



**DEPARTMENT OF FINANCIAL SERVICES**

Division of State Fire Marshal  
Bureau of Fire Standards & Training

**Construction Documents and Plans Review  
FFP2521, BFST2521, ATPC2521**

**Title: Master Syllabus**

**Date: June, 2017**

<b>Course Title</b>	Construction Documents and Plans Review
<b>Course Number</b>	FFP2521, BFST2521, ATPC2521
<b>Prerequisite(s)</b>	None
<b>Revision Date</b>	June, 2017
<b>College Credit Recommendation/Contact hours</b>	This course has a college recommendation of 3 credits.
<b>Continuing Education Units (CEU's)</b>	45 hours towards Fire Inspector I renewal.
<b>Class Days/Time</b>	If on the Fire College Campus - 8:00am to 5:00pm with 5 additional hours of out of class work may be required.
<b>Instructional Supervisor</b>	Name: Francis J. Ennist Email: <a href="mailto:frank.ennist@myfloridacfo.com">frank.ennist@myfloridacfo.com</a>
<b>Program Specialist Contact Info</b>	
<b>Instructor Qualifications</b>	69A-37.065(3) Firesafety Inspector I - (a) Instructor Qualification: An Instructor I must hold certification as a Firesafety Inspector I. (b) Instructor II or III may teach Provided he or she has successfully completed the course. Firesafety Inspector II (a) Instructor must hold a certificate of competency as a Fire Safety Inspector II Instructor II or III may teach provided he or she has successfully completed the course.
<b>Class Location</b>	Florida State Fire College
<b>Course Description</b>	This curriculum is geared towards teaching the student how to assimilate information contained in working, drawing, and specifications as they relate to the fire inspector. The curriculum includes how to interpret conventional graphic communications. Accepted standards and conventions are introduced. Symbols, abbreviations, principles of technical projection, as well as a review of geometry are included. Related worksheets are used to allow for

	applied experience of finding and interpreting information from authentic drawings.
<b><i>Student Learning Outcomes</i></b>	<p>After the successful completion of this course, the student will be able to do the following:</p> <ol style="list-style-type: none"> <li>1. Explain the roles of the fire plans examiner in relation to the permitting, design, and construction processes.</li> <li>2. Describe the processes for submitting and reviewing plans.</li> <li>3. Identify standards and codes that are applicable to the plans review process.</li> <li>4. Identify purpose of construction plans, analytical process, and symbols used.</li> <li>5. Describe what a plans examiner should look for when reviewing site, plot, utility, and landscape plans.</li> <li>6. Describe what a plans examiner should look for when reviewing architectural plans.</li> <li>7. Describe what a plans examiner should look for when reviewing structural plans.</li> <li>8. Describe what a plans examiner should look for when reviewing mechanical plans.</li> <li>9. Describe what a plans examiner should look for when reviewing electrical plans.</li> <li>10. Describe what a plans examiner should look for when reviewing fire protection system plans.</li> <li>11. Describe what a plans examiner should look for when reviewing other fire protection related system plans in relation to hazardous materials.</li> <li>12. Explain performance based design process.</li> <li>13. Describe the reasons why buildings are renovated and remodeled to be alert to modifications to existing fire protection features.</li> <li>14. Explain the importance of the Technical Advisory Committee and stakeholders meeting prior to submittal of building application and plans</li> <li>15. Understand how to report substandard plans to the State.</li> </ol>
<b><i>Textbook used by BFST</i></b>	<i>Plans Examiner for Fire and Emergency Services, 2<sup>nd</sup> Edition (2016)</i> Fire Protection Publications (IFSTA) ISBN: 978-087939608-4
<b><i>Required Materials</i></b>	Students must bring an architectural ruler.
<b><i>Method of Instruction</i></b>	Classroom
<b><i>Grading</i></b>	Passing 70% (Quizzes 30% Final 50% Presentation 20%)
<b><i>Certification(s)</i></b>	One of the five required courses for Firesafety Inspector I certification  <a href="#">FFP1510</a> , <a href="#">BFST1510</a> , or <a href="#">ATPC1510</a> CODES AND STANDARDS

