

# Fire Inspector II



Approved and Adopted by the  
Office of State Fire Marshal



Recommended for adoption by the  
Statewide Training and Education  
Advisory Committee and the  
State Board of Fire Services

## CERTIFICATION TRAINING STANDARDS

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# RE MARSHAL CERTIFICATION TRAINING STANDARDS

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# **RE MARSHAL CERTIFICATION TRAINING STANDARDS**

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## **Introduction**

A Certification Training Standards (CTS) Guide is developed for each rank in the fire service -- fire fighter, driver/operator, fire instructor, fire officer, etc. The CTS Guide lists every responsibility a person is expected to complete and a student performance goal that includes a measurable minimum performance standard. In addition, a comprehensive list of reference resources is provided. The CTS Guide has several valuable uses:

1. It is the foundation for the certification programs recommended for adoption by the SBFS. Any certification program must be based upon job-related knowledge and measurable objectives.
2. It provides measurable minimum performance standards. The validity and reliability of fire service entrance and promotional examinations can be more easily defended when such measurable standards are utilized.

These performance standards will need to be augmented by additional training in order to master the knowledge and skills needed for specialized operations.

3. It lists a variety of reference resources that may be studied in order to enhance job performance. A student can be confident that any eventual testing will be based upon the authoritative resources being studied. It is this fostering of individual confidence and initiative, which may become the most important accomplishment of the CTS Guide.

## **Format**

The following is the standardized format for a Certification Training Standards Guide.

### **Title**

The title should be written as concise as possible and provides the first indication that the standard is cognitive, psychomotor, or both. This indication is accomplished by using corresponding verbs. A task title might be, "Describe and Demonstrate the Use of Ropes." This shows that there are both cognitive and psychomotor requirements.

### **Authority**

Each CTS is keyed, when possible, to a subsection of the appropriate National Fire Protection Association (NFPA) Professional Qualifications. Because of this correlation between the CTS Guide and the NFPA standard, it can be said that each fire service position in California's certification system meets or exceeds the corresponding NFPA standard. In order to achieve this and satisfy the desired performance for California fire service personnel, a standard that the NFPA has designated for a particular level (Fire Officer V for example) may be included in



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California's Fire Officer requirements. Moreover, in some instances, because of repetition in the NFPA standard, several subsections might be cited for a single CTS.

In other instances, California may have a requirement that has been overlooked or neglected by the NFPA. When there is no NFPA subsection in the standard to cite, the authority requiring the standard, or a performance within the standard, is listed. In these cases, the authority cited is the State Fire Marshal and the requirements are printed in *italics*.

## Level

Two levels of learning are used in a CTS Guide. These levels are defined as:

Level I: Knowledge

The ability to recall or recognition of previously learned material (facts, theories, etc.) in essentially the same form as taught. Students will be able to name, match, list, and identify a concept, principle, or object.

Level II: Comprehension

The ability to use information within a limited context, use abstractions in particular situations, and break information into its parts to clarify relationships. Students will be able to describe and demonstrate the use of an identified concept, principle, or object.

## Performance Goal

The heart of the CTS Guide is contained in the performance goals. They attempt to specifically measure what a student knows or is capable of doing at the end of the instructional period by defining the amount of technical knowledge required or the skill of the psychomotor performance. The performance goal provides the instructor or testing agency with these guidelines.

1. What the student should be given to accomplish the CTS.
4. What the student should be able to accomplish.
5. How well the student should perform.
6. The authoritative reference resources being employed.

## Given

Technically, the performance goal differs from a student behavioral objective (in a lesson plan) because the "Given" or "Condition" sections are not the same. In a behavioral objective, the "Condition" contains what the student is given at the time of testing. In a performance goal, the "Given" contains a block of information necessary for a student to study and accomplish the corresponding performance.



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1. Describe leadership styles, which at a minimum *shall* include:
  - Command presence
  - Concepts
  - Models
  - Theories

## Performance

The "Performance" section of the performance goal lists, in detail, what a student must accomplish in order to satisfy the CTS. To cut down on the sheer size of the CTS Guide, the many details included in the "Performance" section precluded the necessity of writing a series of task analyses on closely related subjects. For example, when talking about leadership styles, it became possible to write:

Generally, but not always, each numbered item in the "Performance" is a job. Sometimes, however, many jobs are included in a single numbered item. In this case, each bullet represents a single job.

## Standard

The "Standard" section of the performance goal identifies how the student will be evaluated. For cognitive requirements, the standard will be with a minimum 80% accuracy on a written exam. For psychomotor requirements, the standard will be by completing all operations on a performance test. In the cases where the CTS has both psychomotor and cognitive performance goals, the standard will list both the written exam and a performance test.

## Learning Resources

A list of available authoritative reference resources supporting the performance goal.



# RE MARSHAL CERTIFICATION TRAINING STANDARDS

## SECTION 1: ADMINISTRATION FOR THE FIRE INSPECTOR II

### FIRE INSPECTOR II

#### SECTION 1: ADMINISTRATION

#### **FIII 1-1: DESCRIBE THE ROLE OF THE FIRE INSPECTOR II**

AUTHORITY:	STATE FIRE MARSHAL
LEVEL:	II

#### **PERFORMANCE GOAL**

##### **GIVEN:**

1. A summary of terms the role of a Fire Inspector II
2. A summary of the legally established responsibilities and empowerment related to the performance of jurisdictional organizations that have requirements or conduct inspections relating to life safety or fire prevention
3. A summary of how one's ethics and core values impact the work environment

##### **PERFORMANCE:** (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe the role of the Fire Inspector II, which at a minimum **shall** include:
  - Conducting research
  - Interpreting codes
  - Implementing policy
  - Testifying at legal proceedings
  - Creating forms and job aids
  - Delivering public education
  - Conducting field inspections
  - Analyzing new and existing structures and properties for code compliance related to:
    - Construction
    - Occupancy
    - Fire protection
    - Exposures
2. Describe the jurisdictional organizations that have requirements or conduct inspections relating to life safety or fire prevention, which at a minimum **shall** include:
  - Local authority
  - State authority
  - Federal authority
3. Describe how one's ethics and core values impact the work environment, which at a minimum shall include:
  - Code enforcement



