationship Between Life Safety and Building Construction			
Topic 3-1: Occupancy Classifications and Related			
Lecture	2:00		
Activity 3-1: Using pictures of different occupancy uses have students determine (size up) occupancy, use, and potential hazards. (Instructor to develop)		00:00	
Topic 3-2: Building Construction Types and Fire Behavior			
Lecture	1:00		
Activity 3-2: Have students identify past fires that were impacted by building construction. (Instructor to develop)		00:00	
Topic 3-3: Developing a Preincident Plan			
Lecture	2:00		
Activity 3-3: Develop a preincident plan (Instructor to develop)		00:00	

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Segment	Lecture Time	Activity Time	Total Unit Time
Unit 3 Totals	5:00	00:00	5:00
Unit 4: Elements of a Company Inspection Program			
Topic 4-1: Importance of Conducting a Fire Inspection			
Lecture	0:30		
Activity 4-1: To be determined by instructor.		00:00	
Topic 4-2: Code Enforcement and Appeal Process			
Lecture	1:00		
Activity 4-2: Code Enforcement Violation Rating (Developed by State Fire Training)		0:30	
Topic 4-3: Construction Features that Affect Fire, Heat, and Smoke Spread in a Building			
Lecture	1:00		
Activity 4-3: To be determined by instructor.		00:00	
Topic 4-4: Fire Inspection Records, Reports, and Forms			
Lecture	0:30		
Activity 4-4: To be determined by instructor.		00:00	
Topic 4-5: Conducting a Company Fire Inspection			
Lecture	1:30		
Activity 4-5: To be determined by instructor.		00:00	
Topic 4-6: Inspecting the Exterior of a Structure			
Lecture	1:00		
Activity 4-6: To be determined by instructor.		00:00	
Topic 4-7: Inspecting the Interior of a Structure			
Lecture	3:00		
Activity 4-7: Performing Interior Company Inspections (Developed by State Fire Training)		1:00	
Topic 4-8: Inspecting Fire Alarm Detection and Notification Systems			

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Segment	Lecture Time	Activity Time	Total Unit Time
Lecture	1:00		
Activity 4-8: To be determined by instructor.		00:00	
Topic 4-9: Inspecting Fire Protection Systems and Equipment			
Lecture	1:00		
Activity 4-9: To be determined by instructor.		00:00	
Topic 4-10: Inspection Follow-up Procedures			
Lecture	0:30		
Activity 4-10: To be determined by instructor.		00:00	
Topic 4-11: Standby Life Safety Duty			
Lecture	0:30		
Activity 4-11: To be determined by instructor.		00:00	
Unit 4 Totals	11:30	1:30	13:00
Unit 5: Complex Hazards			
Topic 5-1: Complex Hazards and Fire Safety Requirements			
Lecture	2:00		
Activity 5-1: To be determined by instructor.		00:00	
Topic 5-2: Hazardous Materials			
Lecture	1:00		
Activity 5-2: To be determined by instructor.		00:00	
Topic 5-3: Inspections in the Wildland Urban Interface Environment			
Lecture	1:00		
Activity 5-3: To be determined by instructor.		00:00	
Unit 5 Totals	4:00	00:00	4:30

Course Totals

Total Lecture Time (LT)	27:00
Total Activity Time (AT)	3:30
Total Testing Time (TT)	1:30

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Total Course Time	32:00
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