	<p><a href="#">FFP2120, BFST2120, or ATPC1510</a> BUILDING CONSTRUCTION FOR THE SERVICE</p> <p><a href="#">FFP2521, BFST2521 or ATPC2521</a> CONSTRUCTION DOCUMENTS AND REVIEW</p> <p><a href="#">FFP1505, BFST1505 or ATPC1505</a> FIRE PREVENTION PRACTICES</p> <p><a href="#">FFP1540, BFST1540 or ATPC1540</a> PRIVATE FIRE PROTECTION SYSTEMS</p> <p>One of five required for Fire Officer I</p> <p><a href="#">FFP2120, BFST2120 or ATPC 2120</a> BUILDING CONSTRUCTION FOR THE FIRE SERVICE</p> <p><a href="#">FFP2720, BFST2720, or ATPC2720</a> COMPANY OFFICER</p> <p><a href="#">RN4807</a> COURAGE TO BE SAFE</p> <p><a href="#">FFP1740, BFST1740, or ATPC1740</a> FIRE SERVICE COURSE DELIVERY</p> <p><a href="#">FFP1810, BFST1810, or ATPC1810</a> FIREFIGHTING TACTICS AND STRATEGIES I</p>	
<b>Attendance Policy</b>	<p>You are required to attend all sessions of the course and complete all pre-course assignments. Failure to appear in class for a scheduled activity will be considered an absence. Students are allowed to miss 10% of the class and still receive credit. There are no makeup sessions.</p>	
<b>Academic Integrity</b>	<p>Academic integrity is crucial to the learning community and indicates respect for the college, the instructor, the course, your classmates, and yourself. Any violation of this trust, including but not limited to cheating, plagiarism, collusion, or using or having any content of an un-administered test, will result in immediate dismissal from the course. Under Florida Statute 633, any student dismissed for academic dishonesty can be refused acceptance for any course administered by FSFC.</p> <p>Training Provider Message You must be certified by the State of Florida as an Instructor I, II, or III, or a State of Florida recognized Fire Department, or hold a certification as a Single Course Exemption Instructor. Applications can be made through the Bureau of Fire Standards and Training. Organization Providers are Schools, Government Entities, and Businesses that need to apply and be approved by the Florida State Fire College.</p> <p>Instructor Message An instructor providing training must be qualified by the Bureau of Fire Standards and Training or instructors with requisite faculty credentials for the academic institution</p>	

	<p>that is registered in the Florida Department of Education Statewide Course Numbering System to teach the course or instructors with requisite faculty credentials as determined by the United States Fire Administration-National Fire Academy or instructors with requisite faculty credentials as determined by the respective regionally accredited or nationally accredited university or college or instructors who hold an active Single Course Exemption Certification issued by the Division. Instructors who hold an active Fire Officer II Certification issued by the Division after November 18, 2013, and an active Instructor II Certification issued by the Division. Instructors who hold an active Firesafety Inspector I, Firesafety Inspector II or Fire Code Administrator Certification issued by the Division and an Instructor II Certification issued by the Division may teach the "Building Construction for the Fire Service."</p> <p>Pre-Certification Message To qualify for certification as a Fire Officer I, you shall possess an active Firefighter Certificate of Compliance issued by the Division or have met the curriculum requirements for Volunteer Firefighter I as defined in 69A-37.055(1) F.A.C., Meet the job performance requirements of NFPA 1021 - Fire Officer I (2009)., Complete the Fire Officer I curriculum., Complete the Fire Officer I Task Book with required signatures. The evaluator of the FO1 task book is a direct supervisor, training officer or person designated by the Fire Chief or Agency Head who is responsible for overseeing the performance or activity of the candidate. It is the candidate's responsibility to verify that the evaluator signs and enters their Florida Instructor ID number attesting to first hand observation of the requisite skills after they have observed the demonstration of the task book performance requirements, Pass the Fire Officer I exam with a score of 70% or higher., Complete the National Fallen Firefighters Foundation course titled "Courage to be Safe" or a course determined by the Division to be equivalent. When taking a state exam, please ensure that your personal profile matches the identification that you plan to produce at PearsonVue.</p> <p>To be certified as a Firesafety Inspector I in the State of Florida, an individual must; never have been convicted of</p>
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	<p>felony, successfully complete 200 hours of basic certification training for Firesafety inspectors, or have received equivalent training in another state, and pass a state written examination. To apply for this certification, login as a student, click on Apply, select certification exam and follow the process to submission. Supporting documentation may be scanned and attached or faxed to 352-732-1374. When faxing, note "on-line application" on the fax along with a contact phone number. You will need to have your fingerprints digitally taken and submitted. Directions on how to do this are on the home page.</p> <p><b>NOTE*** WHEN YOU ARE APPROVED TO TEST OR IF ADDITIONAL INFORMATION IS REQUIRED, A MESSAGE WILL BE SENT TO YOUR INBOX. PLEASE CHECK YOUR INBOX ON A REGULAR BASIS.</b></p> <p>NFPA FIRE OFFICER I and FIRESAFETY INSPECTOR I Subject and Level</p>
<b><i>Students with Disabilities</i></b>	Any student who has a permanent or temporary disability that may require a reasonable accommodation to participate in the course must present documentation of the disability and requested accommodation no later than the beginning of the course.
<b><i>Emergency Evacuation Policy</i></b>	<p>Emergency procedures for the institution or training facility should be followed.</p> <p>If on the Florida State Fire College campus, the occupants of the buildings on campus are required to evacuate and assemble outside when a fire alarm is activated or an announcement is made. Please be aware of the following policies regarding evacuation.</p> <ul style="list-style-type: none"> <li>• Familiarize yourself with all exit doors of the classroom and the building.</li> <li>• Remember that the nearest exit door may not be the one you used when you entered the building.</li> <li>• If you require assistance to evacuate, inform the instructor on the first day of class.</li> <li>• In the event of an evacuation, follow the guidance of the instructor.</li> <li>• Do not re-enter a building unless you are given instructions by Florida State Fire College personnel to do so.</li> </ul>
<b><i>Requesting Emergency Care</i></b>	<p>Emergency procedures for the institution or training facility should be followed.</p> <p>If on the Florida State Fire College campus, any request for emergency</p>