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## SECTION 1: ADMINISTRATION FOR THE FIRE INSPECTOR II

- *Decision-making models and systems*
- *Principle-centered decision making*
- *Gifts and gratuities*
- *Professional decorum*

**STANDARD:**

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy



# RE MARSHAL CERTIFICATION TRAINING STANDARDS

## SECTION 1: ADMINISTRATION FOR THE FIRE INSPECTOR II

### **FIII 1-2: DESCRIBE PROCESSING A PERMIT APPLICATION, DEVELOPING REVIEW AND REVISION PROCEDURES, AND ENFORCING PERMIT REGULATIONS**

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 5.2.1, 5.2.2, AND 6.2.6
LEVEL:	II
REQUISITE KNOWLEDGE:	PERMIT APPLICATION PROCESS AND APPLICABLE CODES, STANDARDS, POLICIES, AND PROCEDURES OF THE JURISDICTION (5.2.1) PLAN REVIEW APPLICATION PROCESS, CODE REQUIREMENTS OF THE JURISDICTION, AND POLICIES AND PROCEDURES OF THE JURISDICTION (5.2.2) LEGAL AUTHORITY FOR PERMIT ISSUANCE AND REVOCATION AND APPLICABLE CODES AND STANDARDS ADOPTED BY THE JURISDICTION. (6.2.6)
REQUISITE SKILL:	THE APPLICATION OF REQUISITE KNOWLEDGE (5.2.1) THE ABILITY TO COMMUNICATE ORALLY AND IN WRITING ON MATTERS RELATED TO CODE REQUIREMENTS, POLICIES, AND PROCEDURES OF THE JURISDICTION (5.2.2) THE ABILITY TO COMMUNICATE, MAKE DECISION, EVALUATE CONSEQUENCES OF IMPROPER ENFORCEMENT, AND EVALUATE SKILLS OF OTHERS. (6.2.6)

### **PERFORMANCE GOAL**

#### **GIVEN:**

1. A summary of the components of a construction permit (plan review) application
2. A summary of the components of an operational-use permit application
3. A summary of the procedures for receiving a permit application package
4. A summary of how to enforce permit regulations in accordance with applicable codes, standards and policies
5. A summary of the evaluation process for issuing or denying the permit application in accordance with applicable codes, standards, and policies
6. A summary of how deficiencies are verified
7. A summary of options for deficiency resolution
8. A sample permit request

#### **PERFORMANCE:** (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe the components of a construction permit (plan review) application, which may include:
  - Calculations
  - Manufacturer's cut sheets
  - Plans
  - Relevant supporting documents or materials
  - Specifications
2. Describe the components of an operational-use permit application, which may include:
  - Description of process or operation
  - Plans



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## SECTION 1: ADMINISTRATION FOR THE FIRE INSPECTOR II

- Relevant supporting documents or materials
3. Describe the procedures for receiving a permit application package, which may include:
    - Collecting fees or charges
    - Tracking documentation
    - Verifying application is complete
    - Verifying license and worker's compensation information
  4. Describe the enforcement of permit regulations in accordance with applicable codes, standards and policies
  5. Describe the evaluation process for issuing or denying the permit application in accordance with applicable codes, standards, and policies
  6. Describe how deficiencies are verified, which at a minimum **shall** include:
    - Observed and documented
    - Reported in accordance with the policies of the jurisdiction
  7. Identify options for deficiency resolution, which at a minimum **shall** include:
    - Refer to appropriate level when necessary

### **STANDARD:**

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy



# RE MARSHAL CERTIFICATION TRAINING STANDARDS

## SECTION 1: ADMINISTRATION FOR THE FIRE INSPECTOR II

### FIII 1-3: DESCRIBE INVESTIGATING COMPLEX COMPLAINTS

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTION 5.2.3 AND <i>THE STATE FIRE MARSHAL</i>
LEVEL:	II
REQUISITE KNOWLEDGE:	APPLICABLE CODES AND STANDARDS ADOPTED BY THE JURISDICTION AND POLICIES OF THE JURISDICTION (5.2.3)
REQUISITE SKILL:	THE ABILITY TO INTERPRET CODES AND STANDARDS, RECOGNIZE PROBLEMS, AND REFER COMPLAINTS TO OTHER AGENCIES WHEN REQUIRED (5.2.3)

#### PERFORMANCE GOAL

##### **GIVEN:**

1. A summary of methods to validate complex complaints and procedures for recording complaint information
2. A summary of the procedures to initiate the investigation process and resolve the complaint
3. A summary of methods for complaint resolution
4. *A summary of how political pressures impacts complaint investigation and resolution*
5. A reported complex situation or condition

##### **PERFORMANCE:** (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe methods to validate complex complaints and procedures for recording complaint information
2. Describe methods for complex complaint resolution, which at a minimum **shall** include:
  - Recognizing the problem
  - Evaluating deficiencies
  - Identifying options for resolution
  - Referring to appropriate level or other agencies when necessary
3. Identify responses to frequent complex complaints, which may include:
  - Fire or life safety issues requiring an immediate response, which may include:
    - ◆ Impaired fire alarm systems
    - ◆ Impaired fire sprinkler systems
    - ◆ Overcrowding
  - Construction deficiencies that require time to resolve
  - Change in use or occupancy that may or may not require and immediate response
4. *Describe how political pressures impact complaint investigation and resolution*