	care should be initiated by calling “911” from any phone on campus of the Florida State Fire College. Phones are located in each classroom. Additionally, in the event of any emergency, immediately contact an instructor or staff member.
<b><i>Critical Event Procedures</i></b>	<p>Emergency procedures for the institution or training facility should be followed.</p> <p>If on the Florida State Fire College campus:</p> <p><b>Severe Weather</b> – there is a lightning detection system on campus which has an audible 15 second blast of an air horn. If you are outside, please follow your instructor or move to the closest permanent building. Once the threat is over, there will be three 5 second blasts of the signal.</p> <p><b>Security</b> – During the daytime, security is handled by full time faculty and staff. There are security guards on duty in the evenings and weekends. Please comply with the requests made of security officers. Failure to do so can result in removal from campus.</p> <p><b>Student Badges</b> – You will be issued a badge to be worn anytime you are on campus.</p>
<b><i>Enabling Objectives</i></b>	<p>Given information from discussion and reading materials, the student will perform the following objectives to a written test accuracy of at least 70% and meet the applicable job performance requirements of NFPA 1031.</p> <p><b><u>Chapter 1 Role of Plans Examiner</u></b></p> <ol style="list-style-type: none"> <li>1. Describe the three components of effective fire prevention (NFPA 1031: 7.3.8 and 8.3.7)</li> <li>2. Reasons for construction permits (NFPA 1031:7.2.1)</li> <li>3. Explain the purpose of and reasons for plans reviews (NFPA 1031:7.2.1)</li> <li>4. Identify basic facts about passive and active fire protection systems (NFPA 1031:7.3.10, 8.3.1 and 8.3.7)</li> <li>5. Describe the design process (NFPA 1031:7.2.1 and 8.3.1)</li> <li>6. Explain the permitting process (NFPA 1031:7.2.1)</li> <li>7. Identify basic facts about the construction process (NFPA 1031:7.2.1)</li> <li>8. Role of the architect, engineer, developer, and contractors.</li> </ol> <p><b><u>Chapter 2 Plans Review Process</u></b></p> <ol style="list-style-type: none"> <li>1. Identify basic facts about plans review organizations (NFPA 1031:7.2.1)</li> <li>2. Identify basic facts about legal requirements for plans review (NFPA</li> </ol>

	<p>1031:7.2.1 and 8.2.2)</p> <ol style="list-style-type: none"> <li>3. Describe the general plans submittal and processing process (NFPA: 7.2.1, 7.2.3 and 7.3.8)</li> <li>4. Identify accurate information about permits and fees (NFPA 1031: 7.2.1 and 7.2.3)</li> <li>5. Identify accurate information about submitting plans to the authority having authority (AHJ) (NFPA 1031:7.2.1 and 7.3.3)</li> <li>6. List types of support documents included with building plans</li> <li>7. Identify basic facts about the plans review sequence (NFPA1031: 7.2.1 and 7.2.3)</li> <li>8. Explain why effective communication with design professionals is important to the plans examiner (NFPA 1031: 7.2.2)</li> <li>9. Identify basic facts about types of deficiencies that occur in plans (NFPA 1031: 7.2.2)</li> <li>10. Identify information a plans examiner should provide to correct deficiencies in submitted building plans (NFPA 1031: 7.2.2)</li> <li>11. Explain what is meant when plans are approved by the AHJ (NFPA 1031 7.2.2)</li> <li>12. Identify basic facts about plans revisions (NFPA 1031:7.2.2)</li> <li>13. Explain why record keeping for building plans and permits is important (NFPA 1031: 7.2.1)</li> <li>14. List two ways building records can be requested by outside parties (NFPA 1031: 7.2.1)</li> <li>15. Describe types of legal proceedings involving the interpretation, application, or enforcement of building and fire codes (NFPA 1031: 7.2.2 and 7.3.9)</li> <li>16. Differences between civil plans, architectural plans, engineering plans and shop drawings.</li> <li>17. FAC 61G</li> <li>18. Understand scope of FBC-Building, FBC – Residential and FBC – Existing Building.</li> <li>19. Understand how to deal with the differences between FBC and FFPC</li> </ol> <p><b><u>Chapter 3 Codes and Standards</u></b></p> <ol style="list-style-type: none"> <li>1. Explain what is meant by the terms code and ordinance (NFPA 1031: 7.2.1, 7.2.2 and 7.2.4)</li> <li>2. Explain how a code is amended (NFPA 1031: 7.2.1, 7.2.2 and 7.2.4)</li> <li>3. Identify basic facts about prescriptive-based and performance-based code models (NFPA 1031: 7.2.1, 7.2.2 and 7.2.4)</li> <li>4. List types of specialized codes (NFPA 1031: 7.2.1, 7.2.2 and 7.2.4)</li> </ol>
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5. Identify basic facts about code references (NFPA 1031: 7.2.2, 7.2.4 and 8.2.1)
6. Identify basic facts about plans review checklists (NFPA 1031:8.2.1)
7. Explain what is meant by the term standard (NFPA 1031: 7.2.1, 7.2.2 and 7.2.4)
8. List private-sector organizations involved in developing standards related to fire safety (NFPA 1031:7.2.1, 7.2.2 and 7.2.4)
9. List federal agencies that have standards involving fire safety (NFPA 1031:7.2.1)

**Chapter 4 Plan Sets**

1. List purposes of construction plans (NFPA 1031: 7.2.3)
2. Describe the design analysis process (NFPA 1031: 7.2.3)
3. Identify common abbreviations and symbols used on construction drawings (NFPA 1031: 7.3.1 and 7.3.6)
4. Identify basic facts about measurements and scales and their use in construction drawings (NFPA 1031: 7.3.1 and 7.3.7)
5. List the six major sections or groups of plans that compose a complete set of plans (NFPA 1031:8.3.3)
6. Identify basic facts about the parts of a typical plan sets (NFPA 1031:8.3.3)
7. Identify purposes of supplemental documentation that may accompany plan sets (NFPA 1031: 8.3.3 and 8.3.5)

**Chapter 5 Site, Plot, Utility, and Landscape Plans**

1. Identify basic facts about reviewing site and plot plans (NFPA 1031: 7.2.3)
2. Describe terms related to contours and grades (NFPA 1031: 7.2.3)
3. List requirements included when specifying construction of fire and emergency services access roads (NFPA 1031:7.3.7)
4. List obstacles that a plans examiner should check for that may impede emergency vehicle access (NFPA 1031: 7.3.7)
5. Identify basic facts about easements (NFPA 1031: 7.2.1 and 7.3.7)
6. Identify basic facts about reviewing utility drawing (NFPA 1031: 7.3.1 and 7.3.6)
7. List information included on a utility drawing (NFPA 1031: 7.3.1 and 7.3.6)
8. Identify basic facts about reviewing landscape plans (NFPA 1031:



7.3.7)

9. List information included on a landscape plan (NFPA 1031: 7.3.7)
10. Understand the Building Department has access to, and uses, Auto Turn for design information.
11. Understand water supply designs for compliance with NFPA 1.
12. Understand how tradeoffs may be implemented if water supply is inadequate.