##### **STANDARD:**

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy



# RE MARSHAL CERTIFICATION TRAINING STANDARDS

## SECTION 1: ADMINISTRATION FOR THE FIRE INSPECTOR II

### FIII 1-4: DESCRIBE RECOMMENDING MODIFICATIONS TO JURISDICTIONAL CODES AND STANDARDS

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 5.2.4
LEVEL:	II
REQUISITE KNOWLEDGE:	STATE STATUTES OR LOCAL ORDINANCES ESTABLISHING OR EMPOWERING THE AGENCY TO ADOPT, ENFORCE, AND REVISE CODES AND STANDARDS; THE LEGAL INSTRUMENTS ESTABLISHING OR ADOPTING CODES AND STANDARDS; AND THE DEVELOPMENT AND ADOPTION PROCESS FOR FIRE AND LIFE SAFETY LEGISLATION OR REGULATIONS (5.2.4)
REQUISITE SKILL:	THE ABILITY TO RECOGNIZE PROBLEMS, COLLECT AND DEVELOP POTENTIAL SOLUTIONS, AND IDENTIFY COST/RISK BENEFITS (5.2.4)

#### PERFORMANCE GOAL

##### **GIVEN:**

1. A summary of the state statutes that establish authority for state agencies to modify codes and standards
2. A summary of the state statutes that establish authority for local agencies to modify codes and standards
3. A summary of the development and adoption process for fire and life safety codes and standards
4. A summary of cost/risk benefits
5. A sample fire safety issue

##### **PERFORMANCE:** (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Identify the state statutes that establish authority for state agencies to modify codes and standards
2. Identify the state statute that establish authority for local agencies to modify codes and standards, which at a minimum **shall** include:
  - Health and Safety Code (Section 17958.7)
    - ◆ Express findings to include: climate, geology and topography
3. Describe the development and adoption process for fire and life safety codes and standards
4. Describe the cost/risk benefits of modifying local codes and standards

##### **STANDARD:**

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy



# RE MARSHAL CERTIFICATION TRAINING STANDARDS

## SECTION 1: ADMINISTRATION FOR THE FIRE INSPECTOR II

### FIII 1-5: DESCRIBE RECOMMENDING POLICIES AND PROCEDURES FOR THE DELIVERY OF INSPECTION SERVICES

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 5.2.5, 6.2.7, 6.2.9 AND THE <i>STATE FIRE MARSHAL</i>
LEVEL:	II
REQUISITE KNOWLEDGE:	POLICIES AND PROCEDURE OF THE JURISDICTION RELATED TO CODE ENFORCEMENT AS WELL AS SOURCES OF DETAILED AND TECHNICAL INFORMATION RELATING TO FIRE PROTECTION AND LIFE SAFETY (5.2.5) LEGAL PROCEDURE FOR FIRE CODE ENFORCEMENT AND AUTHORITY AND LIMITATIONS OF POLICE POWERS. (6.2.7) APPLICABLE CODES AND STANDARDS ADOPTED BY THE JURISDICTION AND THEIR INTERRELATIONSHIPS AND VARIOUS SOURCES FOR ADDITIONAL REFERENCE MATERIALS RELATED TO CODE ENFORCEMENT. (6.2.9)
REQUISITE SKILL:	THE ABILITY TO IDENTIFY APPROVED CONSTRUCTION METHODS AND MATERIALS RELATED TO FIRE SAFETY, READ AND INTERPRET CONSTRUCTION PLANS AND SPECIFICATIONS, EDUCATE, CONDUCT RESEARCH, MAKE DECISIONS, RECOGNIZE PROBLEMS, AND RESOLVE CONFLICTS (5.2.5) THE ABILITY TO ADDRESS LEGAL ACTION IN ACCORDANCE WITH THE POLICIES AND PROCEDURES OF THE JURISDICTION. (6.2.7) FAMILIARITY WITH CODE –RELATE RESEARCH AND THE ABILITY TO COMPARE CODE REQUIREMENTS OF A JURISDICTION WITH PREPARED REPORTS AND PROVIDE CORRECTIVE INFORMATION OF CORRECTION WHERE NECESSARY. (6.2.9)

### PERFORMANCE GOAL

#### GIVEN:

1. A summary of code enforcement policies and procedures
2. A summary of reasons for changing a policy or procedure
3. A summary of recommending policies and procedures for delivering inspection services
4. A summary of evaluating inspection reports, forms, and checklists to confirm the information is correct, clear, and concise
5. A summary of evaluating the inspection process
6. A summary of initiating legal action related to a fire code violations so that the action taken in accordance with the policies of the jurisdiction follow due process of law
7. A summary of working cooperatively with legal counsel

#### PERFORMANCE: (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe code enforcement policies and procedures, which at a minimum **shall** include:
  - State mandated
  - Local policies and procedures of the jurisdiction
2. Describe reasons for changing a policy or procedure, which may include:
  - Practice differs from policy or procedure
  - Current policy or procedure creates another problem



# RE MARSHAL CERTIFICATION TRAINING STANDARDS

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## SECTION 1: ADMINISTRATION FOR THE FIRE INSPECTOR II

- Current policy is inefficient
  - Code changes
  - Policy or procedure addresses a problem that no longer exists
  - No policy or procedure exists to address a specific issue
  - Policy or procedure adopted into higher-level code and no longer requires attention at the local level
3. Describe recommending policies and procedures for delivering inspection services, including:
    - Identifying the reason or need for change
    - Developing proposal and gathering or creating supporting documentation
    - Drafting proposed policy or procedural change
    - Meeting with appropriate people for approval
    - Implementation following approval
  4. Describe evaluating inspection reports, forms, and checklists to confirm the information is correct, clear, and concise
  5. Describe how to evaluate the inspection process to determine:
    - Code application
    - Timeliness
    - Compliance
  6. Describe initiating legal action related to a fire code violations so that the action taken in accordance with the policies of the jurisdiction follow due process of law
  7. Describe the process of working cooperatively with legal counsel