### **Chapter 6 Architectural Plans**

1. Identify basic facts about reviewing architectural plans (NFPA 1031: 7.2.3, 7.3.2, 7.3.3, 7.3.4, 7.3.5, 8.3.1 and 8.3.9)
2. Identify basic facts about reviewing exterior elevation drawings (NFPA 1031: 7.3.3)
3. Identify basic facts about reviewing floor plans (NFPA 1031: 7.3.2, 7.3.4, 7.3.5 and 8.3.9)
4. Explain the value of a reflected plan (NFPA 1310: 7.3.3)
5. Identify basic facts about reviewing section drawings (NFPA 1031: 7.3.3)
6. Explain the purpose of interior elevation drawings (NFPA 1031: 7.3.3)
7. Identify basic facts about schedules (NFPA 1031: 7.3.3)
8. Explain the importance of furniture and equipment plans (NFPA 1031: 7.3.5)
9. Identify basic facts about detail views (NFPA 1031: 7.3.3)

### **Chapter 7 Structural Plans**

1. Identify basic facts about reviewing structural plans (NFPA 1031: 7.2.3, 7.3.3, 7.3.10, and 8.3.6)
2. Define the various types of loads (NFPA 1031: 7.3.7)
3. Identify basic facts about dead loads and live loads (NFPA 1031: 7.3.3 and 8.3.6)
4. List examples of dead loads and live loads (NFPA 1031: 7.3.3 and 8.3.6)
5. Identify basic facts about wind loads (NFPA 1031: 7.3.3 and 8.3.6)
6. Identify basic facts about seismic loads (NFPA 1031: 7.3.3 and 8.3.6)
7. Describe design methods used to protect buildings against the forces of earthquakes (NFPA 1031: 7.3.3 and 8.3.6)
8. Identify basic facts about soil pressure, foundation design and foundation plans (NFPA 1031: 7.3.3 and 8.3.6)
9. Define the term bearing-wall structure and frame structure (NFPA