### **STANDARD:**

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy



# RE MARSHAL CERTIFICATION TRAINING STANDARDS

## SECTION 11: INVESTIGATION FOR THE FIRE MARSHAL

### SECTION 2: FIELD INSPECTION

#### FIII 2-1: DESCRIBE VERIFYING CONSTRUCTION FEATURES IN THE FIELD

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 5.3.3, 5.4.6, 6.3.3 AND 6.3.11 AND THE <i>STATE FIRE MARSHAL</i>
LEVEL:	II
REQUISITE KNOWLEDGE:	BUILDING CONSTRUCTION WITH EMPHASIS ON FIRE-RELATED CONSTRUCTION, EVALUATION OF METHODS OF CONSTRUCTION AND ASSEMBLIES FOR FIRE RATING, ANALYSIS OF TEST RESULTS AND MANUFACTURER'S SPECIFICATIONS (5.3.3) BUILDING CONSTRUCTION WITH EMPHASIS ON FIRE-RATED CONSTRUCTION, EVALUATION OF METHODS OF CONSTRUCTION AND ASSEMBLIES FOR FIRE RATING, ANALYSIS OF TEST RESULTS, AND MANUFACTURER'S SPECIFICATIONS. (5.4.6) APPLICABLE CODES AND STANDARDS ADOPTED BY THE JURISDICTION, CONSTRUCTION TYPES, OCCUPANCY REQUIREMENTS, CONSTRUCTION METHODS, POLICIES, AND PROCEDURES. (6.3.3) APPLICABLE CODES AND STANDARDS FOR INSTALLATION AND TESTING OF FIRE PROTECTION SYSTEMS, MEANS OF EGRESS, AND BUILDING SERVICES EQUIPMENT. (6.3.11)
REQUISITE SKILL:	THE ABILITY TO IDENTIFY CHARACTERISTICS OF EACH TYPE OF BUILDING CONSTRUCTION AND OCCUPANCY CLASSIFICATION (5.3.3) THE ABILITY TO IDENTIFY CHARACTERISTICS OF EACH TYPE OF BUILDING CONSTRUCTION. (5.4.6) THE ABILITY TO RECOGNIZE PROBLEMS AND READ REPORTS AND PLANS. (6.3.3) ABILITY TO WITNESS AND DOCUMENT TESTS OF FIRE PROTECTION SYSTEMS AND BUILDING SERVICES EQUIPMENT. (6.3.11)

#### PERFORMANCE GOAL

##### GIVEN:

1. A summary of building construction
2. A summary of the methods to determine a building's area, height, occupancy classification, and construction type
3. A summary of performance-based versus prescriptive design
4. A summary of evaluating compliance with construction documents to ensure that the life safety systems and building service equipment are installed, inspected, and tested to perform as described in the engineering documents and the operation and maintenance manual that accompanies the performance-based design
5. A summary of evaluating the construction type required for an addition or remodeling project based on applicable codes and standards
6. A summary of the procedures for resolving plan review deficiencies
7. *A summary building construction features required in a wildland urban interface environment*

##### PERFORMANCE: (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe building construction, with at a minimum **shall** include:

- Construction types
  - Basic allowable height
  - Basic allowable area
  - Fire-rated assemblies
  - Fire-rated construction
  - Manufacturer's specifications
2. Describe how to evaluate a building's area, height, occupancy classification and construction type, using an approved set of plans, to verify that the building is in accordance with applicable codes and standards
  3. Describe the concept of performance-based versus prescriptive design
  4. Evaluate compliance with construction documents to ensure that the life safety systems and building service equipment are installed, inspected, and tested to perform as described in the engineering documents and the operation and maintenance manual that accompanies the performance-based design
  5. Evaluate the construction type required for an addition or remodeling project based on applicable codes and standards
  6. Describe the procedures for resolving plan review deficiencies, which at a minimum **shall** include:
    - Identifying deficiencies
    - Referencing to the applicable codes and standards
    - Documenting deficiencies
    - Identifying alternative methods and materials used for compliance
    - Reporting a summary of deficiencies
    - Verification of corrective actions
  7. *Describe building construction features required in a wildland urban interface environment, which at a minimum **shall** include:*
    - *Ignition-resistant construction*
    - *Roofing*
    - *Vents*
    - *Exterior coverings*
    - *Exterior doors and windows*
    - *Decking*
    - *Ancillary structures*

**STANDARD:**

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy



# RE MARSHAL CERTIFICATION TRAINING STANDARDS

## SECTION 11: INVESTIGATION FOR THE FIRE MARSHAL

### III 2-2: DESCRIBE VERIFYING EXISTING FIRE PROTECTION SYSTEMS AND EQUIPMENT

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 5.3.4
LEVEL:	II
REQUISITE KNOWLEDGE:	APPLICABLE CODES AND STANDARDS FOR FIRE PROTECTION SYSTEMS, BASIC PHYSICAL SCIENCE AS IT RELATES TO FIRE BEHAVIOR AND FIRE SUPPRESSION, IMPLICATIONS AND HAZARDS ASSOCIATED WITH SYSTEM OPERATION, INSTALLATION TECHNIQUES AND ACCEPTANCE INSPECTION, TESTING AND REPORTS OF MAINTENANCE OF COMPLETED INSTALLATIONS, AND USE AND FUNCTION OF VARIOUS SYSTEMS (5.3.4)
REQUISITE SKILL:	THE ABILITY TO RECOGNIZE PROBLEMS, USE CODES AND STANDARDS, AND READ REPORTS, PLANS, AND SPECIFICATIONS (5.3.4)

### PERFORMANCE GOAL

#### GIVEN:

1. A summary of the evaluation process of fire protection systems and equipment
2. A summary of the field conditions that must be observed and verified to evaluate existing fire protection systems
3. A summary of how to inspect existing water-based fire suppression systems and equipment to comply with applicable codes and standards
4. A summary of how to verify that special agent fire suppression systems and equipment comply with applicable codes and standards
5. A summary of how to inspect fire detection and alarm systems and equipment to comply with applicable codes and standards
6. A summary of how to verify that systems and equipment comply with construction documents
7. A summary of how to verify and resolve deficiencies
8. Sample field observations of the facility and documentation, the hazards protected, and the system specifications

#### PERFORMANCE: (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe the evaluation process of fire protection systems and equipment, which at a minimum **shall** include:
  - Approved for occupancy or hazard being protected
  - Appropriate agent for hazard
  - Appropriate equipment in the appropriate location for hazard
  - Proper maintenance
2. Describe the field conditions that must be observed and verified to evaluate existing fire protection systems, which may include:
  - Installation per approved plans
  - Unobstructed devices

# RE MARSHAL CERTIFICATION TRAINING STANDARDS

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## SECTION 11: INVESTIGATION FOR THE FIRE MARSHAL

- Documentation of required testing
  - Damaged equipment
  - Control valves in open and locked open position
3. Describe how to inspect existing water-based fire suppression systems and equipment to comply with applicable codes and standards, which at a minimum **shall** include:
- Automatic sprinkler systems
  - Water spray fixed systems
  - Water mist systems
  - Foam water systems
  - Standpipe and hose systems
  - Fire pumps
4. Describe how to verify that special agent fire suppression systems and equipment comply with applicable codes and standards, which at a minimum **shall** include:
- Dry chemical
  - Wet chemical
  - Clean agent
  - Foam
5. Describe how to inspect fire detection and alarm systems and equipment to comply with applicable codes and standards, which at a minimum **shall** include:
- Automatic alarm initiating devices
  - Manual alarm initiating devices
  - Alarm signaling systems
6. Describe how to verify that systems and equipment comply with construction documents, which at a minimum **shall** include:
- Applying applicable codes and standards
  - Ensuring life safety systems and building services equipment are installed, inspected and tested to perform as described in the operations and maintenance manuals
7. Describe how to verify and resolve deficiencies, which at a minimum **shall** include:
- Observation and documentation
  - Reporting in accordance with jurisdictional policies
  - Taking appropriate action to gain code compliance
  - Referring to the appropriate level when necessary

### **STANDARD:**

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy

### III 2-3: DESCRIBE AND DEMONSTRATE EVALUATING AND CALCULATING OCCUPANT LOAD AND EGRESS ELEMENTS

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 5.3.1, 5.3.5, 5.4.5, 6.3.1, AND 6.3.2, AND THE <i>STATE FIRE MARSHAL II</i>
LEVEL:	II
REQUISITE KNOWLEDGE:	<p>HOW TO CALCULATE OCCUPANT LOADS FOR AN OCCUPANCY AND FOR BUILDING USE; AND CODE REQUIREMENTS, REGULATIONS, OPERATIONAL FEATURES, AND FIRE HAZARDS PRESENTED BY VARIOUS OCCUPANCIES (5.3.1)</p> <p>ACCEPTABLE MEANS OF EGRESS DEVICES (5.3.5)</p> <p>APPLICABLE CODES AND STANDARDS ADOPTED BY THE JURISDICTION, THE IDENTIFICATION OF STANDARD SYMBOLS USED IN PLANS, AND FIELD VERIFICATION PRACTICES. (5.4.5)</p> <p>APPLICABLE CODES AND STANDARDS ADOPTED BY THE JURISDICTION, CONSTRUCTION TYPES, OCCUPANCY REQUIREMENTS, MEANS OF EGRESS REQUIREMENTS, AND THE EVALUATION OF EVACUATION PLAN PROCEDURES (6.3.1)</p> <p>APPLICABLE CODES AND STANDARDS ADOPTED BY THE JURISDICTION, CONSTRUCTION TYPES, OCCUPANCY REQUIREMENTS, AND MEANS OF EGRESS REQUIREMENTS (6.3.2)</p>
REQUISITE SKILL:	<p>THE ABILITY TO CALCULATE OCCUPANT LOADS, IDENTIFY OCCUPANCY FACTORS RELATED TO VARIOUS OCCUPANCY CLASSIFICATIONS, USE MEASURING TOOLS, READ PLANS, AND USE A CALCULATOR (5.3.1)</p> <p>THE ABILITY TO CALCULATE EGRESS REQUIREMENTS, READ PLANS, AND MAKE DECISIONS RELATED TO ADEQUACY OF EGRESS (5.3.5)</p> <p>THE ABILITY TO READ PLANS AND RESEARCH CODES AND STANDARDS. (5.4.5)</p> <p>THE ABILITY TO EVALUATE EVACUATION PLAN PROCEDURES, MAKE DECISIONS, READ PLANS AND REPORTS, INTERPRET CODES AND STANDARDS, AND ANALYZE PERFORMANCE-BASED REPORTS (6.3.1)</p> <p>THE ABILITY TO MAKE DECISIONS, READ PLANS AND REPORTS, INTERPRET CODES AND STANDARDS, AND ANALYZE PERFORMANCE-BASED REPORTS (6.3.2)</p>

### PERFORMANCE GOAL

#### GIVEN:

1. A summary of computing the maximum allowable occupant load of a multi-use building
2. A summary of assessing alternative methods to adjust occupant loads
3. A summary of egress elements of a building or portion of a building
4. A summary of analyzing egress elements of a building or portion of a building
5. A summary of the process for resolving deficiencies
6. Sample observations made during a field inspection

#### PERFORMANCE: (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe how to compute the maximum allowable occupant load of a multi-use building, which at a minimum **shall** include:
  - Identifying the function of each area to be evaluated
  - Determining the correct occupant load factor based on Table 1004.1.1 – Maximum Floor Area Allowable Per Occupant (CFC or CBC)
  - Describing how to determine square footage, including:

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## SECTION 11: INVESTIGATION FOR THE FIRE MARSHAL

- ◆ Gross square footage
  - ◆ Net square footage
2. Describe how to assess alternative methods to adjust occupant loads, which may include:
    - Evaluating the space and its intended use
    - Keeping occupant load in compliance with applicable codes and standards
    - Identifying solutions to increase occupant loads on a case-by-case basis as determined by the AHJ
  3. Describe the egress elements of a building or portion of a building, including:
    - Exit access
    - Exit
    - Exit discharge
  4. Describe how to analyze egress elements of a building or portion of a building, which at a minimum **shall** include:
    - Verifying their existence
    - Verifying that they meet applicable codes and standards
    - Verifying proper maintenance
  5. Describe the process for resolving deficiencies, which at a minimum **shall** include:
    - Verification
    - Documentation
    - Taking appropriate action to gain code compliance
    - Reporting or referring accordance with jurisdictional codes and standards