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	<p>1031: 7.3.3)</p> <ol style="list-style-type: none"> <li>10. List type of structural design components (NFPA 1031: 7.3.3)</li> <li>11. Identify basic facts about columns and beams (NFPA 1031: 7.3.3)</li> <li>12. Identify basic facts about trusses (NFPA 1031:7.3.3)</li> <li>13. Describe arches and their uses (NFPA 1031: 7.3.3)</li> <li>14. Describe methods to provide lateral stability (NFPA 1031: 7.3.3)</li> <li>15. Describe what is shown in structural framing plans (NFPA 1031:7.3.3)</li> <li>16. Identify basic facts about structural detail, section views, and wood connectors (NFPA 1031:7.3.3)</li> </ol> <p><b><u>Chapter 8 Mechanical Plans</u></b></p> <ol style="list-style-type: none"> <li>1. Identify basic facts about reviewing mechanical plans (NFPA 1031: 7.2.3, and 7.3.6)</li> <li>2. Identify basic facts about plumbing system plans and designs (NFPA 1031: 7.3.6)</li> <li>3. List components of fuel gas systems (NFPA 1031: 8.3.4 and 8.3.8)</li> <li>4. Identify basic facts about fuel gas systems (NFPA 1031:8.3.4 and 8.3.8)</li> <li>5. Identify basic facts about specialized piping systems (NFPA 1031: 8.3.4, 8.3.8)</li> <li>6. Identify basic facts about design criteria for hazardous processes (NFPA 1031: 8.3.4, 8.3.8)</li> <li>7. Identify basic facts about reviewing plumbing systems, including core designs and designs involving penetrations and fire stopping materials (NFPA 1031:8.3.2)</li> <li>9. List air processes used in controlling the interior environment of a building (NFPA 1031: 8.3.11)</li> <li>10. List factors that affect the heating, ventilating, and air conditioning (HVAC) system of a building (NFPA 1031: 8.3.11)</li> <li>11. Identify basic facts about heating systems (NFPA 1031: 8.3.11)</li> <li>12. Identify basic facts about cooling systems (NFPA 1031: 8.3.11)</li> <li>13. Explain why it is important for the plans examiner to review HVAC ductwork (NFPA 1031: 8.3.11)</li> <li>14. Identify basic facts about HVAC system review (NFPA 1031: 8.3.11)</li> </ol> <p><b><u>Chapter 9 Electrical Plans</u></b></p> <ol style="list-style-type: none"> <li>1. Identify basic facts about reviewing electrical plans (NFPA 1031: 7.2.3, 7.3.3, 7.3.10, 8.3.5, 8.3.7, 8.3.11)</li> <li>2. Define the term electricity (NFPA 1031: 8.3.7)</li> </ol>
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3. Identify basic facts about two types of electricity (NFPA 1031: 8.3.7)
  4. Identify basic facts about the fundamental properties of electricity (NFPA 1031: 8.3.7)
  5. Identify basic facts about labeling wiring on an electrical plan (NFPA 1031:8.3.7)
  6. Identify basic facts about electric service (NFPA 1031:8.3.7)
  7. Describe factors that help determine whether the electric service to a building is placed underground or overhead (NFPA 1031: 8.3.7)
  8. List common types of system voltage service that can be provided to a building (NFPA 1031:8.3.7)
  9. Define the term transformer (NFPA 1031: 8.3.7)
  10. Identify basic facts about transformers (NFPA 1031: 8.3.7)
  11. List three categories of electrical system components (NFPA 1031: 8.3.7)
  12. Identify basic facts about electrical system components (NFPA 1031; 8.3.7)
  13. List three topics that require special consideration by the plans examiner when reviewing electrical drawings (NFPA 1031:8.3.5,8.3.7)
  14. Identify basic facts about topics requiring special consideration by the plans examiner when reviewing electrical drawings (NFPA 1031:8.3.5, 8.3.7)
  15. Identify basic facts about standby and emergency power systems (NFPA 1031:8.3.5, 8.3.7)
  16. Identify basic facts about hazardous location electrical equipment (NFPA 1031:8.3.5, 8.3.7)
  17. Explain how grounding is accomplished (NFPA 1031:8.3.5, 8.3.7)
  18. Describe methods of countering static buildup (NFPA 1031:8.3.5, 8.3.7)
  19. Identify basic facts about lightning protection (NFPA 1031: 8.3.5, 8.3.7)
- Chapter 10 Automatic Sprinkler and Standpipe System Plans**
1. Identify basic facts about reviewing fire protection system plans (NFPA 1031: 7.3.1, 7.3.3, 7.3.7, 7.3.10, 8.3.7)
  2. Identify components of an automatic sprinkler system (NFPA 1031:

- 7.3.6, 7.3.10, 8.3.7)
3. Identify basic facts about automatic sprinkler design (NFPA 1031: 7.3.6, 7.3.10, 8.3.7)
  4. Identify basic facts about reviewing sprinkler system plans (NFPA 1031: 7.3.6, 7.3.10, 8.3.7)
  5. Define the term standpipe system (NFPA 1031: 7.3.10, 8.3.7)
  6. Describe standpipe classifications (NFPA 1031:7.3.10, 8.3.7)
  7. Describe the types of standpipes (NFPA 1031;7.3.10, 8.3.7)
  8. Identify basic facts about standpipes (NFPA 1031: 7.3.10, 8.3.7)

**Chapter 11 Fire Alarm and Detection Systems**

1. List functions of fire alarm systems (NFPA 1031:7.3.10, 8.3.7)
2. Describe signals provided by fire alarm systems (NFPA 1031: 7.3.10, 8.3.7)
3. Identify basic components of a fire alarm system (NFPA 1031:7.3.10, 8.3.7)
4. Identify basic facts about components of a fire alarm system (NFPA 1031:7.3.10, 8.3.7)
5. Identify basic facts about reviewing fire alarm system plans (NFPA 1031: 7.3.10, 8.3.7)
6. Identify basic methods to mitigate nuisance alarms during plans review.