**STANDARD:**

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy

### III 2-4: DESCRIBE EVALUATING INDUSTRIAL HAZARDS AND PROCESSES

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTION 5.3.6, 6.3.4 AND 6.3.5
LEVEL:	II
REQUISITE KNOWLEDGE:	<p>APPLICABLE CODES AND STANDARDS, ACCEPTED FIRE PROTECTION PRACTICES, FIRE BEHAVIOR, IGNITION SOURCES, SAFE HOUSEKEEPING PRACTICES, AND ADDITIONAL REFERENCE MATERIALS RELATED TO PROTECTION OF HAZARDOUS PROCESSES AND CODE ENFORCEMENT (5.3.6)</p> <p>APPLICABLE CODES AND STANDARDS ADOPTED BY THE JURISDICTION, HAZARDS OF THE PROCESS OR OPERATION, FIRE PROTECTION SYSTEMS REQUIRED, INHERENT HAZARDS, AND SAFETY PRECAUTIONS NECESSARY. (6.3.4)</p> <p>FIRE BEHAVIOR, FIRE GROWTH POTENTIAL, PROTECTION SCENARIOS, AND EVACUATION PROCEDURES. (6.3.5)</p>
REQUISITE SKILL:	<p>THE ABILITY TO OBSERVE, COMMUNICATE, INTERPRET CODES, RECOGNIZE PROBLEMS, AND MAKE DECISIONS (5.3.6)</p> <p>THE ABILITY TO MAKE OBSERVATIONS, RECOGNIZE PROBLEMS, AND RESOLVE CONFLICTS. (6.3.4)</p> <p>THE ABILITY TO OBSERVE, RECOGNIZE PROBLEMS, AND EVALUATE HAZARDS. (6.3.5)</p>

### PERFORMANCE GOAL

#### **GIVEN:**

1. A summary of CFC Chapter 3
2. A summary of evaluating code compliance for industrial hazards and processes
3. A summary of evaluating hazardous conditions involving equipment, processes or operations so that the equipment, processes or operations are in accordance with applicable codes and standards
4. A summary of verifying and resolving deficiencies
5. A summary of evaluating alternate protection measures for equipment, operations or processes to ensure the proposed protection level is equivalent to the intent of applicable codes and standards
6. A summary of evaluating fire protection plans and practices for a facility housing a complex process or operation
7. Sample field observations and documentation
8. A proposed alternate means of protection for equipment, operations, or processes

#### **PERFORMANCE:** (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Identify CFC Chapter 3 as the applicable reference for industrial hazards
2. Describe how to evaluate code compliance for industrial hazards and processes
3. Describe how to evaluate hazardous conditions involving equipment, processes or operations so that the equipment, processes or operations are in accordance with applicable codes and standards
4. Describe how to verify and resolve deficiencies, which may include:



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## SECTION 11: INVESTIGATION FOR THE FIRE MARSHAL

- Observation and documentation
  - Reporting in accordance with jurisdictional policies
  - Taking appropriate action to gain code compliance
  - Referring to the appropriate level when necessary
5. Describe how to evaluate alternate protection measures for equipment, operations or processes to ensure the proposed protection level is equivalent to the intent of applicable codes and standards
  6. Describe how to evaluate fire protection plans and practices for a facility housing a complex process or operation

**STANDARD:**

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy



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## SECTION 11: INVESTIGATION FOR THE FIRE MARSHAL

### FIII 2-5: DESCRIBE EVALUATING EMERGENCY PLANNING AND PREPAREDNESS PROCEDURES

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 5.3.7 AND 6.3.6
LEVEL:	II
REQUISITE KNOWLEDGE:	OCCUPANCY REQUIREMENTS FOR EMERGENCY EVACUATION PLANS, FIRE SAFETY PROGRAMS FOR CROWN CONTROL, ROLES OF AGENCIES AND INDIVIDUALS IN IMPLEMENTATION AND DEVELOPMENT OF EMERGENCY PLANS (5.3.7) APPLICABLE CODES AND STANDARDS ADOPTED BY THE JURISDICTION; PURPOSE, USE AND APPLICABILITY OF EVACUATION PLANS; AND HUMAN BEHAVIOR (6.3.6)
REQUISITE SKILL:	THE ABILITY TO COMPARE SUBMITTED PLANS AND PROCEDURES WITH APPLICABLE CODES AND STANDARDS ADOPTED BY THE JURISDICTION (5.3.7) THE ABILITY TO READ PLANS AND REPORTS AND RECOGNIZE PROBLEMS (6.3.6)

#### PERFORMANCE GOAL

##### **GIVEN:**

1. A summary of occupancies that require emergency evacuation plans
2. A summary of the roles of agencies and individuals in implementation and development of emergency evacuation plans
3. A summary of information sources and criteria for emergency evacuation plans
4. A summary of the procedures for evaluating emergency planning and preparedness procedures to determine their applicability to the facility and their compliance with codes and standards
5. A summary of other incidents that may require an inspector to participate in an emergency evacuation plan
6. Sample copies of existing or proposed plans and procedures

##### **PERFORMANCE:** (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Identify occupancies that require emergency evacuation plans
2. Describe the roles of agencies and individuals in implementation and development of emergency evacuation plans
3. Identify information sources and recommend criteria for emergency evacuation plans
4. Describe the procedures for evaluating emergency planning and preparedness procedures to determine their applicability to the facility and their compliance with codes and standards
5. Identify other incidents that may require an inspector to participate in an emergency evacuation plan, which may include:
  - Large-scale fire incidents
  - Wildland urban interface fires
  - Natural disasters