**Chapter 12 Automatic Elevators, Fire Command Centers, and Fire Extinguishing and Smoke Control**

1. Identify basic facts about requirements for automatic elevators (NFPA 1031: 7.3.10, 8.3.7)
2. Describe a fire command center (NFPA 1031: 7.3.10, 8.3.7)
3. Identify basic facts about reviewing command center plans (NFPA 1031:7.3.10, 8.3.7)
4. Identify basic facts about restaurant kitchen fire extinguishing systems (NFPA 1031: 7.3.10, 8.3.7)
5. Identify basic facts about gaseous fire-extinguishing agents and systems (NFPA 1031:7.3.10, 8.3.7)

6. Explain what is meant by the term smoke management and smoke control (NFPA 1031:7.3.10, 8.3.7, 8.3.11)
7. List methods by which smoke can travel through buildings (NFPA 1031: 7.3.10, 8.3.7, 8.3.11)
8. Identify basic facts about smoke control systems (NFPA 1031: 7.3.10, 8.3.7, 8.3.11)
9. Identify basic facts about portable fire extinguishers (NFPA 1031: 7.3.10, 8.3.7, 8.3.11)

**Chapter 13 Other Plans Reviews Related to Fire Protection**

1. Identify basic facts about reviewing plans involving storage of hazardous materials, hazardous processes, and uncommon structures such as tents and membrane structures (NFPA 1031: 7.37, 8.3.4, 8.3.6, 8.3.8, 8.3.10)
2. Identify basic facts about inside and outside storage areas for hazardous materials (NFPA 1031: 7.37, 8.3.4, 8.3.6, 8.3.8, 8.3.10)
3. Identify basic facts about the hazardous processes of spraying operations, swimming-pool installations, dip tank operations, flammable/combustible liquid processes, and explosion suppression and venting (NFPA 1031: 8.3.3, 8.3.6, 8.3.8, 8.3.10)
4. Describe a membrane structure (NFPA 1031: 7.3.3)
5. Describe the advantages of membrane structures from a design standpoint (NFPA 1031:7.3.3)
6. Identify basic facts about reviewing membrane structure designs (NFPA 1031: 7.3.3)
7. Identify basic facts about reviewing tent designs (NFPA 1031: 7.3.3)

**Chapter 14 Alternative Design Methods**

1. Identify basic facts about reviewing alternate design methods (NFPA 1031: 7.3.1, 7.3.3, 7.3.8, 8.2.2, 8.3.6, 8.3.12)
2. Identify basic facts about alternate materials, alternate methods and equivalencies (NFPA 1031: 7.3.3, 8.3.6, 8.3.12)
3. Describe boards of appeals (NFPA 1031: 7.2.2, 8.2.2)
4. List ways that an appeal can occur (NFPA 1031: 7.2.2, 8.2.2)
5. Describe Declaratory Statement Requests
6. Understand how to deal with differences between the FFPC and the FBC

7. Define the term performance-based design (NFPA 1031: 8.3.12)
8. Identify factors involved in the performance-based design process (NFPA 1031: 8.3.12)
9. List steps in the performance-based design process (NFPA 1031: 7.3.1, 8.3.12)
10. Identify basic facts about the performance-based design process (NFPA 1031: 7.3.1, 8.3.12)

**Chapter 15 Renovations and Tenant Improvements**

1. Identify basic facts about reviewing renovations and tenant \ improvements (NFPA 1031: 7.2.4, 7.3.2, 7.3.3, 8.3.1)
2. Describe what is meant by the terms renovation and remodeling (NFPA 1031 7.3.3)
3. List reasons why buildings are renovated (NFPA 1031:7.3.3)
4. Explain requirements for buildings being rebuilt because of damage (NFPA 1031: 7.2.4)
5. Explain why it is important for the plans examiner to be alert for modifications of existing fire protection features of a building (NFPA: 7.3.10)
6. Explain why the plans examiner may need to review building records (NFPA 1031: 7.3.3)
7. Identify basic facts about speculative buildings and tenant improvements (NFPA 1031: 8.3.1)
8. Identify basic facts about historic building conversions (NFPA 1031:8.3.8)
9. Explain how a plans examiner must review plans when there is a change of occupancy or use (NFPA 1031: 7.3.2)