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## SECTION 11: INVESTIGATION FOR THE FIRE MARSHAL

- Terrorism

**STANDARD:**

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy



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## SECTION 11: INVESTIGATION FOR THE FIRE MARSHAL

### III 2-6: DESCRIBE EVALUATING CODE COMPLIANCE FOR STORAGE, HANDLING, AND USE OF HAZARDOUS MATERIALS AND FLAMMABLE AND COMBUSTIBLE LIQUIDS AND GASES

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 5.3.8, 5.3.9, 6.3.7, AND 6.3.8, AND THE <i>STATE FIRE MARSHAL</i>
LEVEL:	II
REQUISITE KNOWLEDGE:	<p>FLAMMABLE AND COMBUSTIBLE LIQUIDS PROPERTIES AND HAZARDS, MATERIAL SAFETY DATA SHEET, SAFE HANDLING PRACTICES, APPLICABLE CODES AND STANDARDS, FIRE PROTECTION SYSTEMS AND EQUIPMENT APPROVED FOR THE MATERIAL, FIRE BEHAVIOR, SAFETY PROCEDURES, AND STORAGE COMPATIBILITY (5.3.8)</p> <p>HAZARDOUS MATERIALS PROPERTIES AND HAZARDS, MATERIAL SAFETY DATA SHEET, SAFE HANDLING PRACTICES, APPLICABLE CODES AND STANDARDS, FIRE PROTECTION SYSTEMS AND EQUIPMENT APPROVED FOR THE MATERIAL, FIRE BEHAVIOR, SAFETY PROCEDURES, CHEMICAL REACTIONS, AND STORAGE COMPATIBILITY (5.3.9)</p> <p>OTHER AGENCIES THAT HAVE REQUIREMENTS AND JURISDICTION RELATED TO HAZARDOUS MATERIALS. (6.3.7)</p> <p>PROPERTIES AND HAZARDS OF FLAMMABLE AND COMBUSTIBLE LIQUIDS AND GASES, MATERIAL SAFETY DATA SHEETS, SAFE HANDLING PRACTICES, APPROPRIATE CODES AND STANDARDS, FIRE PROTECTION SYSTEMS AND EQUIPMENT APPROPRIATE FOR THE MATERIAL, FIRE BEHAVIOR, SAFETY PROCEDURES, AND OTHER AGENCIES THAT HAVE REQUIREMENTS AND JURISDICTION RELATED TO FLAMMABLE AND COMBUSTIBLE LIQUIDS, GASES, CHEMICAL REACTIONS, AND STORAGE COMPATIBILITY. (6.3.8)</p>
REQUISITE SKILL:	<p>THE ABILITY TO IDENTIFY TYPICAL FIRE HAZARDS ASSOCIATED WITH PROCESSES OR OPERATIONS UTILIZING FLAMMABLE AND COMBUSTIBLE LIQUIDS AND TO OBSERVE, COMMUNICATE, INTERPRET CODES, RECOGNIZES PROBLEMS, AND MAKE DECISIONS (5.3.8)</p> <p>THE ABILITY TO IDENTIFY FIRE HAZARDS ASSOCIATED WITH PROCESSES OR OPERATIONS UTILIZING HAZARDOUS MATERIALS, AND TO OBSERVE, COMMUNICATE, INTERPRET CODES, RECOGNIZE PROBLEMS AND MAKE DECISIONS (5.3.9)</p> <p>THE ABILITY TO OBSERVE, RECOGNIZE PROBLEMS, COMMUNICATE, READ PLANS AND REPORTS, AND READ MATERIAL SAFETY DATA SHEETS. (6.3.7)</p> <p>THE ABILITY TO OBSERVE, RECOGNIZE PROBLEMS, COMMUNICATE, READ PLANS AND REPORTS, AND READ MATERIAL SAFETY DATA SHEETS. (6.3.8)</p>

### PERFORMANCE GOAL

#### GIVEN:

1. A summary of applicable CFC chapters for hazardous materials
2. A summary of evaluating code compliance for storage, handling and use of hazardous materials
3. A summary of maximum allowable quantities (MAQ)
4. A summary of verifying and resolving deficiencies
5. A summary of evaluating alternate protection measures for storage, handling, and use of hazardous materials to ensure the proposed protection level is equivalent to the intent of applicable codes and standards

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## SECTION 11: INVESTIGATION FOR THE FIRE MARSHAL

6. A summary of the requirements for, and contents of, a Hazardous Materials Management Plan
7. A summary of evaluating control areas as they relate to hazardous materials storage
8. A summary of evaluating compliance with regulations related to reporting unauthorized discharges of hazardous materials
9. A summary of reviewing records to evaluate compliance with general safety regulations related to personnel training and emergency procedures for sites storing or using hazardous materials
10. A summary of evaluating compliance with regulations related to closing a facility that has used hazardous materials
11. Sample field observations and inspection guidelines

**PERFORMANCE:** *(IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)*

1. Identify the applicable CFC chapter for hazardous materials
2. Describe how to evaluate code compliance for storage, handling and use of hazardous materials, which at a minimum **shall** include:
  - Flammable and combustible liquids
  - Compressed and liquefied gases
  - Cryogenic fluids
  - Flammable solids
  - Highly toxic and toxic materials
  - Oxidizers
  - Radioactive materials
  - Corrosive materials
  - Unstable materials
  - Water-reactive solids and liquids
3. Describe maximum allowable quantities (MAQ) as it relates to:
  - Occupancy classification
    - ◆ M (mercantile) and S (storage)
    - ◆ H (hazardous)
  - Fire sprinklers
  - Control areas
  - Storage cabinets
  - Gas cabinets
  - Exceptions
4. Describe how to verify and resolve deficiencies, including:
  - Observation and documentation
  - Reporting in accordance with jurisdictional policies
  - Taking appropriate action to gain code compliance



# RE MARSHAL CERTIFICATION TRAINING STANDARDS

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## SECTION 11: INVESTIGATION FOR THE FIRE MARSHAL

- Referring to the appropriate level when necessary
- 5. Describe how to evaluate alternate protection measures for storage, handling, and use of hazardous materials to ensure the proposed protection level is equivalent to the intent of applicable codes and standards
- 6. Describe the requirements for, and contents of, a Hazardous Materials Management Plan
- 7. Describe how to evaluate control areas as they relate to hazardous materials storage
- 8. Describe how to evaluate compliance with regulations related to reporting unauthorized discharges of hazardous materials
- 9. Describe how to review records to evaluate compliance with general safety regulations related to personnel training and emergency procedures for sites storing or using hazardous materials
- 10. Describe how to evaluate compliance with regulations related to closing a facility that has used hazardous materials

**STANDARD:**

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy



# RE MARSHAL CERTIFICATION TRAINING STANDARDS

## SECTION 11: INVESTIGATION FOR THE FIRE MARSHAL

### III 2-7: DESCRIBE EVALUATING FIRE GROWTH POTENTIAL IN A BUILDING OR SPACE

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTION 5.3.10
LEVEL:	II
REQUISITE KNOWLEDGE:	BASIC FIRE BEHAVIOR; FLAME SPREAD AND SMOKE DEVELOPMENT RATINGS OF CONTENTS, INTERIOR FINISHES, BUILDING CONSTRUCTION ELEMENTS, DECORATIONS, DECORATIVE MATERIALS, AND FURNISHINGS; AND SAFE HOUSEKEEPING PRACTICES (5.3.10)
REQUISITE SKILL:	THE ABILITY TO OBSERVE, COMMUNICATE, INTERPRET CODES AND STANDARDS, RECOGNIZE HAZARDOUS CONDITIONS, AND MAKE DECISIONS (5.3.10)

#### PERFORMANCE GOAL

##### **GIVEN:**

1. A summary of the impact of different factors on fire behavior
2. A summary of the procedures for evaluating fire growth potential in a building or space so that the contents, interior finish, and construction elements can be evaluated for compliance with applicable codes and standards
3. A summary of verifying and resolving deficiencies
4. A summary of the definition of high piled combustible storage
5. A summary of the required permits for high piled combustible storage
6. A summary of factors related to high piled combustible storage
7. A summary of general fire protection and life safety requirements as they relate to high piled storage
8. Sample field observations or plans

##### **PERFORMANCE:** (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe the impact of different factors on fire behavior, which may include:
  - Heat content of materials
  - Exposed surface area
  - Material height and array
  - Continuity
  - Compartment volume and ceiling height
  - Ventilation
  - Openness of compartment
  - Fuel type
  - Availability and location of additional fuels
  - Thermal properties of the compartment
  - Ambient conditions
  - Effects of changing conditions



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## SECTION 11: INVESTIGATION FOR THE FIRE MARSHAL

2. Describe the procedures for evaluating fire growth potential in a building or space so that the contents, interior finish, and construction elements can be evaluated for compliance with applicable codes and standards
3. Describe how to verify and resolve deficiencies, which at a minimum **shall** include:
  - Observation and documentation
  - Reporting in accordance with jurisdictional policies
  - Taking appropriate action to gain code compliance
  - Referring to the appropriate level when necessary
4. Define high piled combustible storage
5. Identify the required permit for high piled combustible storage
6. Describe factors related to high piled combustible storage
7. Describe general fire protection and life safety requirements as they relate to high piled storage, which at a minimum **shall** include:
  - CFC Table 2306.2
  - CFC 2306.9
  - CFC Table 2308.3

### **STANDARD:**

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy



# RE MARSHAL CERTIFICATION TRAINING STANDARDS

## SECTION 11: INVESTIGATION FOR THE FIRE MARSHAL

### III 2-8: DESCRIBE INSPECTING NEW FIRE PROTECTION SYSTEMS AND EQUIPMENT

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTION 5.3.11, 6.3.9, AND THE <i>STATE FIRE MARSHAL</i>
LEVEL:	II
REQUISITE KNOWLEDGE:	APPLICABLE CODES AND STANDARDS FOR INSTALLATION AND TESTING OF FIRE PROTECTION SYSTEMS, MEANS OF EGRESS, AND BUILDING SERVICES EQUIPMENT (5.3.11) ACCEPTANCE TEST PROCEDURES AND APPROPRIATE CODES AND STANDARDS (6.3.9)
REQUISITE SKILL:	THE ABILITY TO WITNESS AND DOCUMENT TESTS OF FIRE PROTECTION SYSTEMS AND BUILDING SERVICES EQUIPMENT (5.3.11) THE ABILITY TO SUPERVISE THE PERFORMANCE OF ACCEPTANCE TESTS (6.3.9)

#### PERFORMANCE GOAL

##### **GIVEN:**

1. A summary of codes and standards for a water-based extinguishing system
2. A summary of codes and standards for a special agent system
3. A summary of codes and standards for a fire detection and alarm system
4. A summary of the components of a fire detection and alarm system
5. A summary of the field conditions that must be observed and verified to ensure proper installation
6. A summary of how deficiencies are verified and resolved

##### **PERFORMANCE:** (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

7. Describe codes and standards for a water-based extinguishing system, which at a minimum **shall** include:
  - Automatic sprinkler systems
    - ◆ Commercial
    - ◆ Residential
  - Standpipes
  - Fire pumps
  - Water spray systems
  - Water mist systems
  - Foam-water systems
8. Describe codes and standards for a special agent system, which at a minimum shall include:
  - Dry chemical
  - Wet chemical
  - Clean agent
  - Carbon dioxide
9. Describe codes and standards for a fire detection and alarm system



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## SECTION 11: INVESTIGATION FOR THE FIRE MARSHAL

10. Describe the components of a fire detection and alarm system
11. Describe the field conditions that must be observed and verified to ensure proper installation, which may include:
  - Installation techniques
  - Performance-based design
  - Manufacturer's specifications
  - Commissioning and acceptance test of completed installations
12. Describe how deficiencies are verified and resolved, which at a minimum **shall** include:
  - Observation, analysis and documentation
  - Reporting in accordance with the policies of the jurisdiction
  - Taking appropriate action based on the findings to gain code compliance
  - Referring to appropriate level when necessary

**STANDARD:**

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy