FIRE FIGHTER ADVISORY COMMITTEE
September 17, 2010, 8:30 A.M.
William B. Travis Building, 1701 N. Congress Avenue, Room 1-100, Austin, Texas

The Fire Fighter Advisory Committee will convene in open session to deliberate and possibly take formal action on any of the following agenda items:

1. Roll call – 8:30 a.m.

2. Adoption of the May 3, 2010, Fire Fighter Advisory Committee meeting minutes.

3. Report from the Curriculum and Testing Committee with discussion and possible action regarding:
   a. Proposed rule changes to 37 TAC, Chapter 427, Training Facility Certification, included, but not limited to §427.305, Procedures for Testing Conducted by On-Site and Distance Training Providers.
   b. Recommendations for appointments to Curriculum and Testing Committee.
   c. Curriculum updates to Driver Operator Curriculum, Fire Officer I & II Curriculum, and Inspector Curriculum.

4. Presentation of information and discussion regarding Pro Board Certification history and process.

5. Discussion and possible recommendation regarding proposed rule changes to 37 TAC, Chapter 431, Minimum Standards For Arson Investigation Certification, including, but not limited to §431.1, Minimum Standards For Arson Investigation Personnel; §431.3, Minimum Standards For Basic Arson Investigator Certification; §431.13, International Fire Service Accreditation Congress (IFSAC) Seal; Subchapter B Minimum Standards for Fire Investigator Certification; §431.201, Minimum Standards for Fire Investigation Personnel.

6. Discussion and possible recommendation regarding proposed rule changes to 37 TAC, Chapter 435, Fire Fighter Safety, including, but not limited to new §435.25, Courage to be Safe Program.

7. Discussion and possible recommendation regarding proposed rule changes to 37 TAC, Chapter 437, Fees, including, but not limited to §437.1, Purpose and Scope; §437.5, Renewal Fees, §437.7, Standards Manual and Certification Curriculum Manual Fees.

8. Discussion and possible recommendation regarding proposed rule changes to 37 TAC, Chapter 441, Continuing Education, including, but not limited to §441.3, Definitions; §441.5, Requirements; §441.7, Continuing Education for Structure Fire Protection Personnel; 441.9, Continuing Education for Aircraft Rescue Fire Fighting Personnel; §441.11, Continuing Education for Marine Fire Protection Personnel; §441.13, Continuing Education for Fire Inspection Personnel; §441.15, Continuing Education for Arson Investigator or Fire Investigator; §441.17, Continuing Education for Hazardous Materials Technician; §441.19, Continuing Education for Head of a Fire Department; §441.21, Continuing Education for Fire Service Instructor. This was tabled at June, 2009 meeting.

9. Discussion and action to formulating a blue print or plan to evaluate data and work with liaison from commission to develop recommendations to reduce fire protection personnel injuries.

10. Discussion and possible action on future meeting dates, agenda items, and locations.

11. Adjourn meeting.

1. **Roll call---8:30 a.m.**

2. Adoption of the May 3, 2010 Fire Fighter Advisory Committee meeting minutes.

TEXAS COMMISSION ON FIRE PROTECTION

Presiding Officer Jim Reidy called the May 3, 2010 meeting of the Fire Fighter Advisory Committee to order at 10:00 a.m. at the William B. Travis Building, 1701 N. Congress Ave., Room 1-100, in Austin, Texas.

Attending	Jim Reidy	Leonardo Perez	Michael Wisko	Tommy Anderson*	Amado Cano, Jr.
	Daniel DeYear	David Hudgins	J. P. Steelman	Michael Jones	

*absent entire meeting
**absent part of meeting

Staff Jake Soteriou Tim Rutland Deborah Cowan Larry Whitis Miles Skipper
Veena Mohan, Assistant Attorney General

1.	Roll call	Secretary Michael Wisko called roll and 8 of 9 members were present.
2.	Adoption of Minutes	A motion was made by J. P. Steelman and seconded by Daniel DeYear to approve the minutes of the March 26, 2010, fire fighter advisory committee meeting as discussed. The motion carried.
3.	Report from Curriculum and Testing Committee	Pat McAuliff, Chairman of the committee was unable to attend the meeting. Larry Whitis gave a brief update on activities of the last committee meeting and briefly identified Testing Committee various curricula that is currently being reviewed.
4.	37 TAC, Chapter 427	A motion was made by Michael Wisko and seconded by Amado Cano to accept the recommended changes to 37 TAC, Chapter 427, §427.7 as discussed. The motion carried.
5.	37 TAC, Chapter 435	A motion was made by Leonardo Perez and seconded by Michael Wisko to accept the second substituted changes to 37 TAC Chapter 435, §435.25 as discussed. The motion carried.
6.	Future meeting dates, agendas and locations	The committee scheduled a meeting for September 17, 2010 and December 3, 2010.
7.	Adjournment	A motion to adjourn was made by J. P. Steelman and seconded by Daniel DeYear. The motion carried.

Jim Reidy
Presiding Officer

3. **Report from the Curriculum and Testing Committee with discussion and possible action regarding:**

    a. **Proposed rule changes to 37 TAC, Chapter 427, Training Facility Certification, included, but not limited to §427.305, Procedures for Testing Conducted by On-Site and Distance Training Providers.**

Chapter 427

TRAINING FACILITY CERTIFICATION

SUBCHAPTER A

ON-SITE CERTIFIED TRAINING PROVIDER

§427.1. Minimum Standards for Certified Training Facilities for Fire Protection Personnel.

(a) An on-site training facility must be certified by the commission in each discipline with a commission approved curriculum for which the facility provides accredited training for fire protection personnel certification. An on-site training facility is where instructors and students are in immediate proximity and where content is instructed primarily in classrooms, at demonstration projects, in fire simulation structures, on fire apparatus, or at training sites in the field under direct supervision of the training facility instructors.

(b) A certified on-site training facility may be approved to instruct in any one or all of the fire protection personnel curricula. Minimum requirements for each curriculum must be met to receive certification.

(c) Minimum requirements for certification as a certified on-site training facility shall include facilities, apparatus, equipment, reference materials, standard operating procedures, instructors, and records to support a quality education and training program. The resources must provide for classroom instruction, demonstrations, and practical exercises for the trainees to develop the knowledge and skills required for fire protection personnel certification.

(d) The on-site facilities and training shall be performance oriented, when required. Practical performance training with maximum participation by trainees shall be an integral part of the training program. The evaluation process for each phase of training will emphasize, as required, performance testing to determine if the trainee has acquired the knowledge and skills to achieve the required level of competency as required by the respective curriculum.

(e) It must be clearly understood that the minimum standard for training facilities is applicable only as the title implies and does not address the additional training facility resources which are required for the continuing in-service training essential to the development and maintenance of a well-coordinated and effective fire service organization.

(f) An organization, installation, or facility must submit a written application for certification as a certified on-site training facility to the commission. Such application will include descriptions and addresses of physical facilities together with inventory of apparatus, equipment, and reference material to be utilized in conducting the basic curriculum as specified by the commission. It is not required that the equipment be owned by, permanently assigned to, nor kept at a training facility, but must be readily available for instructional purposes. A training facility must submit a letter of commitment with the original training facility certification application authorizing the use of resources not controlled by the training facility from the provider of said resources. A copy of the letters of commitment must be maintained on-site and be available for review. Photographs of resources annotated to reflect their identity must be included with the application. When seeking training approvals, the facility shall certify that the resources are provided in accordance with this chapter.

(g) All training for certification must be submitted to the commission in writing for approval at least 20 days prior to the proposed starting date of the training. Approved courses are subject to audit by commission staff any time during the approved schedule. Any deviation in the approved course schedule or content must be reported to the commission within three business days of the deviation. The academy coordinator will:

(1) attest to the fact that the training meets the competencies in the applicable Commission Curriculum and/or NFPA Standards;

(2) submit a testing schedule for all required academy skills; and

(3) notify the Commission of any changes in instructor staff and/or field examiners.

(h) An on-site training provider certified for the first time by the commission will receive, at no charge, one Commission Certification Curriculum and Standards Manual on CD that is to be utilized by the certified on-site training provider's instructors. The on-site provider is responsible for ensuring that all subjects are taught as required by the respective curriculum. Additional CD copies may be purchased from the commission or downloaded from the agency web site. On-site training providers that renew their certification will receive appropriate updates at no charge.

§427.3. Facilities.

The following minimum resources, applicable to the curricula, are required for certification as a certified on-site training facility. These facilities may be combined or separated utilizing one or more structures. In either event the facilities must be available and used by the instructor and trainees.

(1) A training tower equivalent to two or more stories in height. The term "training tower" as used in these standards is a structure suitable for training in the practical application of required ladder, rescue, hose and rope skills training.

(2) A facility for classroom instruction and testing shall have seating capacity for anticipated trainees. The facility must be conducive for an effective learning environment including environmental comfort for instructors and students, physical requirements needed for good seeing and hearing, adequate lighting, and free of outside distractions.

(3) An area for practical application of principles and procedures of fire fighting, hose loading, pumper operation, to include friction loss, nozzle reaction, fire stream patterns, and GPM discharge utilizing various layouts for hand lines and/or master stream appliances.

(4) An enclosed area or room for use in practical training with self-contained breathing apparatus. This may be a smoke and fire room or enclosed area which can be charged with smoke-producing devices to provide a realistic training environment.

(5) A structure suitable for interior live fire training and meeting the requirements of the basic curriculum pertaining to the particular discipline(s) which the training facility is approved to teach, shall be available for use by the instructors to teach interior live fire training.

(6) Facilities to conduct exterior live fire training as required by the basic curriculum pertaining to the particular discipline(s) which the training facility is approved to teach, shall be available for use by the instructors to teach exterior live fire training.

(7) If performance or driving skills are part of the curriculum, suitable area(s) for practicing required skills, demonstration of skills, and performance testing must be available.

§427.5. Apparatus.

(a) Certified on-site training facility--approved for basic structural fire protection personnel certification training.

(1) A pumper apparatus fully equipped as required by the basic fire suppression curriculum shall be readily available for use by the instructors for instructional purposes.

(2) Ladders or a ladder truck as required by the basic fire suppression curriculum shall be readily available for use by the instructors for instructional purposes.

(b) Certified on-site training facility--approved for basic aircraft rescue fire fighting personnel certification training. Fire apparatus that is equipped to perform aircraft operations as required by the basic aircraft fire protection curriculum must be readily available for use by the instructors for instructional purposes.

(c) Certified on-site training facility--approved for Driver/Operator – Pumper certification training. A piece of fire apparatus with a permanently mounted fire pump that has a rated discharge capacity of 750 gpm (2850 L/min) or greater as defined in NFPA 1901, Standard for Automotive Fire Apparatus.

(d) Certified on-site training facility approved for hazardous materials technician certification training must have access to props and/or simulators, protective suits and monitoring equipment required for skills training and testing.

§427.7. Protective Clothing.

Each and every set of protective clothing, including proximity clothing, that will be used during the course of instruction for a commission approved fire protection personnel curriculum shall comply with §435.1 of this title (relating to Protective Clothing). This rule applies whether the protective clothing is provided by the academy or the trainee. Protective clothing and elements that are no longer of use to the organization for emergency operations service but are not contaminated, defective, or damaged may be used for training that does not involve live fire training provided such clothing and elements are appropriately marked to be easily recognized.

§427.9. Equipment.

The following minimum equipment, applicable to the curricula the training facility is certified to teach, is required for certification as a certified on-site training facility. The equipment must be available for use by the certified training facility:

(1) If instruction in the use of self-contained breathing apparatus is a part of the curriculum being taught, then self-contained breathing apparatus in sufficient numbers shall be provided to enable each trainee to wear the equipment for at least the life of one breathing air tank during the training. If during the course of the training, a trainee will be subjected to a hazardous atmosphere or where the atmosphere is unknown, the trainee shall be provided with a self-contained breathing apparatus. (Note: All self-contained breathing apparatus used by a certified training facility and the air used in self-contained breathing apparatus must comply with §435.3 of this title (relating to Self-Contained Breathing Apparatus)). This rule applies whether the self-contained breathing apparatus is provided by the academy or the trainee. All students, instructors, safety personnel, and other personnel participating in any evolution or operation of fire suppression during the live fire training shall breathe from an SCBA air supply whenever operating under one or more of the following conditions:

(A) in any atmosphere that is oxygen deficient or contaminated by products of combustion, or both;

(B) in any atmosphere that is suspected of being oxygen deficient or contaminated by products of combustion, or both;

(C) in any atmosphere that can become oxygen deficient or contaminated, or both; and/or

(D) below ground level;

(2) standard classroom equipment to include chalkboard, speaker rostrum, supportive instructional aids available to include audio-visual projection equipment. The use of cutaways, models, flip charts, and other visual aids are recommended to enhance effectiveness of the instruction. Note: The instructor needs to ensure all necessary equipment is available for trainees to use regarding the basic performance skills as identified in appropriate curriculum and to comply with §427.15 of this title (relating to Testing Procedures); and

(3) other equipment, which may include training simulators and mock training aids, and tools required by the applicable curriculum.

§427.11. Reference Material.

A reference library is required. The library must contain the publications required to conduct research and develop lesson plans covering the material required in the applicable curriculum. The reference library material must be readily and easily accessible to students and instructors.

§427.13. Records.

(a) Training records shall be maintained by the on site training facility that reflect:

(1) who was trained, subject, instructor, and date of instruction. (Note: Individual records are required rather than class records); and

(2) individual trainee test scores to include performance testing.

(b) All training records must be maintained by the on-site training facility for a minimum of three years or in accordance with the requirement of the Texas State Library and Archives Commission, State and Local Records Management Division, whichever is greater.

§427.18. Live Fire Training Evolutions.

The most current edition of NFPA 1403, Standard on Live Fire Training Evolutions, shall be used as a guide when developing standard operating procedures for conducting live fire training. The following requirements shall apply for all Live Fire Training Evolutions conducted during basic certification training of fire protection personnel.

(1) Prior to being permitted to participate in Live Fire Training Evolutions, the student shall have received training to meet the performance requirements for Fire Fighting I in NFPA 1001, Standard for Fire Fighter Professional Qualifications, related to the following subjects:

(A) safety;

(B) fire behavior;

(C) portable extinguishers;

(D) personal protective equipment to include SCBA;

(E) ladders;

(F) fire hose, appliances, and streams;

(G) overhaul;

(H) water supply;

(I) ventilation;

(J) forcible entry; and

(K) fire fighter rescue.

(2) The on-site lead instructor will insure that the water supply rate and duration for each individual Live Fire Training Evolution is adequate to control and extinguish the training fire, the supplies necessary for backup lines to protect personnel, and any water needed to protect exposed property.

(3) The on-site lead instructor will insure that the buildings or props being utilized for live fire training are in a condition that would not pose an undue safety risk.

(4) A safety officer shall be appointed for all Live Fire Training Evolutions. The safety officer shall have the authority, regardless of rank, to intervene and control any aspect of the operations when, in his or her judgment, a potential or actual danger, accident, or unsafe condition exists. The safety officer shall not be

assigned other duties that interfere with safety responsibilities. The safety officer shall not be a student.

(5) No person(s) shall play the role of a victim inside the building.

(6) The participating student-to-instructor ratio shall not be greater than five to one.

(7) Prior to the ignition of any fire, instructors shall insure that all personal protective clothing and/or self-contained breathing apparatus are NFPA compliant and being worn in the proper manner.

(8) Prior to conducting any live fire training, a pre-burn briefing session shall be conducted. All participants shall be required to conduct a walk-through of the structure in order to have a knowledge of, and familiarity with, the layout of the building and to be able to facilitate any necessary evacuation of the building.

(9) A standard operating procedure shall be developed and utilized for Live Fire Training Evolutions. The standard operating procedure shall include, but not be limited to:

(A) a Personal Alert Safety System (PASS). A PASS device shall be provided for all students and instructors participating in live fire training and shall meet the requirements in §435.9 of this title (relating to PASS devices). This applies whether the PASS device is provided by the academy or the trainee;

(B) a Personnel Accountability System that complies with §435.13 of this title shall be utilized;

(C) an Incident Management System;

(D) use of personal protective clothing and self-contained breathing apparatus;

(E) an evacuation signal and procedure; and pre-burn, burn and post-burn procedures.

§427.19. General Information.

(a) All Texas certified training facilities shall meet these minimum requirements. No training credit will be recognized from a Texas training facility that has not been certified by the Commission, unless the program has been approved by the Commission as being equivalent. The Commission shall take action on an application for certification of a training facility within 30 days from receipt.

(b) Certified training facilities shall conduct all training in a controlled and safe manner so that trainees are not subjected to unnecessary risks. Texas Government Code, §419.032(c) provides that fire protection personnel must complete a Commission-approved training course in fire suppression before being assigned to fire suppression duties. In addition, certified training facilities, whether operated by a fire department or other governmental or private training facility, shall not put trainees at risk by requiring or allowing a trainee to perform the duties of fire protection personnel at actual uncontrolled emergency situations such as, but not limited to, structure fires, aircraft fires, wildland fires, hazardous materials incidents or dangerous rescue situations.

(c) A certified training facility may transport trainees to the site of an actual emergency for training purposes only if the following requirements are strictly adhered to:

(1) the trainees are kept in a group under the direct supervision of qualified instructors to maintain accountability and ensure their safety;

(2) the trainees are kept outside of the emergency operations area; and

(3) the trainees' activities are restricted to observation only and trainees are not allowed to participate in emergency operations.

(d) Certified training facilities are subject to inspection by the Commission at any time during regular business hours.

(e) In order to retain the certification as a certified training facility, schools desiring to make substantial changes in the facility or other conditions under which the school was approved shall coordinate such plans with the Commission.

(f) The Commission shall be notified, in writing, within 14 days of any change from the original status under which the certification was issued.

(g) The Commission may revoke, suspend, and/or probate the certification of a training facility when the Commission determines that the training facility:

(1) fails to provide the quality of training for which the facility was approved; or

(2) fails to comply with Commission rules and/or these minimum standards; or

(3) fails to submit required reports in a timely manner or submits false reports to the Commission; or

(4) fails to meet at least a 70-percent student pass rate on the state certification examination per course.

SUBCHAPTER B

DISTANCE TRAINING PROVIDERS

§427.201. Minimum Standards for Distance Training Provider.

(a) The following definition is applicable to this subchapter only. Approved distance training is defined as fire training where instructors and students are primarily in different locations and content is instructed primarily using the internet or an intranet and courses must contain some level of interactivity. Distance training that serves as nothing more than electronic text is not acceptable. Online courses must provide the opportunity for the student to interact or ask questions via e-mail, chat rooms or some other method of communication. Other computer-mediated methods of instruction may be used to enhance instruction; however, the primary delivery method must be through the internet or an intranet.

(b) A distance training provider must seek certification as a training facility in each discipline it intends to instruct.

(c) In order to become a Commission-approved distance training provider; the provider must submit a completed Commission training facility application with supporting documentation and fees. Such application will include descriptions and addresses of where the distance training provider will have their course delivery and materials. A distance training provider must provide documentation of its ability to meet all minimum requirements for each discipline for which it seeks certification. The documentation must also identify how students and instructors will access resources as identified in the curriculum.

(d) A distance training provider that applies for certification as a training facility in a discipline that includes skills training shall comply with Subchapter A of this chapter concerning minimum standards, facilities, apparatus, protective clothing, equipment, and live fire training utilized to teach and test the required skills.

(e) A distance training provider certified for the first time by the Commission will receive, at no charge, one Commission Certification Curriculum and Standards Manual on CD to be utilized by the certified distance training providers' instructors. The distance training provider is responsible for ensuring that all subjects are taught as required by the curricula. Additional CD copies may be purchased from the Commission or downloaded from the agency website. Distance training providers that renew their certification will receive appropriate updates at no charge.

§427.203. Records.

(a) Training records shall be maintained by the distance training provider that reflect:

(1) Who was trained, subject, instructor, and date of instruction. (Note: Individual records are required rather than class records);

(2) Individual trainee test scores to include performance testing; and

(3) Evidence to substantiate the test scores received by each trainee to include performance testing. Such records will include materials (completed tests and/or answer sheets, other documents, video or audio recording, etc.), and will provide identification of the examinee, identification of the evaluating field examiner, and the observer as defined in Chapter 439.

(b) All distance training provider records must be maintained by the distance training provider for commission review for a minimum of three years or in accordance with the requirement of the Texas State Library and Archives Commission, State and Local Records Management Division, whichever is greater.

(c) A master copy of tests will be maintained for review by commission representatives. The certified distance training provider shall maintain copies of all tests for a minimum of three

§427.209. General Information.

(a) All distance training providers shall meet these minimum requirements. No training credit will be recognized from a distance training provider that has not been certified by the Commission. The Commission shall take action on an application for certification of a distance training provider/training facility provider within 30 days from receipt.

(b) Distance training providers conducting on-site programs shall ensure that all training is conducted in a controlled and safe manner so that trainees are not subjected to unnecessary risks. In addition, certified training facilities shall not put trainees at risk by requiring or allowing a trainee to perform the duties of fire protection personnel at actual uncontrolled emergency situations such as, but not limited to, structure fires, aircraft fires, wildland fires, hazardous materials incidents or dangerous rescue situations.

(c) A distance training provider may transport trainees to the site of an actual emergency for training purposes, only if the following requirements are strictly adhered to:

(1) the trainees are kept in a group under the direct supervision of qualified instructors to maintain accountability and ensure their safety;

(2) the trainees are kept outside of the emergency operations area: and

(3) the trainees' activities are restricted to observation only and trainees are not allowed to participate in emergency operations.

(d) Distance training providers are subject to inspection by the Commission at any time during regular business hours. Distance training providers shall provide the Commission with access to the training facility to monitor the course in progress.

(e) The Commission shall be notified, in writing, within 14 days of any change from the original status under which the certification was issued.

(f) The Commission may revoke, suspend, and/or probate the certification of training when the Commission determines that the distance training provider:

(1) fails to provide the quality of training and education for which the provider was approved; or

(2) fails to comply with Commission rules and/or these minimum standards; or

(3) fails to submit required reports in a timely manner or submits false reports to the Commission; or

(4) per course, fails to meet at least a 70-percent student pass rate on the state certification examination.

SUBCHAPTER C

TRAINING PROGRAMS FOR ON-SITE AND DISTANCE TRAINING PROVIDERS

§427.301. General Provisions for Training Programs -- On-Site and Distance Training Providers.

(a) Training programs that are intended to satisfy the requirements for fire protection personnel certification for each curriculum must meet the objectives and competencies in that curriculum.

(b) A system for evaluating the comprehension of the trainee, including periodic and comprehensive written tests, is required. If performance skills are part of the applicable curriculum, performance testing shall be done in accordance with §439.11 of this title.

§427.303. Training Approval Process for On-Site and Distance Training Providers.

(a) When seeking training approvals, a training provider, whether on-site or distance, shall certify that it has provided the resources described in §427.1(f) of this title.

(b) All training for certification must be approved by the Commission. A training provider must submit to the Commission a completed Training Prior Approval Form at least 20 days prior to the proposed start date of the training.

(c) The provider of training will receive from the Commission the following documents.

(1) A Notice of Course Approval. This document will serve as notification that the course has been approved by the Commission and will contain the approval number assigned by the Commission and the course I.D. number.

(2) An Application for Testing Form, when applicable.

(3) A Certificate of Completion Form. This document must be completed by the training provider and issued to each student when the student has successfully completed the applicable curriculum.

(4) Commission-designated skills envelope when applicable.

(d) Approved courses are subject to audit by Commission staff at any time. Any deviation from the approved start-and-end date of the class, periodic and final test schedule, field examiners or the substitution of one instructor for another (this does not apply to an instructor already approved for the course) must be reported to the Commission within three business days of the deviation.

§427.305. Procedures for Testing Conducted by On-Site and Distance Training Providers.

(a) The requirements and provisions in this section apply to procedures for periodic and final testing conducted by training providers. For procedures regarding state examinations for certification Commission examinations that occur after a training program is completed, see Chapter 439 of this title.

(b) Periodic and comprehensive final tests shall be given by the training provider in addition to the Commission examination required in Chapter 439 of this title.

(c) Periodic ~~written~~ tests shall be administered at the ratio of one test per 50 hours of recommended training, or portion thereof. ~~In addition to periodic tests, a comprehensive final written test must be administered.~~ An average ~~passing~~ score of 70% must be achieved on all required ~~written~~ periodic tests. ~~If a course is taught in phases, one comprehensive final written test shall be administered at the completion of all phases and a passing score of 70% must be achieved.~~

(d) In addition to periodic tests, a comprehensive final test must be administered. A passing score of 70% must be achieved.

(e) If the Fire Investigator course is taught in phases, one comprehensive final test shall be administered upon completion of the final phase and a passing score of 70% must be achieved.

§427.307. On-Site and Distance Training Provider Staff Requirements.

(a) The chief training officer of a training facility, as a minimum, must possess Fire Service Instructor III certification.

(b) All training instructors (except guest instructors) must possess fire instructor certification. The instructor(s) must be certified in the applicable discipline or be approved by the commission to instruct in the applicable subject.

(c) The lead instructor, as a minimum, shall possess a Fire Service Instructor II certification and must be certified by the commission in the applicable discipline.

(d) Guest instructors are not required to be certified as instructors. A guest instructor is defined as an individual with special knowledge, skill, and expertise in a specific subject area who has the ability to enhance the effectiveness of the training. Guest instructors shall teach under the endorsement of the lead instructor.

(e) In order to teach fire officer certification courses, an individual who does not meet the requirements of subsection (a) or (c) of this section, shall possess a minimum of a bachelor's degree in management or its equivalent.

(f) In order to teach an instructor certification training course for Fire Service Instructor I, an individual must hold one of the following three qualifications:

(1) Hold a Fire Service Instructor II or higher, or

(2) A Bachelor's degree with the following:

(A) As a minimum, a minor in education, and

(B) Three years of teaching experience in a fire department, department of a state agency, educational institution, or political subdivision of the state, during which time the individual taught a minimum of 200 class hours; or

(3) An Associate's degree with the following:

(A) twelve semester hours of education instructional courses, and

(B) five years of teaching experience in a fire department, department of a state agency, educational institution, or political subdivision of the state, during which time the individual taught a minimum of 400 class hours.

(g) In order to teach an instructor certification training course for Fire Service Instructor II or III, an individual must hold one of the following three qualifications:

(1) Hold a Fire Service Instructor III or

(2) A Bachelor's degree with the following:

(A) As a minimum, a minor in education, and

(B) Three years of teaching experience in a fire department, department of a state agency, educational institution, or political subdivision of the state, during which time the individual taught a minimum of 200 class hours; or

(3) An Associate's degree with the following:

(A) twelve semester hours of education instructional courses, and

(B) five years of teaching experience in a fire department, department of a state agency, educational institution, or political subdivision of the state, during which time the individual taught a minimum of 400 class hours.

SUBCHAPTER D

Certified Training Facilities

§427.401. General Provisions for Training Facilities Not Owned by the State of Texas or Operated by a Political Subdivision of the State of Texas.

(a) The provisions in this subchapter apply only to certified training facilities that are not owned or operated by the State of Texas or a political subdivision of the State of Texas.

(b) Training facilities seeking certification under this subchapter must comply with all the provisions of this chapter and must also meet and comply with all Commission rules.

(c) Training facilities seeking certification under this subchapter must apply for training facility certification in each discipline they wish to teach.

(d) In order to become a Commission approved training facility under this subchapter; the provider must submit a completed Commission training facility application for certification with supporting documentation and fees. Supporting documentation will consist of:

(1) descriptions, photos and addresses of where the provider will have their course delivery and materials;

(2) documentation of how the provider will meet all the minimum requirements for each discipline for which it seeks certification;

(3) complete and correct financial statements, as specified in this subchapter, demonstrating the facility is financially stable and capable of fulfilling its commitments for training;

(4) statement of ownership which identifies the owners, stockholders, partners, representatives, management, trustees, board members;

(5) documentation showing registration with the Texas Secretary of State as a business.

§427.403. Financial Standards.

(a) Definitions Relating to Financial Requirements.

(1) Balance Sheet--A statement of financial position or statement of condition, showing the status of assets, liabilities and owner equity for a defined period i.e., monthly, quarterly, etc.

(2) Current ratio--ability to pay current obligations from current assets.

(3) Generally Accepted Accounting Principles (GAAP)--Conventions, rules and procedures that define accepted accounting practices to include both broad guidelines as well as detailed procedures.

(4) Generally Accepted Auditing Standards (GAAS)--Conventions, rules and procedures that define accepted audit practices.

(5) Stockholders Equity (net worth)--amount by which assets exceed liabilities.

(6) Sworn statement--A notarized statement including the following language: "I swear or affirm that the information in these statements is true and correct to the best of my knowledge."

(7) Unearned income (tuition) affidavit--A statement of income received but not yet earned during the current or most recent fiscal year. This is usually shown as a liability on a balance sheet, assuming it will be credited to income within the normal accounting cycle.

(b) The balance sheet required in this subchapter shall reflect the following:

(1) positive equity or net worth balance;

(2) unearned tuition as a current liability;

(3) a current ratio of at least one-to-one; (current assets divided by current liabilities) and

(4) stockholder's equity or net worth exceeding the amount shown for goodwill, if applicable, under assets in the balance sheet.

(c) Compilations shall be accompanied by the owner's sworn statement.

(d) All financial statements shall identify the name, license number, and licensing state of the accountant associated with the statements and be in accordance with GAAP.

(e) A school that maintains a financial responsibility composite score that meets the general standards established in federal regulations by the U.S. Department of Education for postsecondary institutions participating in student financial assistance programs authorized under Title IV of the Higher Education Act of 1965, as amended, shall be considered to have met the financial standards of this subchapter.

(f) A school that qualifies under an alternative standard but not the general standard of these federal regulations will not be considered to have met the financial standards of this subchapter unless the school meets the other requirements stated in this subchapter.

(g) Requirements for Original Approvals.

(1) The owner shall furnish the Commission with the following:

(A) a school owned by a sole proprietor must submit a reviewed personal balance sheet stating the disclosure of payments for the next five years to meet debt agreements as required by GAAP; or

(B) all other ownership structures must submit an audited balance sheet consistent with GAAP and GAAS and certified by an accountant.

(2) The facility shall submit a balance sheet, a list of the expected school-related expenses for the first three months of operation of the school; a sworn statement signed by the owner affirming the availability of sufficient cash to cover projected expenses at the date of the certification. Projected expenses may include the following:

(A) employee salaries, listed by position title, including withholding and unemployment taxes, and other related expenses;

(B) lease or rent payments for listed equipment;

(C) lease or rent payments for facilities;

(D) accounting, legal and other specifically identified professional fees;

(E) an estimate of expenses such as advertising, travel, textbooks, office and classroom supplies, printing, telephone, utilities, taxes;

(F) a projection of the gross amount of tuition and fees to be collected during each of the first two years of operation; and

(G) such other evidence as may be deemed appropriate by the Commission to establish financial stability.

(h) Prior to a change in ownership of a facility, the purchaser shall furnish the Commission a current balance sheet meeting the requirements outlined in this subchapter for original approvals, excluding the sufficient cash requirement for initial expenses. The purchaser shall furnish any other evidence deemed appropriate by the Commission to establish financial stability.

(i) The deletion or addition of any person that would be considered an owner is considered a change in facility ownership. The facility must notify the Commission of the change in ownership within 14 days of the transaction.

(j) The Commission may require submission of a full application for approval of a change in ownership.

(k) Management agreements must be disclosed to the Commission. Parties to a management agreement shall be of good reputation and character.

(l) The deletion, addition or moving of a facility will be reported to the Commission 14 days prior to the transaction.

(m) If the Commission determines that the deletion, addition or moving of a facility presents an unreasonable transportation hardship which would prevent a student from completing the training at the new location, the school shall provide a full refund of all monies paid and a release from all obligations to the student.

(n) The Commission shall be notified in writing of any legal action to which the facility, any of its owners, representatives or management employees is a party.

(o) The notification shall be within 14 days after the action is known to be filed or the facility, owner, representative or management employee is served.

(p) The facility shall include, with the required notice, a file-marked copy of the petition, complaint, or other legal instrument, including copies of any judgments.

(q) If the Commission determines that reasonable cause exists to question the validity of any financial information submitted, or the financial stability of the facility, the Commission may require at the facility's expense:

(1) an audit of the facility that has been certified by an accountant; or

(2) The owner must furnish any other evidence deemed appropriate by the Commission to establish financial stability.

(r) The entity certified under this subchapter shall maintain, in a permanent format that is acceptable and readily accessible to the Commission, a record of any funds received from, or on behalf of, the student. The entity shall clearly identify the payer, the type of funding, and the reason for the charges. These records shall be posted and kept current.

(s) An entity certified under this subchapter shall issue written receipts of any charges or payments to the student and maintain such records for review upon request by the Commission. Each separately charged item shall be clearly itemized on the student-signed receipt.

(t) An entity certified under this subchapter shall develop and maintain a cancellation and refund policy.

(u) The student shall be entitled to a full refund of all monies paid to the facility if classes or courses are cancelled by the facility.

(v) Classes or courses cancelled by the student, refund policies will be based on a prorated basis or percentage of the class or program completed by the student.

(w) An entity certified under this subchapter shall comply with Chapter 437.3 concerning certification and renewal fees.

(x) Upon application for renewal, an entity certified under this subchapter will provide a balance sheet with a sworn statement.

§427.405. Policy Regarding Complaints.

(a) Complaints. The entity shall:

(1) Submit a written grievance procedure designed to resolve disputes between current and former students and the school for Commission approval;

(2) Provide a copy of the grievance procedure to each student and maintain proof of such delivery;

(3) Maintain records regarding grievance filings and resolutions; and

(4) Diligently work to resolve all complaints at the local school level.

(b) Investigations

(1) The Commission may investigate a complaint about an entity and may determine the extent of investigation needed by considering various factors, such as:

(A) the seriousness of the alleged violation;

(B) the source of the complaint;

(C) the school's history of compliance and complaints;

(D) the timeliness of the complaint; and

(E) any other reasonable matter deemed appropriate.

(2) The Commission may require documentation or other evidence of the violation before initiating a complaint investigation.

§427.407. School Responsibilities Regarding Instructors.

(a) The facility Chief Training Officer (CTO) shall ensure that there are an appropriate number of instructors.

(b) The facility CTO shall ensure that instructors are qualified to instruct in the subjects they are teaching or assisting.

(c) The facility CTO shall ensure continuity of instruction and that instructors provide students with a quality education.

(d) The facility CTO shall formally evaluate each instructor in writing at least annually and shall make the evaluations available for review by the Commission.

(e) The facility CTO shall ensure that students are allowed the opportunity to formally evaluate each instructor in writing and make the evaluations available for review by the Commission.

§427.409. Advertising.

(a) General Information for Advertising.

(1) A school shall not make deceptive statements in attempting to enroll students.

(2) The Commission may require a school to furnish proof to the Commission of any of its advertising claims.

(b) Advertisement Method.

(1) A school may advertise for prospective students under "instruction," "education," "training," or a similarly titled classification.

(2) No school advertisements shall use the word "wanted," "help wanted," or "trainee," either in the headline or the body of the advertisement, nor shall any advertisement indicate, in any manner, that the school has or knows of employment of any nature available to prospective students; only "placement assistance," if offered, may be advertised.

(3) A school shall not use terms to describe the significance of the approval that specify or connote greater approval. Terms that schools may not use to connote greater approval by the Commission include, but are not limited to, "accredited," "supervised," "endorsed," and "recommended." A school shall not use the words "guarantee," "guaranteed," or "free" unless approved in writing by the Commission.

(4) Any advertisement that includes a reference to awarding of credit hours shall include the statement, "limited transferability." Where a school has an arrangement with a college or university to accept transfer hours, such information may be advertised, but any limitations shall be included in the advertisement.

(c) Advertisement Content.

(1) Advertisement content shall include, and clearly indicate, the full and correct name of the school and its address, including city, as they appear on the certificate of approval.

(2) Advertisements shall not include:

(A) statements that the school or its programs are accredited unless the accreditation is that of an agency recognized by the United States Department of Education;

(B) statements that the school or its courses of instruction have been approved unless the approval can be substantiated by an appropriate certificate of approval issued by an agency of the state or federal government;

(B) statements that represent the school as an employment agency under the same name, or a confusingly similar name, or at the same location of the school; or

(D) statements as being Commission-approved or IFSAC approved in order to solicit students prior to receiving actual Commission approval. Any such activity by the school, prior to the Commission's approval of the training course, shall constitute misrepresentation by the training facility and shall entitle each student in the course to a full refund of all monies paid and a release from all obligations to the student".

(3) A school holding a franchise to offer specialized programs or subjects not available to other schools shall not advertise such programs in such a manner as to diminish the value and scope of programs offered by other schools not holding such a franchise. Advertising of special subjects or programs offered under a franchise shall be limited to the subject or programs offered.

(4) a school shall not use endorsements, commendations, or recommendations by students in favor of a school except with the consent of the student and without any offer of financial or other material compensation. Endorsements shall bear the legal or professional name of the student.

(5) a school shall not use a photograph, cut, engraving, illustration or graphic in advertising in such a manner as to:

(A) convey a false impression of size, importance, or location of the school, equipment, or facilities associated with the school, or

(B) circumvent any of the requirements of this subchapter regarding written or oral statements.

(6) Every advertisement must clearly indicate that training is being offered, and shall not, either by actual statement, omission, or intimation, imply that prospective employees are being sought.

(d) Financial Incentives. Advertisements shall not:

(1) state that students shall be guaranteed employment while enrolled in the school;

(2) state that employment shall be guaranteed for students after graduation; or

(3) misrepresent opportunities for employment upon completion of any program; or

(4) contain dollar amounts as representative or indicative of the earning potential of graduates unless those dollar amounts have been published by the United States Department of Labor. This provision shall not be construed as prohibiting the school from providing earning potential to the student individually on the student's receipt of enrollment policies or other such Commission-approved document.

(e) Advertisements for student tuition loans shall:

(1) contain the language "financial aid available, if qualified";

(2) appear in type no larger than the font used for the name of the school and in similar color and style; and

(3) does not preclude disclosure of the school's eligibility under the various state and federal loan programs.

(f) Advertisement Monitoring.

(1) The Commission may order corrective action to counteract the effect of advertising in violation of the Act or rules, including:

(A) retraction by the school of such advertising claims published in the same manner as the claims themselves; and

(B) cancellation of telephone numbers without an automatic forwarding message.

(2) As corrective action for violations of the Act or rules, the Commission may require schools to submit all advertisements to the Commission for pre-approval at least 30 days before proposed submission of the advertisements to the advertising medium.

(3) Nothing in these guidelines shall prohibit release of information to students as required by a state or federal agency.

§427.411. Cancellations or Suspensions.

(a) If an approved course of instruction is discontinued for any reason, the Commission shall be notified within 72 hours (9 days) of discontinuance and furnished with the names and addresses of any students who were prevented from completion of the course of instruction due to discontinuance. Should the school fail to make arrangements satisfactory to the students and the Commission for the completion of the course of instruction, the full amount of all tuition and fees paid by the students are then due and refundable. Any course of instruction discontinued will be removed from the list of approved courses of instruction.

(b) The Commission may suspend enrollments in a particular course of instruction at any time the Commission finds cause. For purposes of this subsection, cause includes, but is not limited to:

(1) inadequate instruction;

(2) unapproved or inadequate curriculum;

(3) inadequate equipment; or

(4) inadequate facilities.

(c) If a school begins teaching a course of instruction or revised course of instruction that has not been approved by the Commission, the Commission may require the school to refund to the enrolled students all or a portion of the tuition fees.

§427.413. Liabilities.

(a) Curriculum and Testing

(1) The school shall be able to provide license agreements with the publisher of any curriculum used. The school may not reproduce the curriculum, or any part thereof, without describing the purpose or having the written consent by said publisher.

(2) The school shall be able to provide a valid purchase receipt or license agreement of any published test banks, or any part thereof, used in the evaluation process of any course taught.

(b) Equipment and Facilities

(1) The school shall be able to provide written agreements for the use of any equipment not owned by the school, but used during the instruction of any student. The agreement shall dictate the terms, liability, fees, and availability of maintenance records of such equipment.

(2) The school shall be able to provide written agreements of the use of any facilities or area, not otherwise public, but used during the instruction of any student. The agreement shall dictate the terms, liability, and fees of such facilities or area.

(c) Insurance Coverage. The school shall be able to provide a general liability policy issued by a company licensed to do business in the State of Texas.

3. Report from the Curriculum and Testing Committee with discussion and possible action regarding:

b. Recommendations for appointments to Curriculum and Testing Committee.

3. Report from the Curriculum and Testing Committee with discussion and possible action regarding:

c. Curriculum updates to Driver Operator curriculum, Fire Officer I & II curriculum, and Inspector curriculum.

CERTIFICATION CURRICULUM MANUAL

CHAPTER SEVEN

DRIVER/OPERATOR - PUMPER

2009 Edition

Effective January 1, 2011

Texas Commission on Fire Protection
P.O. Box 2286 Austin, Texas 78768-2286 (512) 936-3838

RECOMMENDED REFERENCE LIST FOR THE DRIVER/OPERATOR-PUMPER CURRICULUM

Certified Training Facilities approved to teach this curriculum, must have the following reference materials:

NFPA 13: Standard for the Installation of Sprinkler Systems (~~2002~~ **2007** ed.) Quincy, MA: National Fire Protection Association. NFPA Publications.

NFPA 13D: Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes (~~2002~~ **2007**ed.) Quincy, MA: National Fire Protection Association. NFPA Publications.

NFPA 13E: Recommended Practice for Fire Department Operations in Properties Protected by Sprinkler and Standpipe Systems (2005 ed.) Quincy, MA: National Fire Protection Association. NFPA Publications.

NFPA 13R: Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height (~~2002~~ **2007** ed.) Quincy, MA: National Fire Protection Association. NFPA Publications.

NFPA 14: Standard for the Installation of Standpipe and Hose Systems (~~2003~~ **2007** ed.) Quincy, MA: National Fire Protection Association. NFPA Publications.

NFPA 1002: Standard on Fire Apparatus Driver/Operator Professional Qualifications (~~2003~~ **2009** ed.) Quincy, MA: National Fire Protection Association. NFPA Publications.

~~*NFPA 1915: Standard for Fire Apparatus Preventive Maintenance Program* (2000 ed.) Quincy, MA: National Fire Protection Association. NFPA Publications.~~

NFPA 1901, *Standard for Automotive Fire Apparatus,*(2009 ed.) Quincy, MA: National Fire Protection Association. NFPA Publications.

Pumping Apparatus Driver/Operator Handbook (2nd ed.) (2006). Stillwater, OK: Fire Protection Publications. International Fire Service Training Association.

Standards Manual for Fire Protection Personnel. Austin, TX: Texas Commission on Fire Protection.

CHAPTER SEVEN

DRIVER/OPERATOR-PUMPER

CURRICULUM OUTLINE

SECTION	SUBJECT	RECOMMENDED HOURS
700-4.1	General	2
700-4.2	Preventive Maintenance	8
700-4.3	Driving/Operating	16
700-5.1	General	8
700-5.2	Operations	26
	~~Performance Skills Evaluation*~~	~~20~~
	TOTAL RECOMMENDED HOURS	**~~80~~ 60**

* The recommended hours for skills evaluation is based on 12 students. Actual hours needed will depend on the number of students, the number of examiners, availability of equipment, and the student skill level.

SECTION 700

DRIVER/OPERATOR-PUMPER

A **Fire Apparatus Driver** is the firefighter who has met the requirements defined in 700-4.2 and 700-4.3.

A **Pump Operator** is the fire apparatus driver/operator who has met the requirements of 700-5.1 and 5.2 for the operation of apparatus equipped with an attack or fire pump.

700-4.1 General

Prior to operating fire department vehicles, the fire apparatus driver/operator shall meet the job performance requirements defined in Sections 700-4.2 and 700-4.3.

700-4.2 Preventive Maintenance

700-4.2.1 Perform routine tests, inspections, and servicing functions on the systems and components specified in the following list, given a fire department vehicle**,** ~~and~~ its manufacturer's specifications, **and policies and procedures of the jurisdiction,** so that the operational status of the vehicle is verified:

1) Routine tests, inspections and servicing functions contribute to the goal of emergency-response readiness

2) Battery(ies)
   a) Determine maintenance/maintenance-free
      i. Check water level if applicable
      ii. Check overall cleanliness
   b) Terminals
      i. Tightness
      ii. Corrosion
   c) General appearance and condition
      i. Damage
         (1) Bulging
         (2) Cracks
         (3) Case deterioration
      ii. Battery tie-down

3) Braking system
   a) Air actuated
      i. Check for leaks

ii. Ensure manual or automatic purging of any excess condensation
iii. Determine that system meets NFPA requirements for recovery

b) Hydraulic system
i. Check for leaks
ii. Check hydraulic fluid level

c) Check for obvious contamination (e.g. fluid color change, excessive metallic particulates)

4) Coolant system
a) Check for leaks
b) Check condition of coolant hoses or lines
c) Check fluid level
d) Check for obvious contamination (e.g. fluid color change, excessive metallic particulates)

5) Electrical system
a) Charging system
b) Gauges
c) Ignition system
d) Lights (e.g. headlights, turning signals, brake lights)
e) Emergency warning devices (visual and audible)
f) General condition of wires and connections

6) Fuel
a) Fuel gauge level
b) Check for leaks

7) Hydraulic fluids
a) Check for leaks
b) Check fluid level

8) Oil
a) Check for leaks
b) Check fluid level
c) Check for obvious contamination (e.g. milky appearance, fuel odor, excessive metallic particulates)
d) **Check** oil pressure gauge
~~i) Check oil pressure~~

9) Tires
a) Condition of valve
b) Condition of tread (e.g. wear patterns)
c) Depth of tread
d) Damage

e) Check air pressure
f) Lug nuts
    i. Tightness
    ii. Rust
    iii. Missing lug nuts

10) Steering system
    a) Check fluid level
    b) Check for excessive play

11) Belts
    a) Proper adjustment
    b) Excessive wear
    c) Cracking

12) Tools, appliances, and equipment
    a) Ensure required tools, appliances and equipment are present as determined by policies of the authority having jurisdiction
    b) Ensure required tools, appliances and equipment are in good working order for response readiness

13) Transmission
    a) Manual
        i. Check for leaks
        ii. Check clutch fluid level (if applicable)
        iii. Check clutch pedal
        iv. Check shift linkage
    b) Automatic
        i. Check for leaks
        ii. Check fluid level
        iii. Check for obvious contamination (e.g. fluid color change, odor)

14) NFPA 1915 Standard for Fire Apparatus Preventive Maintenance Program, Chapter 3 General Inspection and Maintenance

700-A.4.2.1 Routine tests, inspections, and servicing functions should be performed on a daily, weekly, monthly, or other periodic basis as determined by departmental policy. The specifications provided by the manufacturer for these functions should be followed.

Requisite Knowledge: Manufacturer specifications and requirements, policies, and procedures of the jurisdiction.

1) Manufacturer specifications and requirements

2) Policies, and procedures of the jurisdiction

700-4.2.2 Document the routine tests, inspections, and servicing functions, given maintenance and inspection forms, so that all items are checked for operation and deficiencies are reported.

Requisite Knowledge: Departmental requirements for documenting maintenance performed and the importance of keeping accurate records.

1) Departmental requirements for documenting maintenance performed
   a) Paper-based
   b) Electronic

2) The importance of keeping accurate records
   a) Safety
   b) Risk management
   c) Training opportunities
   d) Warranty issues
   e) Vehicle longevity

700-4.3 Driving/Operating

700-4.3.1 Operate a fire department vehicle, given a vehicle and a predetermined route on a public way that incorporates the maneuvers and features, specified in the following list, that the driver/operator is expected to encounter during normal operations, so that the vehicle is operated in compliance with all applicable state and local laws, departmental rules and regulations, and the requirements of NFPA 1500, Section 4.2.

1) Four left turns and four right turns
2) A straight section of urban business street or a two-lane rural road at least 1 mile (1.6 km) in length
3) One through-intersection and two intersections where a stop has to be made
4) One railroad crossing
5) One curve, either left or right
6) A section of limited-access highway that includes a conventional ramp entrance and exit and a section of road long enough to allow two lane changes
7) A downgrade steep enough and long enough to require down-shifting and braking
8) An upgrade steep enough and long enough to require gear changing to maintain speed
9) One underpass or a low clearance or bridge

700-A.4.3.1 The maneuvers and features specified for this job performance requirement include driving situations that the NFPA committee has determined to be essential. The NFPA committee recognizes that each of these situations might not exist in all areas. Where this occurs, those specific requirements can be omitted.

Requisite Knowledge: The effects on vehicle control of liquid surge, braking reaction time, and load factors; effects of high center of gravity on roll-over potential, general steering reactions, speed, and centrifugal force; applicable laws and regulations; principles of skid avoidance, night driving, shifting, and gear patterns; negotiating intersections, railroad crossings, and bridges; weight and height limitations for both roads and bridges; identification and operation of automotive gauges; and operational limits.

1) The effects on vehicle control of liquid surge
   a) Newton's Three Laws of Motion
      i. An object in motion tends to stay in motion unless acted upon by an outside force
         a. Weight transfer

b. Greater stopping distance
c. Overturning fire apparatus

ii. An object at rest tends to stay at rest unless acted upon by an outside force
a. Acceleration/deceleration
b. Outside curves

iii. For every action there is an equal and opposite reaction
a. Braking
b. Skidding

2) The effects on vehicle control of braking reaction time
a) Braking reaction time defined
b) Methods to improve braking reaction time
i. Scanning
ii. Look ahead
iii. Use mirrors
iv. Cover the brake
v. Prepare to yield the right of way
c) Under the influence
i. Prescription medications
ii. Over the counter medications
iii. Exposure to products of incomplete combustion/toxins
iv. Illicit drugs/alcohol
d) Driver fatigue

3) The effects on vehicle control of load factors
a) Acceleration/deceleration
b) Weight distribution
i. Emergency maneuvers
ii. Normal handling characteristics
c) Exceeding load limits
i. Personnel
ii. Equipment
iii. After market modifications

4) Effects of high center of gravity on roll-over potential
a) Momentum
b) Inertia
c) Centrifugal force

5) Effects of high center of gravity on general steering reaction
a) Over steering
b) Under steering
c) Plowing/pushing (Newton's first law)

6) Effects of high center of gravity on speed
   a) Grades
   b) Curves

7) Effects of high center of gravity on centrifugal force
   ~~a) Curves~~
   a) ~~i)~~Skidding
   b) ~~ii)~~Overturning
   c) ~~iii)~~Plowing/pushing

8) Applicable laws and regulations
   a) Governmental
   b) Authority having jurisdiction
   c) Departmental policies

9) Principles of skid avoidance
   a) Influencing factors
      i. Driver error
         a. Driving too fast for road conditions
         b. Apparatus weight shifts
         c. Failure to anticipate obstacles
         d. Improper use of auxiliary braking devices
         e. Improper maintenance of tire pressure
         f. Tread depth
      ii. Environmental
         a. Rain
         b. Snow
         c. Ice
         d. Fog
         e. Wind
      iii. Skid recovery
         a. Steer into the skid
         b. Accelerate or decelerate
         c. Do not push the clutch pedal if equipped

2) Principles of night driving
   a) Reduced speed
   b) Reduced visibility
   c) Safety features on fire apparatus (e.g. strobe light dimmer)
   d) Driver/Operator fatigue

3) Principles of shifting and gear patterns
   a) Downshifting
   b) Up shifting
   c) Premature shifting

4) Negotiating
   a) Intersections
      i. Be prepared to yield
      ii. Scan for hazards
      iii. Observe traffic
      iv. Cover brake pedal
   b) Railroad crossings
      i. Be prepared to yield
      ii. Scan for rail traffic
      iii. Cover brake pedal
   c) Bridges
      i. Remain cognizant of weather hazards
      ii. Recognize bridge width

5) Weight and height limitations for both roads and bridges **according to the Authority Having Jurisdiction (AHJ).**
   ~~a) Authority having jurisdiction~~

6) Identification and operation of automotive gauges
   a) Oil pressure gauge
   b) Coolant temperature gauge
   c) Speedometer
   d) Tachometer
   e) Fuel gauge
   f) Voltmeter
   g) Air pressure gauge(s)
   h) Automatic transmission temperature gauge

7) Operational limits
   a) Operational limits including, but not limited to the following:
      i. Acceleration
      ii. Braking
      iii. Turning radius
      iv. Steering wheel play
      v. Tilt test
      vi. Air pressures
      vii. Weight and height limitations
      viii. Normal operating ranges for automotive gauges
   b) Manufacturer's specified operating limits
   c) NFPA 1901, as applicable to operational limits

700-4.3.2 Back a vehicle from a roadway into restricted spaces on both the right and left sides of the vehicle, given a fire department vehicle, a spotter, and restricted spaces 12 ft. (3.7 m.) in width, requiring 90-degree right-hand

and left-hand turns from the roadway, so that the vehicle is parked within the restricted areas without having to stop and pull forward and without striking obstructions.

Requisite Knowledge: Vehicle dimensions, turning characteristics, spotter signaling, and principles of safe vehicle operation.

1) Vehicle dimensions
   a) Length
   b) Width
   c) Height
   d) Wheel base

2) Turning characteristics
   a) Wheel base
   b) Front wheel cramp angle
   c) Rear axle pivot points
   d) Speed
   e) Steering wheel gear ratio

3) Spotter signaling
   a) Headset
   b) Hand signals per department standard practice
   c) Radio

4) Principles of safe vehicle operation
   a) Adjustment of cab features
   b) Wearing of occupant restraints
   c) Verification of personnel locations before proceeding
   d) Right of way considerations

700-4.3.3 Maneuver a vehicle around obstructions on a roadway while moving forward and in reverse, given a fire department vehicle, a spotter for backing, and a roadway with obstructions, so that the vehicle is maneuvered through the obstructions without stopping to change the direction of travel and without striking the obstructions.

Requisite Knowledge: Vehicle dimensions, turning characteristics, the effects of liquid surge, spotter signaling, and principles of safe vehicle operation.

1) Vehicle dimensions
   a) Length
   b) Width
   c) Height

d) Wheel base

2) Turning characteristics
   a) Wheel base
   b) Front wheel cramp angle
   c) Rear axle pivot points
   d) Speed
   e) Steering wheel gear ratio

3) The effects of liquid surge **(Newtown's Three Laws of Motion)**
   ~~a) Newton's Three Laws of Motion~~
   a) An object in motion tends to stay in motion unless acted upon by an outside force
      i. Weight transfer
      ii. Greater stopping distance
      iii. Overturning fire apparatus
   b) An object at rest tends to stay at rest unless acted upon by an outside force
      i. Acceleration/deceleration
      ii. Outside curves
   c) For every action there is an equal and opposite reaction
      i. Braking
      ii. Skidding

4) Spotter signaling
   a) Headset
   b) Hand signals per department standard practice
   c) Radio

5) Principles of safe vehicle operation
   a) Adjustment of cab features
   b) Wearing of occupant restraints
   c) Verification of personnel locations before proceeding
   d) Right of way considerations

700-4.3.4 Turn a fire department vehicle 180 degrees within a confined space, given a fire department vehicle, a spotter for backing up, and an area in which the vehicle cannot perform a U-turn without stopping and backing up, so that the vehicle is turned 180 degrees without striking obstructions within the given space.

Requisite Knowledge: Vehicle dimensions, turning characteristics, the effects of liquid surge, spotter signaling, and principles of safe vehicle operation. **(Reference requisite knowledge in 700-4.3.3 for clarification.)**

1) Vehicle dimensions
   a) Length
   b) Width
   c) Height
   d) Wheel base

2) Turning characteristics
   a) Wheel base
   b) Front wheel cramp angle
   c) Rear axle pivot points
   d) Speed
   e) Steering wheel gear ratio

3) The effects on vehicle control of liquid surge
   a) Newton's Three Laws of Motion
      a) An object in motion tends to stay in motion unless acted upon by an outside force
         i. Weight transfer
         ii. Greater stopping distance
         iii. Overturning fire apparatus
      b) An object at rest tends to stay at rest unless acted upon by an outside force
         i. Acceleration/deceleration
         ii. Outside curves
      c) For every action there is an equal and opposite reaction
         i. Braking
         ii. Skidding

4) Spotter signaling
   a) Headset
   b) Hand signals per department standard practice
   c) Radio

5) Principles of safe vehicle operation
   a) Adjustment of cab features
   b) Wearing of occupant restraints
   c) Verification of personnel locations before proceeding
   d) Right of way considerations

700-4.3.5 Maneuver a fire department vehicle in areas with restricted horizontal and vertical clearances, given a fire department vehicle and a course that requires the operator to move through areas of restricted horizontal and vertical clearances, so that the operator accurately judges the ability of the

vehicle to pass through the openings and so that no obstructions are struck.

Requisite Knowledge: Vehicle dimensions, turning characteristics, the effects of liquid surge, spotter signaling, and principles of safe vehicle operation. **(Reference requisite knowledge in 700-4.3.3 for clarification.)**

1) Vehicle dimensions
   a) Length
   b) Width
   c) Height
   d) Wheel base

2) Turning characteristics
   a) Wheel base
   b) Front wheel cramp angle
   c) Rear axle pivot points
   d) Speed
   e) Steering wheel gear ratio

3) The effects on vehicle control of liquid surge
   a) Newton's Three Laws of Motion
      a) An object in motion tends to stay in motion unless acted upon by an outside force
         i. Weight transfer
         ii. Greater stopping distance
         iii. Overturning fire apparatus
      b) An object at rest tends to stay at rest unless acted upon by an outside force
         i. Acceleration/deceleration
         ii. Outside curves
      c) For every action there is an equal and opposite reaction
         i. Braking
         ii. Skidding

4) Spotter signaling
   a) Headset
   b) Hand signals per department standard practice
   c) Radio

5) Principles of safe vehicle operation
   a) Adjustment of cab features
   b) Wearing of occupant restraints
   c) Verification of personnel locations before proceeding

d) ~~Right of way considerations~~

700-4.3.6 Operate a vehicle using defensive driving techniques under emergency conditions, given a fire department vehicle and emergency conditions, so that control of the vehicle is maintained.

700-A.4.3.6 Emergency driving simulation should be restricted to a driving track or similar controlled area. Emergency driver training should not be conducted on public ways.

Requisite Knowledge: The effects on vehicle control of liquid surge, braking reaction time, and load factors; the effects of high center of gravity on roll-over potential, general steering reactions, speed, and centrifugal force; applicable laws and regulations; principles of skid avoidance, night driving, **shifting**, ~~and~~ **gear** patterns; **and automatic braking systems in wet and dry conditions;** negotiation of intersections, railroad crossings, and bridges; weight and height limitations for both roads and bridges; identification and operation of automotive gauges; and operational limits.

1) The effects on vehicle control of liquid surge **(Newton's Three Laws of Motion)**
   ~~a) Newton's Three Laws of Motion~~
   a) ~~i)~~An object in motion tends to stay in motion unless acted upon by an outside force
      i. ~~1)~~Weight transfer
      ii. ~~2)~~Greater stopping distance
      iii. ~~3)~~Overturning fire apparatus
   b) ~~ii)~~An object at rest tends to stay at rest unless acted upon by an outside force
      i. ~~1)~~Acceleration/deceleration
      ii. ~~2)~~Outside curves
   c) ~~iii)~~For every action there is an equal and opposite reaction
      i. ~~1)~~Braking
      ii. ~~2)~~Skidding

2) The effects on vehicle control of braking reaction time
   a) Braking reaction time defined
   b) Methods to improve braking reaction time
      i. Scanning
      ii. Look ahead
      iii. Use mirrors
      iv. Cover the brake
      v. Prepare to yield the right of way
   c) Under the influence
      i. Prescription medications

ii. Over the counter medications
iii. Exposure to products of incomplete combustion/toxins
iv. Illicit drugs/alcohol

d) Driver fatigue

3) The effects on vehicle control of load factors
   a) Acceleration/deceleration
   b) Weight distribution
      i. Emergency maneuvers
      ii. Normal handling characteristics
   c) Exceeding load limits
      i. Personnel
      ii. Equipment
      iii. After market modifications

4) Effects of high center of gravity on roll-over potential
   a) Momentum
   b) Inertia
   c) Centrifugal force

5) Effects of high center of gravity on general steering reaction
   a) Over steering
   b) Under steering
   c) Plowing/pushing (Newton's first law)

6) Effects of high center of gravity on speed
   a) Grades
   b) Curves

7) Effects of high center of gravity on centrifugal force
   ~~a) Curves~~
   a) ~~i)~~Skidding
   b) ~~ii)~~Overturning
   c) ~~iii)~~Plowing/Pushing

8) Applicable laws and regulations
   a) Governmental
   b) Authority having jurisdiction
   c) Departmental policies

9) Principles of skid avoidance
   ~~a) Influencing factors~~
   a) ~~i)~~Driver error
      i. Driving too fast for road conditions
      ii. Apparatus weight shifts

iii. Failure to anticipate obstacles
iv. Improper use of auxiliary braking devices
v. Improper maintenance of tire pressure
vi. Tread depth

b) ~~ii)~~Environmental
i. Rain
ii. Snow
iii. Ice
iv. Fog
v. Wind

c) ~~iii)~~Skid recovery
i. Steer into the skid
ii. Accelerate or decelerate
iii. Do not push the clutch pedal if equipped

10) Principles of night driving
a) Reduced speed
b) Reduced visibility
c) Safety features on fire apparatus (e.g. strobe light dimmer)
d) Driver/Operator fatigue

11) Principles of shifting and gear patterns
a) Downshifting
b) Up shifting
c) Premature shifting

12) **Automatic braking systems**
a) Wet conditions
b) Dry conditions

13) Negotiating
a) Intersections
i. Be prepared to yield
ii. Scan for hazards
iii. Observe traffic
iv. Cover brake pedal
b) Railroad crossings
i. Be prepared to yield
ii. Scan for rail traffic
iii. Cover brake pedal
c) Bridges
i. Remain cognizant of weather hazards
ii. Recognize bridge width

14) Weight and height limitations for both roads and bridges **(AHJ)**

~~a) Authority having jurisdiction~~

15) Identification and operation of automotive gauges
   a) Oil pressure gauge
   b) Coolant temperature gauge
   c) Speedometer
   d) Tachometer
   e) Fuel gauge
   f) Voltmeter
   g) Air pressure gauge(s)
   h) Automatic transmission temperature gauge

16) Operational limits
   a) Operational limits including, but not limited to the following:
      i. Acceleration
      ii. Braking
      iii. Turning radius
      iv. Steering wheel play
      v. Tilt test
      vi. Air pressures
      vii. Weight and height limitations
      viii. Normal operating ranges for automotive gauges
   b) Manufacturer's specified operating limits
      i. Gross Vehicle Weight (GVW)
      ii. Operating curb weight
   c) NFPA 1901, as applicable to operational limits

17) Psychological effects of emergency warning devices
   a) Driver/Operator
   b) General public

700-4.3.7 Operate all fixed systems and equipment on the vehicle not specifically addressed elsewhere in this standard, given systems and equipment, manufacturer's specifications and instructions, and departmental policies and procedures for the systems and equipment, so that each system or piece of equipment is operated in accordance with the applicable instructions and policies.

700-A.4.3.7 The NFPA committee's intent for this job performance requirement is for the driver/operator to be able to operate all major equipment and mechanical systems that are attached to the apparatus, other than those specifically covered in Chapters 5 through 10 of this standard. These types of equipment and systems include, but are not limited to, electric generation equipment, floodlighting systems, air compressors, air cascade

systems, hydraulic rescue tool systems, power reels for air or hydraulic hose, cranes and stabilizers, and A-frames or other lifting equipment.

Requisite Knowledge: Manufacturer's specifications and operating procedures, and policies and procedures of the jurisdiction.

1) Manufacturer's specifications and operating procedures **(AHJ)**
   ~~a) Authority having jurisdiction~~

2) Policies and procedures of the jurisdiction **(AHJ)**
   ~~a) Authority having jurisdiction~~

700-5.1 General

The requirements of Fire Fighter I as specified in NFPA 1001 **(or the requirements of Advanced Exterior Industrial Fire Brigade Member or Interior Structural Fire Brigade Member as specified in NFPA 1081)** and the job performance requirements defined in Sections 5.1 and 5.2 shall be met prior to ~~certification~~ **qualifying** as a fire department driver/operator — pumper.

700-5.1.1 Perform the routine tests, inspections, and servicing functions specified in the following list in addition to those in 700-4.2.1, given a fire department pumper**,** ~~and~~ its manufacturer's specifications, **and policies and procedures of the jurisdiction,** so that the operational status of the pumper is verified:

1) Water tank
   a) Direct visual
   b) Remote sensor level

2) Other extinguishing agent levels (if applicable)
   a) Direct visual
   b) Remote sensor level

3) Pumping systems
   a) Positive displacement
      i. Piston pumps
      ii. Rotary pumps
         a. Rotary gear
         b. Rotary vane
   b) Centrifugal
      i. Single stage

ii. Two stage
~~(1) Transfer valve operation~~
a. Series (Pressure)
b. Parallel (Volume)

4) Foam systems
   a) Induction
   b) Injection
   c) Batch mix
   d) Premix
   e) Compressed Air Foam System (CAFS)

Requisite Knowledge: Manufacturer's specifications and requirements, and policies and procedures of the jurisdiction.

1) Manufacturer's specifications and requirements

2) Policies and procedures of the jurisdiction

700-5.2 Operations

700-5.2.1 Produce effective hand or master streams, given the sources specified in the following list, so that the pump is engaged, all pressure control and vehicle safety devices are set, the rated flow of the nozzle is achieved and maintained, and the apparatus is continuously monitored for potential problems:

1) Internal tank
2) Pressurized source
   a) Connection to a hydrant
   b) Supply line from another pumping source
3) Static source
4) Transfer from internal tank to external source

Requisite Knowledge: Hydraulic calculations for friction loss and flow using both written formulas and estimation methods, safe operation of the pump, problems related to small-diameter or dead-end mains, low-pressure and private water supply systems, hydrant coding systems, and reliability of static sources.

1) Hydraulic calculations for friction loss and flow using both written formulas and estimation methods
   a) Theoretical written formulas

i. Friction loss
ii. Gallons per minute (flow)
iii. Nozzle reaction
iv. Pump discharge pressure
v. Elevation

b) Fire ground estimation methods
i. Friction loss
ii. Gallons per minute (flow)
iii. Pump discharge pressure
iv. Elevation

c) Elements of hydraulic calculations
i. Appliances
ii. Hose
a. Diameter
b. Length
c. Construction
d. Layouts
(1) Simple
(2) Complex
iii. Master streams
iv. Sprinklers
v. Standpipes

2) Safe operation of the pump
a) Relief valves
i. Discharge
a. Governor
(1) Electronic
(2) Mechanical
b. Spring-actuated pressure relief
ii. Intake
a. Manufacturer pressure relief
b. Add-on pressure relief

b) Transfer **valve**
i. Electronic **(to include override procedures)**
~~1. Override~~
ii. Manual
iii. Manufacturer's recommendations

c) Cavitation
i. Indicators
a. Auditory signals (e.g. gravel sounds)
b. Gauge readings
c. Throttle increase with no pressure increase
ii. Prevention
a. Bleeder valve

b. Maintain adequate residual

b) Priming
   i. Positive displacement primers
      a. Rotary vane
         (1) Mechanical
         (2) Electric
      b. Rotary gear
         (1) Mechanical
         (2) Electric
   ii. Exhaust primers
   iii. Vacuum primers
c) Opening/closing valves
   i. Water hammer
   ii. Cavitation
   iii. Pressure fluctuation

2) Problems related to small-diameter or dead-end mains
   a) Limited flow
      i. Encrustation
      ii. Sedimentation
      iii. Silt and debris
   b) Greater susceptibility to water hammer damage

3) Low-pressure water supply systems
   a) Access
   b) Limited flow
   c) Relay pumping

4) Private water supply systems
   a) Industrial
   b) Non-potable water
   c) Static pressure
   d) Access
      i. Thread compatibility
      ii. Locked/covered hydrants

5) Hydrant coding systems
   a) NFPA
   b) American Water Works Association
   c) Local jurisdiction

6) Reliability of static sources
   a) Principles of lift
      i. Theoretical
      ii. Practical

b) Natural
   i. Types
   ii. Adequacy
      a. Q=A(V)(7.5)
      b. Capacity
   iii. Accessibility
c) Man-made
   i. Types
   ii. Adequacy
      a. Q=A(V)(7.5)
      b. Capacity
   iii. Accessibility

700-5.2.2 Pump a supply line of 2 1/2 in. (65 mm) or larger, given a relay pumping evolution, the length and size of the line and the desired flow and intake pressure, so that the correct pressure and flow are provided to the next pumper in the relay.

Requisite Knowledge: Hydraulic calculations for friction loss and flow using both written formulas and estimation methods, safe operation of the pump, problems related to small-diameter or dead-end mains, low-pressure and private water supply systems, hydrant coding systems, and reliability of static sources. **(Reference requisite knowledge in 700-5.2.1)**

~~1) Hydraulic calculations for friction loss and flow using both written formulas and estimation methods~~
~~a) Theoretical written formulas~~
~~i) Friction loss~~
~~ii) Gallons per minute (flow)~~
~~iii) Nozzle reaction~~
~~iv) Pump discharge pressure~~
~~v) Elevation~~
~~b) Fire ground estimation methods~~
~~i) Friction loss~~
~~ii) Gallons per minute (flow)~~
~~iii) Pump discharge pressure~~
~~iv) Elevation~~
~~c) Elements of hydraulic calculations~~
~~i) Appliances~~
~~ii) Hose~~
~~(1) Diameter~~
~~(2) Length~~
~~(3) Construction~~
~~(4) Layouts~~

(a) Simple
(b) Complex
iii) Master streams
iv) Sprinklers
v) Standpipes

2) Safe operation of the pump
a) Relief valves
i) Discharge
(1) Governor
(a) Electronic
(b) Mechanical
(2) Spring-actuated pressure relief
ii) Intake
(1) Manufacturer pressure relief
(2) Add-on pressure relief
b) Transfer
i) Electronic
(1) Override
ii) Manual
iii) Manufacturer's recommendations
c) Cavitation
i) Indicators
(1) Auditory signals (e.g. gravel sounds)
(2) Gauge readings
(3) Throttle increase with no pressure increase
ii) Prevention
(1) Bleeder valve
(2) Maintain adequate residual
d) Priming
i) Positive displacement primers
(1) Rotary vane
(a) Mechanical
(b) Electric
(2) Rotary gear
(a) Mechanical
(b) Electric
ii) Exhaust primers
iii) Vacuum primers
e) Opening/closing valves
i) Water hammer
ii) Cavitation
iii) Pressure fluctuation

3) Problems related to small-diameter or dead-end mains

a) ~~Limited flow~~
   i) ~~Encrustation~~
   ii) ~~Sedimentation~~
   iii) ~~Silt and debris~~
b) ~~Greater susceptibility to water hammer damage~~

4) ~~Low-pressure water supply systems~~
   a) ~~Access~~
   b) ~~Limited flow~~
   c) ~~Relay pumping~~

5) ~~Private water supply systems~~
   a) ~~Industrial~~
   b) ~~Non-potable water~~
   c) ~~Static pressure~~
   d) ~~Access~~
      i) ~~Thread compatibility~~
      ii) ~~Locked/covered hydrants~~

6) ~~Hydrant coding systems~~
   a) ~~NFPA~~
   b) ~~American Water Works Association~~
   c) ~~Local jurisdiction~~

7) ~~Reliability of static sources~~
   a) ~~Principles of lift~~
      i) ~~Theoretical~~
      ii) ~~Practical~~
   b) ~~Natural~~
      i) ~~Types~~
      ii) ~~Adequacy~~
         (1) ~~Q=A(V)(7.5)~~
         (2) ~~Capacity~~
      iii) ~~Accessibility~~
   c) ~~Man-made~~
      i) ~~Types~~
      ii) ~~Adequacy~~
         (1) ~~Q=A(V)(7.5)~~
         (2) ~~Capacity~~
      iii) ~~Accessibility~~

700-5.2.3 Produce a foam fire stream, given foam-producing equipment, so that properly proportioned foam is provided.

Requisite Knowledge: Proportioning rates and concentrations, equipment assembly procedures, foam system limitations, and manufacturer's specifications.

1) Proportioning rates and concentrations

2) Equipment assembly procedures (if applicable)

3) Foam system operations

4) Foam system limitations

5) Manufacturer's specifications

700-5.2.4 Supply water to fire sprinkler and standpipe systems, given specific system information and a fire department pumper, so that water is supplied to the system at the correct volume and pressure.

Requisite Knowledge: Calculation of pump discharge pressure; hose layouts; location of fire department connection; alternative supply procedures if fire department connection is not usable; operating principles of sprinkler systems as defined in NFPA 13, NFPA 13D, and NFPA 13R; fire department operations in sprinklered properties as defined in NFPA 13E; and operating principles of standpipe systems as defined in NFPA 14.

1) Calculation of pump discharge pressure

2) Hose layouts

3) Location of fire department connection

4) Alternative supply procedures if fire department connection is not usable

5) Operating principles of sprinkler systems as defined in NFPA 13, NFPA 13D, and NFPA 13R

6) Fire department operations in sprinklered properties as defined in NFPA 13E

7) Operating principles of standpipe systems as defined in NFPA 14

CERTIFICATION CURRICULUM MANUAL

CHAPTER NINE

FIRE OFFICER I

2009 Edition

Effective January 1, 2011

Texas Commission on Fire Protection
P.O. Box 2286 Austin, Texas 78768-2286 (512) 936-3838

FIRE OFFICER I

A Fire Officer I is a first-line supervisory officer who has met all the job performance and certification requirements of Fire Fighter II as defined in NFPA 1001, *Standard for Fire Fighter Professional Qualifications,* and Fire Instructor I as defined in NFPA 1041, *Standard for Fire Service Instructor Professional Qualifications.* An individual at the Fire Officer I level, as part of his or her duties and responsibilities performs the following:

- Uses human resources to accomplish assignments in accordance with safety plans in an efficient manner, evaluates member task performance, supervises personnel during emergency, and non-emergency work periods
- Deals with inquiries from the community, projects the role of the department to the public, delivers safety, injury prevention and fire prevention education programs
- Performs general administrative functions and implements departmental policies and procedures at the unit/company level
- Performs a fire investigation to determine preliminary cause, secures the incident scene, and preserves evidence
- Supervises emergency operations, conducts pre-incident planning, and deploys assigned resources in accordance with the local emergency plan
- Integrates safety plans, policies, and procedures into the daily activities as well as on the emergency scene, including the donning of appropriate levels of personal protective equipment to ensure a safe work environment, in accordance with health and safety plans, for all assigned members

901-4.1 General

For qualification at Fire Officer Level I, the candidate shall meet the requirements of Fire Fighter II as defined in NFPA 1001, Fire Instructor I as defined in NFPA 1041, and the job performance requirements defined in Sections 4.2 through 4.7 of this standard.

901-4.1.1 General Prerequisite Knowledge

1) The organizational structure of the department
2) Geographical configuration and characteristics of response districts
3) Departmental operating procedures for administration, emergency operations, incident management systems, and safety
4) Departmental budget process
5) Information management and recordkeeping
6) The fire prevention and building safety codes and ordinances applicable to the jurisdiction
7) Current trends, technologies, and socioeconomic and political factors that affect the fire service
8) Cultural diversity
9) Methods used by supervisors to obtain cooperation within a group of subordinates
10) The rights of management and members
11) Agreements in force between the organization and members
12) Generally accepted ethical practices, including a professional code of ethics
13) Policies and procedures regarding the operation of the department as they involve supervisors and members

901-4.1.2 General Prerequisite Skills

1) The ability to effectively communicate in writing utilizing technology provided by the AHJ

2) Write reports, letters, and memos utilizing word processing and spreadsheet programs

3) Operate in an information management system

4) Effectively operate at all levels in the incident management system utilized by the AHJ

901-4.2 Human Resource Management

This duty involves utilizing human resources to accomplish assignments in accordance with safety plans and in an efficient manner. This duty also involves evaluating member performance and supervising personnel during emergency and nonemergency work periods, according to the following job performance requirements.

901-4.2.1 Assign tasks or responsibilities to unit members, given an assignment at an emergency incident, so that the instructions are complete, clear, and concise; safety considerations are addressed; and the desired outcomes are conveyed.

Requisite Knowledge: Verbal communications during emergency incidents, techniques used to make assignments under stressful situations, and methods of confirming understanding.

1) Verbal communications during emergency incidents
   a) National Incident Management System (NIMS) standards including but not limited to the following:
      i) Command presence
         (1) Calm
         (2) Clear
         (3) Concise
         (4) Accurate
      ii) Clear text (no ten codes)
      iii) Standard resource typing
      iv) Standard terminology for facilities, equipment and resources
      v) State the desired outcome

2) Techniques used to make assignments under stressful situations
   a) Standard operating procedures/guidelines
   b) Maintain span of control
   c) Safety considerations
   d) Accountability
   e) Develop an incident action plan

f) Establish tactical priorities
   i) Life safety
   ii) Incident stabilization
   iii) Environmental conservation
   iv) Property conversation

3) Methods of confirming understanding
   a) Feedback (repeat message)
   b) Ask for any questions/clarifications

Requisite Skills: The ability to condense instructions for frequently assigned unit tasks based on training and standard operating procedures.

901-4.2.2 Assign tasks or responsibilities to unit members, given an assignment under nonemergency conditions at a station or other work location, so that the instructions are complete, clear, and concise; safety considerations are addressed; and the desired outcomes are conveyed.

Requisite Knowledge: Verbal communications under nonemergency situations, techniques used to make assignments under routine situations, and methods of confirming understanding.

1) Verbal communications under nonemergency situations
   a) Calm
   b) Clear
   c) Concise
   d) Accurate
   e) State the desired outcome

2) Techniques used to make assignments under routine situations
   a) Verbal
   b) Written

3) Methods of confirming understanding
   a) Feedback (repeat message)
   b) Ask for any questions/clarifications

Requisite Skills: The ability to issue instructions for frequently assigned unit tasks based on department policy.

901-4.2.3 Direct unit members during a training evolution, given a company training evolution and training policies and procedures, so that the evolution is performed in accordance with safety plans, efficiently, and as directed.

Requisite Knowledge: Verbal communication techniques to facilitate learning.

1) **Communication model**
   a) Sender
   b) Message
   c) Instructional medium
   d) Receiver
   e) Feedback
   f) Environment

2) **Factors in effective delivery**
   a) Voice inflection
   b) Eye contact
   c) Common/appropriate terminology
   d) Appropriate terminology
   e) Body language
   f) Facial expressions
   g) Tone of voice
   h) Appropriate appearance

3) **Basic rules of effective spoken communication**
   a) Be adaptive to audience
   b) Have a specific purpose
   c) Be clear and concise
   d) Be focused

Requisite Skills: The ability to distribute issue-guided directions to unit members during training evolutions.

901-4.2.4 Recommend action for member-related problems, given a member with a situation requiring assistance and the member assistance policies and procedures, so that the situation is identified and the actions taken are within the established policies and procedures.

Requisite Knowledge: The signs and symptoms of member-related problems, causes of stress in emergency services personnel, adverse effects of stress on the performance of emergency service personnel, and awareness of AHJ member assistance policies and procedures.

1) The signs and symptoms of member-related problems
   a) Substance abuse
   b) Health problems
      i) Mental
      ii) Physical

c) Financial problems
d) Personal/family problems
e) Behavioral problems

2) Causes of stress in emergency services personnel
   a) Environmental
      i) Weather
      ii) Workplace conditions/expectations
      iii) Emergency scenes
   b) Physiological
      i) Interrupted meals/sleep
      ii) Shift work
      iii) Constant heightened sense of awareness
   c) Psychological
      i) Multiple casualty incidents
      ii) Gruesome injuries
      iii) Co-worker injuries or deaths
      iv) Injuries or deaths involving children
   d) Cultural
      i) Age
      ii) Gender
      iii) Ethnicity
      iv) Religion
   e) Personal
      i) Financial
      ii) Issues outside of work

3) Adverse effects of stress on the performance of emergency service personnel
   a) Failure to meet job performance requirements
   b) Injuries/illnesses
   c) Death

4) <u>Awareness of AHJ member assistance policies and procedures</u>

Requisite Skills: The ability to recommend a course of action for a member in need of assistance.

<u>901-4.2.5</u> Apply human resource policies and procedures, given an administrative situation requiring action, so that policies and procedures are followed.

Requisite Knowledge: Human resource policies and procedures.

1) **Laws**
   a) **Federal**
   b) **State**

2) **Local AHJ (e.g. Employee Assistance Program)**

3) Departmental (e.g. Wellness/fitness program)

Requisite Skills: The ability to communicate orally and in writing and to relate interpersonally.

901-4.2.6 Coordinate the completion of assigned tasks and projects by members, given a list of projects and tasks and the job requirements of subordinates, so that the assignments are prioritized, a plan for the completion of each assignment is developed, and members are assigned to specific tasks and **both supervised during and held accountable for the completion of the assignments.**

Requisite Knowledge: Principles of supervision and basic human resource management.

1) Principles of supervision
   a) Delegate responsibility
   b) Consistent management
   c) Motivate
   d) Communicate
   e) Train
   f) Decision making
   g) Resource management
   h) Time management
   i) Coach/counsel
   j) Discipline (positive and negative)
   k) Accountability
   l) Employee performance appraisals
   m) Conflict resolution
   n) Risk management
   o) Leadership styles
      i) Autocratic
      ii) Democratic
      iii) Laissez-faire

2) Basic human resource management
   a) Managerial theories
   b) Human resource planning

c) Employee relations
d) Staffing
e) Performance management
f) Human resource development
g) Compensation and benefits
h) Employee health, safety and security
i) Risk benefit analysis

Requisite Skills: The ability to plan and to set priorities.

901-4.3 Community and Government Relations

This duty involves dealing with inquiries of the community and **communicating the role, image, and mission of the department** to the public and delivering safety, injury, and fire prevention education programs, according to the following job performance requirements.

901-4.3.1 Initiate action on a community need, given policies and procedures, so that the need is addressed.

Requisite Knowledge: Community demographics and service organizations, as well as verbal and nonverbal communication, **and an understanding of the role and mission of the department.**

1) Community demographics and service organizations
   a) Statistical analysis
      i) Age
      ii) Income
      iii) Ethnic**ity**
      iv) ~~Sex~~ **Gender**
      v) Educational level
      vi) Special needs
   b) Service organizations
      i) Civic (e.g. Lions, Rotary)
      ii) Religious (e.g. Knights of Columbus, Salvation Army)
      iii) Volunteer (e.g. Red Cross, Community Emergency Response Team (CERT), Fire Corps)

2) Verbal and nonverbal communication
   a) Verbal communication
      i) Voice inflection
      ii) Appropriate/common terminology
      iii) Tone of voice
      iv) Have a specific purpose
      v) Be clear and concise

vi) Be focused

b) Nonverbal communication
   i) Eye contact
   ii) Body language
   iii) Facial expressions
   iv) Appropriate appearance

3) An understanding of the role and mission of the department

Requisite Skills: Familiarity with public relations and the ability to communicate verbally.

901-4.3.2 Initiate action to a citizen's concern, given policies and procedures, so that the concern is answered or referred to the correct individual for action and all policies and procedures are complied with.

Requisite Knowledge: Interpersonal relationships and verbal and nonverbal communication.

1) Interpersonal relationships
   a) Blake and Mouton's Managerial Grid
   b) Maslow's Hierarchy of Needs

2) Verbal and nonverbal communication
   a) Verbal communication
      i) Voice inflection
      ii) Appropriate/common terminology
      iii) Tone of voice
      iv) Have a specific purpose
      v) Be clear and concise
      vi) Be focused
   b) Nonverbal communication
      i) Eye contact
      ii) Body language
      iii) Facial expressions
      iv) Appropriate appearance

Requisite Skills: Familiarity with public relations and the ability to communicate verbally.

901-4.3.3 Respond to a public inquiry, given policies and procedures, so that the inquiry is answered accurately, courteously, and in accordance with applicable policies and procedures.

Requisite Knowledge: Written and oral communication techniques.

1) Written communication techniques
   a) Consider the reader
   b) Emphasis
   c) Concise
   d) Simplicity
   e) Summarize

2) Oral communication techniques
   a) Voice inflection
   b) Appropriate/common terminology
   c) Tone of voice
   d) Have a specific purpose
   e) Be clear and concise
   f) Be focused

Requisite Skills: The ability to relate interpersonally and to respond to public inquiries.

901-4.4 Administration

This duty involves general administrative functions and the implementation of departmental policies and procedures at the unit level, according to the following job performance requirements.

901-4.4.1 Recommend changes to existing departmental policies and/or implement a new departmental policy at the unit level, given a new departmental policy, so that the policy is communicated to and understood by unit members.

Requisite Knowledge: Written and oral communication.

1) Written communication techniques
   a) Consider the reader
   b) Emphasis
   c) Concise
   d) Simplicity
   e) Summarize

2) Oral communication techniques
   a) Voice inflection
   b) Appropriate/common terminology
   c) Tone of voice
   d) Have a specific purpose
   e) Be clear and concise

f) Be focused

Requisite Skills: The ability to relate interpersonally **and to communicate change in a positive manner.**

901-4.4.2 Execute routine unit-level administrative functions, given forms and record-management systems, so that the reports and logs are complete and files are maintained in accordance with policies and procedures.

Requisite Knowledge: Administrative policies and procedures and records management.

1) Administrative policies and procedures **- AHJ**
   a) ~~Authority having jurisdiction~~

2) Records management
   a) Paper-based
   b) Electronic
   c) Record retention requirements
   d) Storage and security

Requisite Skills: The ability to communicate orally and in writing.

901-4.4.3 Prepare a budget request, given a need and budget forms, so that the request is in the proper format and is supported with data.

Requisite Knowledge: Policies and procedures and the revenue sources and budget process.

1) Policies and procedures **- AHJ**
   a) ~~Authority having jurisdiction~~

2) Revenue sources
   a) ~~Operating Budget (e.g. program, line item)~~
   a) Taxes
   b) Trust funds
   c) Enterprise funds
   d) Grants/gifts
   e) Restricted funds

3) Budget process **- AHJ**
   a) ~~Authority having jurisdiction~~

Requisite Skill: The ability to communicate in writing.

901-4.4.4 Explain the purpose of each management component of the organization, given an organization chart, so that the explanation is current and accurate and clearly identifies the purpose and mission of the organization.

Requisite Knowledge: Organizational structure of the department and functions of management.

1) Organizational structure of the department
   a) Scalar structure
   b) Line and staff personnel
   c) Decision making authority

2) Functions of management
   a) Planning
   b) Organizing
   c) Leading
   d) Controlling

3) Principles of organization
   a) Unity of command
   b) Span of control
   c) Division of labor
   d) Discipline

Requisite Skills: The ability to communicate verbally in a clear and concise manner.

901-4.4.5 Explain the needs and benefits of collecting incident response data, given the goals and mission of the organization, so that incident response reports are timely and accurate.

Requisite Knowledge: The agency's records management system.

1) NFIRS

2) TXFIRS

3) Report development
   a) Completeness
   b) Clarity
   c) Objectivity
   d) Factuality

Requisite Skills: The ability to communicate both orally and in writing.

901-4.5 Inspection and Investigation

This duty involves conducting inspections to identify hazards and address violations, performing a fire investigation to determine preliminary cause, securing the incident scene, and preserving evidence, according to the following job performance requirements.

901-4.5.1 Describe the procedures of the AHJ for conducting fire inspections, given any of the following occupancies, so that all hazards, including hazardous materials, are identified, approved forms are completed, and approved action is initiated:

1) **Assembly**
2) **Educational**
3) **Health care**
4) **Detention and correctional**
5) **Residential**
6) **Mercantile**
7) **Business**
8) **Industrial**
9) **Storage**
10) **Unusual structures**
11) **Mixed occupancies**

Requisite Knowledge. Inspection procedures; fire detection, alarm, and protection systems; identification of fire and life safety hazards; and marking and identification systems for hazardous materials.

1) **Inspection procedures**
2) **Fire detection, alarm and protection systems**
3) **Identification of fire and life safety hazards**
4) **Marking and identification systems for hazardous materials**

Requisite Skills. The ability to communicate in writing and to apply the appropriate codes and standards.

901-4.5.2 Identify 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, given an occupancy, and the policies and forms of the AHJ so that a pre-incident plan for any of the following occupancies is developed:

1) **Public assembly**
2) **Educational**
3) **Institutional**
4) **Residential**
5) **Business**
6) **Industrial**
7) **Manufacturing**
8) **Storage**
9) **Mercantile**
10) **Special properties**

Requisite Knowledge. Fire behavior; building construction; inspection and incident reports; detection, alarm, and suppression systems; and applicable codes, ordinances, and standards.

1) **Fire behavior**
   a) **Fire load**
   b) **Fire classifications (A, B, C, D, K)**
2) **Building construction**
   a) **Type I – fire resistive**
   b) **Type II – non-combustible**
   c) **Type III – ordinary**
   d) **Type IV – heavy timber (mill)**
   e) **Type V – wood frame**
3) **Inspection and incident reports**
   a) **Occupancy type**

b) Required fire flow
c) Special hazards (i.e., hazardous materials or life safety)

4) Detection, alarm and suppression systems
a) Basic fire protection systems and features
b) Sprinkler systems
c) Standpipe systems
d) Alert/detection systems
e) Other special extinguishing systems
f) Fire Department Connections (FDC)
g) Water supplies

5) Applicable codes, ordinances and standards (AHJ)

Requisite Skills. The ability to use evaluative methods and to communicate orally and in writing.

901-4.5.3 Secure an incident scene, given rope or barrier tape, so that unauthorized persons can recognize the perimeters of the scene and are kept from restricted areas, and all evidence or potential evidence is protected from damage or destruction.

Requisite Knowledge. Types of evidence, the importance of fire scene security, and evidence preservation.

1) Types of evidence
   a) Demonstrative
   b) Documentary/circumstantial
   c) Testimonial

2) The importance of fire scene security
   a) Evidence protection
   b) Public safety

3) Evidence preservation
   a) Chain of custody
   b) Contributes to prosecution
   c) Use of caution during salvage and overhaul

Requisite Skills. The ability to establish perimeters at an incident scene.

901-4.6 Emergency Service Delivery

This duty involves supervising emergency operations, conducting pre-incident planning, and deploying assigned resources in accordance with

the local emergency plan and according to the following job performance requirements.

901-4.6.1 Develop an initial action plan, given size-up information for an incident and assigned emergency response resources, so that resources are deployed to control the emergency.

Requisite Knowledge. Elements of a size-up, standard operating procedures for emergency operations, and fire behavior.

1) Elements of a size-up
   a) Size-up includes the many variables that the officer observes from the time of the alarm, during response, and upon arrival, in order to develop an initial action plan to control an emergency incident.
      i) Size up processes
         (1) Layman's 5-step process
         (2) National Fire Academy (NFA) size-up system
   b) Size-up elements
      i) Building type and occupancy
      ii) Demographics
      iii) Fire and smoke conditions
      iv) Materials spilled or involved in fire
      v) Modes of action
         (1) Defensive
         (2) Offensive
         (3) Transition
      vi) Number of occupants
      vii) Time of day
      viii) Water supply
      ix) Weather
      x) Other hazards

2) Standard operating procedures for emergency operations **- AHJ**

3) Fire behavior
   ~~a) Basic fire chemistry/science~~
   a) Fire load
   b) Fire classifications (A, B, C, D, K)
   c) Phase of fire
   d) Percentage involvement

Requisite Skills. The ability to analyze emergency scene conditions; to activate the local emergency plan, including localized evacuation procedures; to allocate resources; and to communicate orally.

901-4.6.2 Implement an action plan at an emergency operation, given assigned resources, type of incident, and a preliminary plan, so that resources are deployed to mitigate the situation.

Requisite Knowledge. Standard operating procedures, resources available for the mitigation of fire and other emergency incidents, an incident management system, scene safety, and a personnel accountability system.

1) Standard operating procedures **- AHJ**
   ~~a)~~ ~~Authority having jurisdiction~~

2) Resources available for the mitigation of fire and other emergency incidents
   a) Single company
   b) One alarm
   c) Multiple alarm
   d) Mutual~~/automatic~~ aid
   e) Automatic aid

3) An incident management system
   a) National Incident Management System (NIMS)
      ~~i)~~ ~~Incident Command System~~

4) Scene safety
   a) Rapid intervention/backup team
   b) Two-in/two-out
   c) Incident safety officer

5) Personnel accountability system

Requisite Skills. The ability to implement an incident management system, to communicate orally, to manage scene safety, and to supervise and account for assigned personnel under emergency conditions.

901-4.6.3 Develop and conduct a post-incident analysis, given a single unit incident and post-incident analysis policies, procedures, and forms, so that all required critical elements are identified and communicated, and the approved forms are completed and processed in accordance with policies and procedures.

Requisite Knowledge. Elements of a post-incident analysis, basic building construction, basic fire protection systems and features, basic

water supply, basic fuel loading, fire growth and development, and departmental procedures relating to dispatch response tactics and operations and customer service.

1) Elements of a post-incident analysis
   a) Reconstruct the incident to establish a clear picture of the events surrounding the incident
   b) Non-punitive
   c) Focus on improving emergency response

2) Basic building construction
   a) Construction type
   b) Occupancy type

3) Basic fire protection systems and features
   a) Sprinkler systems
   b) Standpipe systems
   c) Alert/detection systems
   d) Other special extinguishing systems

4) Basic water supply
   a) Determine location(s) of water supplies
   b) Fire Department Connections (FDC)
   c) Determine required fire flow

5) Basic fuel loading
   a) ~~Based on h~~**H**azard class **of material**
   b) Quantity of material
   c) Location/distribution of material

6) Fire growth and development
   ~~a) Basic fire chemistry/science~~
   a) Phase of fire
   b) External growth factors (e.g., weather, loss of water supply, incendiary, etc.)

7) Departmental procedures relating to dispatch response tactics and operations **- AHJ**
   ~~a) Authority having jurisdiction~~

8) Customer service **– AHJ**
   ~~a) Authority having jurisdiction~~

Requisite Skills. The ability to write reports, to communicate orally, and to evaluate skills.

901-4.7 Health and Safety

This duty involves integrating health and safety plans, policies, and procedures into daily activities as well as the emergency scene, including the donning of appropriate levels of personal protective equipment to ensure a work environment that is in accordance with health and safety plans for all assigned members, according to the following job performance requirements.

901-4.7.1 Apply safety regulations at the unit level, given safety policies and procedures, so that required reports are completed, in-service training is conducted, and member responsibilities are conveyed.

Requisite Knowledge. The most common causes of personal injury and accident to members, safety policies and procedures, basic workplace safety, and the components of an infectious disease control program.

1) The most common causes of personal injury and accident to members
   a) Improper lifting
   b) Falls
   c) Improper use of, or lack of Personal Protective Equipment (PPE)
   d) Other causes

2) Safety policies and procedures
   ~~a)~~ ~~Applicable safety regulations or policies may come from the following sources:~~
      ~~i)~~ **a)** Federal (e.g. Occupational Safety and Health Administration (OSHA))
      ~~ii)~~ **b)** State (e.g. Texas Commission on Fire Protection (TCFP))
      ~~iii)~~ **c)** Local (e.g. standard operating policies)
      ~~iv)~~ **d)** National Consensus Standards (e.g. National Fire Protection Association (NFPA))

3) Basic workplace safety
   a) Wear Personal Protective Equipment (PPE)
   b) Good housekeeping
   c) Good maintenance
   d) Follow manufacturer's recommendations
   e) Implement and provide ongoing safety training program

4) The components of an infectious disease control program
   a) Written goal

b) Written risk management plan
c) Annual training
d) Designated control officer
e) Immunizations for employees
f) Exposure procedures
g) Other state and public health authority requirements

Requisite Skills. The ability to identify safety hazards and to communicate orally and in writing.

901-4.7.2 Conduct an initial accident investigation, given an incident and investigation forms, so that the incident is documented and reports are processed in accordance with policies and procedures of the AHJ.

Requisite Knowledge. Procedures for conducting an accident investigation and safety policies and procedures.

1) Procedures for conducting an accident investigation
   a) Identify and collect physical evidence
   b) Interview witnesses
   c) Complete required written documents

2) Safety policies and procedures **- AHJ**
   ~~a)~~ ~~Authority having jurisdiction~~

Requisite Skills. The ability to communicate orally and in writing and to conduct interviews.

901-4.7.3 Explain the benefits of being physically and medically capable of performing assigned duties and effectively functioning during peak physical demand activities, given current fire service trends and agency policies, so that the need to participate in wellness and fitness programs is explained to members.

Requisite Knowledge. National death and injury statistics; fire service safety and wellness initiatives; agency policies.

1) National death and injury statistics
   a) NIOSH reports
   b) NFPA reports
   c) US Fire Administration/National Fire Academy

2) Fire service safety and wellness initiatives
   a) National Fallen Firefighters Foundation, Courage To Be Safe
   b) International Association of Firefighters/International Association of Fire Chiefs Joint Wellness Initiative

3) Agency policies
- **a) Local**
- **b) State**
- **c) Federal**

Requisite Skills. The ability to communicate orally.

CERTIFICATION CURRICULUM MANUAL

CHAPTER NINE

FIRE OFFICER II

2009 Edition

Effective January 1, 2011

Texas Commission on Fire Protection
P.O. Box 2286 Austin, Texas 78768-2286 (512) 936-3838

CHAPTER NINE

FIRE OFFICER II

CURRICULUM OUTLINE

SECTION	SUBJECT	RECOMMENDED HOURS
902-5.1	General	1
902-5.2	Human Resources Management	10
902-5.3	Community and Government Relations	~~NONE~~ **3**
902-5.4	Administration	10
902-5.5	Inspection and Investigation	10
902-5.6	Emergency Service Delivery	8
902-5.7	Health and Safety	~~9~~ **6**
	Performance Skills*	12
	TOTAL RECOMMENDED HOURS	**60**

*The recommended hours for skills evaluation is based on 12 students. Actual hours needed will depend on the number of students, the number of examiners, availability of equipment, and the student skill level.

FIRE OFFICER II

A Fire Officer II is a midlevel supervisor who performs both supervisory and first-line managerial functions who has met all the job performance and certification requirements of Fire Officer I as defined in NFPA 1021, *Standard for Fire Officer Professional Qualifications.* An individual at the Fire Officer II level as part of his or her duties and responsibilities:

- Evaluates member job performance
- Prepares a project or divisional budget, news releases, and/or new policy or changes in existing policies
- Conducts inspections to identify hazards and addresses violations and conducts fire investigations to determine origin and preliminary causes
- Supervises multi-unit emergency operations, deploys assigned resources, and develops and conducts post-incident analysis
- Reviews injury, accident, and health exposure reports, identifies unsafe work environments or behaviors, and takes approved action to prevent their reoccurrence

902-5.1 General

For qualification at Level II, the Fire Officer I shall meet the requirements of Fire Instructor I as defined in NFPA 1041 and the job performance requirements defined in Sections 5.2 through 5.7 of this standard.

902-5.1.1 General Prerequisite Knowledge

The organization of local government; enabling and regulatory legislation and the law-making process at the local, state/provincial, and federal levels; and the functions of other bureaus, divisions, agencies, and organizations and their roles and responsibilities that relate to the fire service.

~~1) The organization of local government~~

~~2) Enabling and regulatory legislation and the law-making process at the local, state, and federal levels~~

~~3) The functions of other bureaus, divisions, agencies, and organizations and their roles and responsibilities that relate to the fire service~~

902-5.1.2 General Prerequisite Skills

Intergovernmental and interagency cooperation.

~~1) Intergovernmental and interagency cooperation.~~

902-5.2 Human Resource Management

This duty involves evaluating member performance, according to the following job performance requirements.

902-5.2.1 Initiate actions to maximize member performance and/or to correct unacceptable performance, given human resource policies and procedures, so that member and/or unit performance improves or the issue is referred to the next level of supervision.

Requisite Knowledge. Human resource policies and procedures, problem identification, organizational behavior, group dynamics, leadership styles, types of power, and interpersonal dynamics.

1) Human resource policies and procedures
   a) Federal (e.g. Americans with Disabilities Act)
   b) State (e.g. Local Government Code)
   c) Local/Authority Having Jurisdiction **(AHJ)** (e.g. city policies)
   d) Departmental (e.g. departmental policies)

2) Problem identification
   a) Performance
   b) Behavior

3) Organizational behavior
   a) Acceptable/unacceptable job performance
   b) Acceptable/unacceptable behavior
   c) Culture
   d) Change/status quo

4) Group dynamics
   a) Common binding interest
   b) Vital group image
   c) Sense of continuity
   d) Shared set of values
   e) Different roles within the group

5) Leadership styles
   a) Autocratic
   b) Democratic
   c) Laissez-faire

6) Types of power
   a) Reward
   b) Coercive
   c) Identification
   d) Expert
   e) Legitimate
   f) Informal

7) Interpersonal dynamics
   a) Blake and Mouton's Managerial Grid
   b) Maslow's Hierarchy of Needs
   c) Others

Requisite Skills. The ability to communicate orally and in writing, to solve problems, to increase team work, and to counsel members.

902-5.2.2 Evaluate the job performance of assigned members, given personnel records and evaluation forms, so each member's performance is

evaluated accurately and reported according to human resource policies and procedures.

Requisite Knowledge. Human resource policies and procedures, job descriptions, objectives of a member evaluation program, and common errors in evaluating.

1) Human resource policies and procedures
   a) Federal (e.g. Fair Labor Standards Act)
   b) State (e.g. Local Government Code)
   c) Local/Authority having jurisdiction (e.g. city policies)
   d) Departmental (e.g. departmental policies)

2) Job descriptions
   a) General description of work
   b) Typical tasks
   c) Knowledge, skills and abilities
   d) Education and experience
   e) Special requirements
   f) Future requirements

3) Objectives of a member evaluation program
   a) Accuracy
   b) Fairness
   c) Consistency
   d) Thoroughness
   e) Identify areas of excellence or improvement
   f) Document member's work history

4) Common errors in evaluating
   a) Halo/Horn effect
   b) Central tendency
   c) Contrast effect
   d) Leniency or severity
   e) Personal bias
   f) Recency
   g) Frame of reference

Requisite Skills. The ability to communicate orally and in writing and to plan and conduct evaluations.

902-5.2.3 Create a professional development plan for a member of the organization, given the requirements for promotion, so that the

individual acquires the necessary knowledge, skills, and abilities to be eligible for the examination for the position.

Requisite Knowledge. Development of a professional development guide and job shadowing.

1) Development of a professional development guide (AHJ)
- **a) Education**
- **b) Experience**
- **c) Certifications**
- **d) Personal development**

2) Job shadowing
- **a) Mentoring**
- **b) Peer assistance**

Requisite Skills. The ability to communicate orally and in writing.

902-5.3 Community and Government Relations

This duty involves dealing with inquiries of allied organizations in the community and projecting the role, mission, and image of the department to other organizations with similar goals and missions for the purpose of establishing strategic partnerships and delivering safety, injury, and fire prevention education programs, according to the following job performance requirements.

902-5.3.1 Explain the benefits to the organization of cooperating with allied organizations, given a specific problem or issue in the community, so that the purpose for establishing external agency relationships is clearly explained.

Requisite Knowledge. Agency mission and goals and the types and functions of external agencies in the community.

1) Agency (fire department) mission and goals
- **a) Mission statement**
- **b) Strategic plan**

2) Types and functions of external agencies in the community
- **a) Law enforcement**
- **b) EMS/hospitals/clinics**
- **c) Municipal/county/state departments**
- **d) Local business and industry**
- **e) Private non-profit organizations**
- **f) Local/state/federal agencies**

Requisite Skills. The ability to develop interpersonal relationships and to communicate orally and in writing.

902-5.4 Administration

This duty involves preparing a project or divisional budget, news releases, and policy changes, according to the following job performance requirements.

902-5.4.1 Develop a policy or procedure, given an assignment, so that the recommended policy or procedure identifies the problem and proposes a solution.

Requisite Knowledge. Policies and procedures and problem identification.

1) Policies and procedures
   a) Develop policies/procedures
   b) Train members
   c) Implement policies/procedures
   d) Evaluate/revise policies/procedures

2) Problem identification
   a) Be attentive
   b) Ask questions
   c) Encourage subordinates to report problems

Requisite Skills. The ability to communicate in writing and to solve problems.

902-5.4.2 Develop a project or divisional budget, given schedules and guidelines concerning its preparation, so that capital, operating, and personnel costs are determined and justified.

Requisite Knowledge. The supplies and equipment necessary for ongoing or new projects; repairs to existing facilities; new equipment, apparatus maintenance, and personnel costs; and appropriate budgeting system.

1) The supplies and equipment necessary for ongoing or new projects **(AHJ)**

2) Repairs to existing facilities
   a) Structural

b) Remodel
c) Additions

3) New equipment
   a) Repair
   b) Replace
   c) Upgrade

4) Apparatus maintenance
   a) Preventative
   b) Repair
   c) Replace
   d) Upgrade

5) Personnel costs
   a) Salary
      i. Straight time
      ii. Compensatory time
      iii. Overtime
   b) Benefits (AHJ)

6) Appropriate budgeting system **(AHJ)**

Requisite Skill. The ability to allocate finances, to relate interpersonally, and to communicate orally and in writing.

902-5.4.3 Describe the process of purchasing, including soliciting and awarding bids, given established specifications, in order to ensure competitive bidding.

Requisite Knowledge. Purchasing laws, policies, and procedures.

1) Purchasing laws
   a) ~~Authority having jurisdiction~~ **Local**
   b) State ~~laws~~
   c) Federal

2) Policies and procedures **(AHJ)**
   a) ~~Authority having jurisdiction~~

Requisite Skills. The ability to use evaluative methods and to communicate orally and in writing.

902-5.4.4 Prepare a news release, given an event or topic, so that the information is accurate and formatted correctly.

Requisite Knowledge. Policies and procedures and the format used for news releases.

1) Policies and procedures **(AHJ)**
   ~~a)~~ ~~Authority having jurisdiction~~

2) Format used for news releases
   a) Oral interview
      i. Be prepared
      ii. Stay in control
      iii. Look and act the part
      iv. It is not over until it is over

   b) Written
      i. Formulate a plan
      ii. Develop a concept and write the release
      iii. Make it unique
      iv. Well organized
      v. Department letterhead
      vi. Release news to the media

Requisite Skills. The ability to communicate orally and in writing.

902-5.4.5 Prepare a concise report for transmittal to a supervisor, given fire department record(s) and a specific request for details such as trends, variances, or other related topics.

Requisite Knowledge. The data processing system.

~~1)~~ ~~The data processing system~~
1) ~~a)~~ Word processing software
2) ~~b)~~ Spreadsheet software
3) ~~c)~~ Presentation software
4) ~~d)~~ Database software

Requisite Skills. The ability to communicate in writing and to interpret data.

902-5.4.6 Develop a plan to accomplish change in the organization, given an agency's change of policy or procedures, so that effective change is implemented in a positive manner.

Requisite Knowledge. Planning and implementing change.

1) **Planning change**
   a) **Analyze**
   b) **Resistance**

2) **Implementing change**
   a) **Involvement**
   b) **Support**

3) **Evaluating change**
   a) **Review**
   b) **Monitor**
   c) **Analyze**

Requisite Skills. The ability to clearly communicate orally and in writing.

902-5.5 ~~Inspection and~~ Investigation

This duty involves ~~conducting inspections to identify hazards and address violations and~~ conducting fire investigations to determine origin and preliminary cause, according to the following job performance requirements.

~~902-5.5.1 Describe the procedures for conducting fire inspections, given any of the following occupancies, so that all hazards, including hazardous materials, are identified, approved forms are completed, and approved action is initiated:~~

~~1) Assembly~~

~~2) Educational~~

~~3) Health care~~

~~4) Detention and correctional~~

~~5) Residential~~

~~6) Mercantile~~

~~7) Business~~

~~8) Industrial~~

~~9) Storage~~

~~10)Unusual structures~~

~~11)Mixed occupancies~~

~~**Requisite Knowledge:** Inspection procedures; fire detection, alarm, and protection systems; identification of fire and life safety hazards; and marking and identification systems for hazardous materials.~~

~~1) Inspection procedures~~

~~2) Fire detection, alarm, and protection systems~~

~~3) Identification of fire and life safety hazards~~

~~4) Marking and identification systems for hazardous materials~~

~~**5.5.2**~~ **902-5.5.1**Determine the point of origin and preliminary cause of a fire, given a fire scene, photographs, diagrams, pertinent data, and/or sketches, to determine if arson is suspected.

Requisite Knowledge Methods used by arsonists, common causes of fire, basic cause and origin determination, fire growth and development, and documentation of preliminary fire investigative procedures.

1) Methods used by arsonists
   a) Disabling built-in fire protection
   b) Delaying notification/making access difficult
   c) Using accelerants and trailers
   d) Setting multiple points of origin
   e) Tampering or altering equipment

2) Common causes of fire
   a) Accidental
   b) Natural
   c) Incendiary/Suspicious
   d) Undetermined

3) Basic cause and origin determination
   a) Basic fire chemistry/sciences
   b) Area of origin
   c) Fire patterns
   d) Legal considerations

4) Fire growth and development

5) Documentation of preliminary fire investigative procedures
   a) ~~Authority having jurisdiction~~ **AHJ**
   b) National Fire Incident Reporting System (NFIRS)
   c) NFPA 921 Guide for Fire and Explosion Investigations

Requisite Skills. The ability to communicate orally and in writing and to apply knowledge using deductive skills.

902-5.6 Emergency Service Delivery

This duty involves supervising multi-unit emergency operations, conducting pre-incident planning, and deploying assigned resources, according to the following job requirements.

902-5.6.1 Produce operational plans, given an emergency incident requiring multi-unit operations, **the current edition of NFPA 1600, and AHJ-approved safety procedures,** so that required resources and their assignments are obtained and plans are carried out in compliance with NFPA 1600 and approved safety procedures resulting in the mitigation of the incident.

Requisite Knowledge. Standard operating procedures; national, state/provincial, and local information resources available for the mitigation of emergency incidents; an incident management system; and a personnel accountability system.

1) Standard operating procedures **(AHJ)**
   a) ~~Authority having jurisdiction~~

2) National, state/provincial, and local information resources available for the mitigation of emergency incidents

3) An incident management system
   a) National Incident Management System (NIMS)
   b) ~~i)~~ Incident Command System

4) A personnel accountability system **(AHJ)**

5) Elements of a post-incident analysis
   a) Reconstruct the incident to establish a clear picture of the events surrounding the incident
   b) Non-punitive
   c) Focus on improving emergency response

6) Basic building construction
   a) Construction type
   b) Occupancy type

7) Basic fire protection systems and features
   a) Sprinkler systems
   b) Standpipe systems
   c) Alert/detection systems
   d) Other special extinguishing systems

8) Basic water supply
   a) Pressurized sources
   b) Drafting points
   c) Fire department connections (FDC)

9) Basic fuel loading
   a) Based on hazard class
   b) Occupancy type

10) Fire growth and development
   a) Basic fire chemistry/science
   b) Fire spread

11) Departmental procedures relating to dispatch response tactics and operations **(AHJ)**
   ~~a)~~ ~~Authority having jurisdiction~~

12) Customer service **(AHJ)**
   ~~a)~~ ~~Authority having jurisdiction~~

Requisite Skills. The ability to implement an incident management system, to communicate orally, to supervise and account for assigned personnel under emergency conditions, and to serve in command staff and unit supervision positions within the Incident Management System.

902-5.6.2 Develop and conduct a post-incident analysis, given multi-unit incident and post-incident analysis policies, procedures, and forms, so that all required critical elements are identified and communicated and the approved forms are completed and processed.

Requisite Knowledge. Elements of a post-incident analysis, basic building construction, basic fire protection systems and features, basic water supply, basic fuel loading, fire growth and development, and departmental procedures relating to dispatch response, strategy tactics and operations, and customer service.

1) Elements of a post-incident analysis
   a) Reconstruct the incident to establish a clear picture of the events surrounding the incident
   b) Non-punitive
   c) Focus on improving emergency response

2) Basic building construction
   a) Construction type
   b) Occupancy type

3) Basic fire protection systems and features
   a) Sprinkler systems
   b) Standpipe systems
   c) Alert/detection systems
   d) Other special extinguishing systems

4) Basic water supply
   a) Pressurized sources
   b) Drafting points
   c) Fire department connections (FDC)

5) Basic fuel loading
   a) Based on hazard class
   b) **Occupancy type**

6) Fire growth and development
   a) Basic fire chemistry/science
   b) **Fire spread**

7) Departmental procedures relating to dispatch response tactics and operations **(AHJ)**
   ~~a.~~ ~~Authority having jurisdiction~~

8) Customer service **(AHJ)**
~~a. Authority having jurisdiction~~

Requisite Skills. The ability to write reports, to communicate orally, and to evaluate skills.

902-5.6.3 Prepare a written report, given incident reporting data from the jurisdiction, so that the major causes for service demands are identified for various planning areas within the service area of the organization.

Requisite Knowledge. Analyzing data.

1) Analyze and interpret incident data

2) Needs analysis

3) Intended audience

4) Report format

Requisite Skills. The ability to write clearly and to interpret response data correctly to identify the reasons for service demands.

902-5.7 Health and Safety

This duty involves reviewing injury, accident, and health exposure reports, identifying unsafe work environments or behaviors, and taking approved action to prevent reoccurrence, according to the following job requirements.

902-5.7.1 Analyze a member's accident, injury, or health exposure history, given a case study, so that a report including action taken and recommendations made is prepared for a supervisor.

Requisite Knowledge. The causes of unsafe acts, health exposures, or conditions that result in accidents, injuries, occupational illnesses, or deaths.

1) The causes of unsafe acts~~, health exposures~~
   a) Human factors
      i. Improper attitude
      ii. Lack of knowledge or skill
      iii. Physically/mentally unsuited
   b) Environmental factors

i. **Weather**
ii. **Hazardous**
iii. **Lighting**

c) **Equipment factors**
i. **Malfunction**
ii. **Improper usage**

d) **Review member's accident history**

2) Health exposures

a) **Human factors**
i. **Improper attitude**
ii. **Lack of knowledge or skill**
iii. **Physically/mentally unsuited**

b) **Environmental factors**
i. **Weather**
ii. **Hazardous**
iii. **Lighting**

c) **Equipment factors**
i. **Malfunction**
ii. **Improper usage**

d) **Review member's health exposure history**

3) Conditions that result in accidents, injuries, occupational illness, or deaths

a) **Unsafe acts**
i. **Skill based errors**
ii. **Memory failure**
iii. **Technique failure**

b) **Preconditions to unsafe acts**
i. **Adverse mental states**
ii. **Psychological states**
iii. **Physical limitations**

c) **Unsafe supervision**
i. **Inadequate supervision**
ii. **Inappropriate operations**
iii. **Failure to correct known problems**
iv. **Supervisory violations**

Requisite Skills. The ability to communicate in writing and to interpret accidents, injuries, occupational illnesses, or death reports.

CERTIFICATION CURRICULUM MANUAL

CHAPTER FOUR

FIRE INSPECTOR

2009 Edition

Effective January 1, 2011

Texas Commission on Fire Protection
P.O. Box 2286 Austin, Texas 78768-2286 (512) 936-3838

RECOMMENDED REFERENCE LIST FOR THE BASIC FIRE INSPECTOR CURRICULUM

Certified Training Facilities approved to teach this curriculum must have the following reference materials:

~~Custer, Richard and Meacham, Brian. *Introduction to Performance Based Fire Safety* (1997). Bethesda, MD: Society of Fire Protection Engineers.~~

~~Diamantes, David, *Fire Prevention Inspection and Code Enforcement*, (3rd ed.) (2006). Albany, NY: Delmar Publishers.~~

Emergency Response Guidebook, (Current edition). U.S. Department of Transportation

Fire Inspection and Code Enforcement ~~(6th ed.)~~ **(7th ed.)** ~~(1998)~~ **(2009)**. Stillwater, OK: Fire Protection Publications. International Fire Service Training Association.

~~Gagnon, Robert M, *Design of Special Hazard and Fire Alarm Systems* (1st ed.) (1998). Albany, NY: Delmar Publishers.~~

~~Gagnon, Robert M, *Design of Water- Based Fire Protection Systems* (1st ed.) (1997). Albany, NY: Delmar Publishers.~~

Local Codes and Standards.

~~*Hazardous Materials Response Handbook* (4th ed.) (2002). Quincy, MA: National Fire Protection Association. NFPA Publications.~~

NFPA 10: Standard for Portable Fire Extinguishers (2007 ed.) Quincy, MA: National Fire Protection Association. NFPA Publications.

~~*NFPA 472: Standard for Professional Competence of Responders to Hazardous Materials Incidents* (2002 ed.) Quincy, MA: National Fire Protection Association. NFPA Publications.~~

NFPA 1031: Standard for Professional Qualifications for Fire Inspector and Plan Examiner (200~~3~~ **8** ed.). Quincy, MA: National Fire Protection Association. NFPA Publications.

~~Noel, Gregory G., et al., *Hazardous Materials: Managing the Incident* (3rd ed.) (2005). Chester, MD: Red Hat Publishing Company.~~

Plans Examiner for Fire and Emergency Services (1st ed.) (2005). Stillwater, OK: Fire Protection Publications. International Fire Service Training Association.

Standards Manual for Fire Protection Personnel. Austin, TX: Texas Commission on Fire Protection.

~~Texas Rules of Evidence; rules 101, 401, 402, 403, 404, 405, 406, 407, 408, 501, 502, 601, 602, 603, 608, 612, 701, 702, 703, 802, 803, 901, 1001, 1002, 1003, 1004, 1005, 1006, 1007.~~

BASIC FIRE INSPECTOR

(All three curricula are to be completed for Basic Fire Inspector certification)

SECTION	SUBJECT	RECOMMENDED HOURS
401-4.1,5.1, & 7.1	General	3
401-4.2,5.2,& 7.2	Administration	18
401-4.3, & 5.3	Field Inspection	138
401-4.4, 5.4, & 7.3	Plans Review	37
	TOTAL RECOMMENDED HOURS *	196

*The recommended hours includes time for skills evaluation and is based on 12 students. Hours needed depends on the actual number of students.

FIRE INSPECTOR I

CURRICULUM OUTLINE

SECTION	SUBJECT	RECOMMENDED HOURS
401-4.1	General	1
401-4.2	Administration	8
401-4.3	Field Inspection	~~75~~ **81**
401-4.4	Plans Review	0
~~401-9.1~~	~~Hazardous Materials~~	~~12**~~
	TOTAL RECOMMENDED HOURS*	~~96~~ **90**

*The recommended hours includes time for skills evaluation and is based on 12 students. Hours needed depends on the actual number of students.

~~**NOTE: A MINIMUM OF 8 HOURS MUST BE TAUGHT.~~

FIRE INSPECTOR II

CURRICULUM OUTLINE

SECTION	SUBJECT	RECOMMENDED HOURS
402-5.1	General	1
402-5.2	Administration	4
402-5.3	Field Inspection	57
402-5.4	Plans Review	8
	TOTAL RECOMMENDED HOURS*	**70**

* The recommended hours includes time for skills evaluation and is based on 12 students. Hours needed depends on the actual number of students.

PLAN EXAMINER I

CURRICULUM OUTLINE

SECTION	SUBJECT	RECOMMENDED HOURS
470-7.1	General	1
470-7.2	Administration	6
470-7.3	Plans Review	29/33
	TOTAL RECOMMENDED MINIMUM HOURS (With Inspector I & II as a prerequisite)*	**36**
	TOTAL RECOMMENDED HOURS (With or without Inspector I & II)*	**40**

* The recommended hours includes time for skills evaluation and is based on 12 students. Hours needed depends on the actual number of students.

SECTION 401

INSPECTOR I

401-4.1 ***General***

The Fire Inspector I shall meet the job performance requirements defined in Sections 4.2 through 4.4. In addition, the Fire Inspector I shall meet the requirements of Section 4.2 of NFPA 472.

401-4.2 ***Administration***

This duty involves the preparation of correspondence and inspection reports, handling of complaints, and maintenance of records, as well as participation in legal proceedings and maintenance of an open dialogue with the plan examiner and emergency response personnel, according to the following job performance requirements.

401-4.2.1 Prepare inspection reports, given agency policy and procedures, and observations from an assigned field inspection, so that the report is clear and concise and reflects the findings of the inspection in accordance with the applicable codes and standards and the policies of the jurisdiction.

Requisite Knowledge:

1. Applicable codes and standards adopted by the jurisdiction
    a. Model codes
    b. Model code organizations
        i. International Code Council (ICC)
        ii. Legacy codes
        iii. Building Officials and Code Administrators International (BOCA)
        iv. International Conference of Building Officials (ICBO)
        v. Southern Building Code Congress International (SBCCI)
        vi. National Fire Protection Association (NFPA)
    c. Code adoption

2. Policies of the jurisdiction
    a. Inspection priorities and frequency
        i. Permit model
        ii. Inspection model

Requisite Skills: The ability to conduct a field inspection, apply codes and standards, and communicate orally and in writing.

401-4.2.2 Recognize the need for a permit, given a situation or condition, so that requirements for permits are communicated in accordance with the applicable codes and standards and the policies of the jurisdiction.

Requisite Knowledge:

1. Permit policies of the jurisdiction

2. Rationale for the permit

Requisite Skills: The ability to communicate orally and in writing.

401-4.2.3 Recognize the need for plan review, given a situation or condition, so that requirements for plan reviews are communicated in accordance with the applicable codes and standards and the policies of the jurisdiction.

Requisite Knowledge:
1. Plan review policies of the jurisdiction

2. Rationale for the plan review

Requisite Skills: The ability to communicate orally and in writing.

401-4.2.4 Investigate common complaints, given a reported situation or condition, so that complaint information is recorded, the AHJ-approved process is initiated, and the complaint is resolved.

Requisite Knowledge:
1. Applicable codes and standards adopted by the jurisdiction

2. Policies of the jurisdiction

Requisite Skills: The ability to apply codes and standards, communicate orally and in writing, recognize problems, and resolve complaints.

401-4.2.5 Identify the applicable code or standard, given a fire protection, fire prevention, or life safety issue, so that the applicable document, edition, and section are referenced.

Requisite Knowledge:
1. Applicable codes adopted by the jurisdiction

2. Applicable standards adopted by the jurisdiction

Requisite Skills: The ability to apply codes and standards.

401-4.2.6 Participate in legal proceedings, given the findings of a field inspection or a complaint and consultation with legal counsel, so that all information is presented and the inspector's demeanor is professional.

Requisite Knowledge:
1. The legal requirements pertaining to evidence rules in the legal system
   a. Texas Rules of Evidence

2. Types of legal proceedings
   a. Appeals
      i. Appeals boards
      ii. Appeals hearings

b. Criminal
c. Civil

3. Hearing preparation

Requisite Skills: The ability to maintain a professional courtroom demeanor, communicate, listen, and differentiate facts from opinions.

401-4.3 ***Field Inspection***

This duty involves fire safety inspections of new and existing structures and properties for construction, occupancy, fire protection, and exposures, according to the following job performance requirements.

401-4.3.1 Identify the occupancy classification of a single-use occupancy, given a description of the occupancy and its use, so that the classification is made according to the applicable codes and standards.

Requisite Knowledge:

1. Occupancy classification types
2. Applicable codes, regulations and standards adopted by the jurisdiction
3. Operational features
4. Fire hazards presented by various occupancies

Requisite Skills: The ability to make observations and correct decisions.

401-4.3.2 Compute the allowable occupant load of a single-use occupancy or portion thereof, given a detailed description of the occupancy, so that the calculated allowable occupant load is established in accordance with applicable codes and standards.

Requisite Knowledge:

1. Occupancy classification types
    a. Function of space
    b. Net floor area
    c. Gross floor area
2. Applicable codes, regulations, and standards adopted by the jurisdiction
    a. International Building Code (IBC)
    b. National Fire Protection Association (NFPA)
    c. Other regulatory agencies
3. Operational features
4. Fire hazards presented by various occupancies
5. Occupant load factors - function

Requisite Skills: The ability to calculate occupant loads, identify occupancy factors related to various occupancy classifications, use measuring tools, and make field sketches.

401-4.3.3 Inspect means of egress elements, given observations made during a field inspection of an existing building, so that means of egress elements are maintained in compliance with applicable codes and standards and deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.

Requisite Knowledge:

1. Applicable codes and standards adopted by the jurisdiction related to means of egress

2. Maintenance requirements of egress elements

3. Types of construction

4. Occupancy egress requirements
    a. Examples of means of egress elements include:
        i. Exit access
        ii. Exit
        iii. Exit enclosures
        iv. Exit discharges
        v. Exit travel distances
        vi. Common path of travel
        vii. Arrangement
        viii. Exit passageway
        ix. Delayed egress (Access controlled)
        x. Accessible means of egress
        xi. Areas of refuge
        xii. Capacity
        xiii. Stairways
        xiv. Ramps
        xv. Corridors
        xvi. Doors
        xvii. Hardware
        xviii. Exit markings
        xix. Illumination

5. The relationship of fixed fire protection systems to egress requirements and to approved means of egress, including, but not limited to, doors, hardware, and lights

Requisite Skills: The ability to observe and recognize problems, calculate, make basic decisions related to means of egress, use measuring tools, and make field sketches.

401-4.3.4 Verify the type of construction for an addition or remodeling project, given field observations or a description of the project and the materials being used, so that

the construction type is identified and recorded in accordance with the applicable codes and standards and the policies of the jurisdiction.

Requisite Knowledge:

1. Applicable codes and standards adopted by the jurisdiction

2. Types of construction classification
    a. Height and area dimensions
    b. Construction type
    c. Construction materials

3. Rated construction components

4. Accepted building construction methods and materials

Requisite Skills: The ability to read plans, make decisions, and apply codes and standards.

401-4.3.5 Determine the operational readiness of existing fixed fire suppression systems, given test documentation and field observations, so that the systems are in an operational state, maintenance is documented, and deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.

401-A.4.3.5 Fire Inspectors should be able to confirm the operational status of fixed extinguishing systems by visual inspection of the control panels for automatic suppression systems (e.g., dry chemical systems, Halon, CO2, and clean agent systems), automatic fire pumps and booster pumps, and detection systems arranged to operate automatic systems.

Operational status of sprinkler systems, including wet-pipe, dry-pipe, deluge, foam-water, and preaction systems, can be confirmed by visually inspecting aboveground water supply control valves, spring testing underground water supply control valves, inspecting water levels in tanks and reservoirs, and observing sprinkler system drain tests. Periodic inspections and tests should be documented as noted in the applicable NFPA standards.

Requisite Knowledge:

1. A basic understanding of the components and operation of fixed fire suppression systems
    a. Sprinkler systems
    b. Types of sprinklers
    c. Standpipes
    d. Other extinguishing systems

2. Applicable codes and standards

Requisite Skills: The ability to observe, make decisions, recognize problems, and read reports.

401-4.3.6 Determine the operational readiness of existing fire detection and alarm systems, given test documentation and field observations, so that the systems are in an operational state, maintenance is documented, and deficiencies are identified, documented, and reported in accordance with the policies of the jurisdiction.

401-A.4.3.6 Fire Inspectors should be able to confirm the operational status of fire detection systems by visual inspection of the control panels for the detection system. Operational testing, maintenance, and sensitivity testing of detectors, where applicable, should be documented in accordance with applicable NFPA standards. To meet this requirement, the fire inspector is required to simply verify that valves are open and secured, control panels are on with no trouble indications, and fire extinguishers or systems are sealed with proper gauge readings. Documentation of maintenance would include inspection tags and records of alarm system and device tests, sprinkler or standpipe main drain tests, and so forth.

Requisite Knowledge:

1. A basic understanding of the components and operation of fire detection and alarm systems and devices

2. Applicable codes and standards

Requisite Skills: The ability to observe, make decisions, recognize problems, and read reports.

401-4.3.7 Determine the operational readiness of existing portable fire extinguishers, given field observations and test documentation, so that the equipment is in an operational state, maintenance is documented, and deficiencies are identified, documented, and reported in accordance with the policies of the jurisdiction.

401-A.4.3.7 Fire Inspectors should be able to confirm the operational status of extinguishers by visually examining the units, checking gauges, checking that they are tagged and hydrostatically tested in accordance with NFPA 10, and checking that they are correctly located and marked. Extinguishers should also be confirmed to be appropriate for the hazard.

Requisite Knowledge:

1. A basic understanding of portable fire extinguishers
    a. Components
    b. Placement

2. Applicable codes and standards

Requisite Skills: The ability to observe, make decisions, recognize problems, and read reports.

401-4.3.8 Recognize hazardous conditions involving equipment, processes, and operations, given field observations, so that the equipment, processes, or operations are conducted and maintained in accordance with applicable codes and standards and deficiencies are identified, documented, and reported in

accordance with the applicable codes and standards and the policies of the jurisdiction.

Requisite Knowledge:

1. Practices and techniques of code compliance inspections
2. Fire behavior
3. Fire prevention practices
4. Ignition sources
5. Safe housekeeping practices
6. Classification of hazardous materials
7. Dust hazard processes
8. Kitchen hood and ducts
9. Dip tanks
10. Flammable finishing operations
11. Flammable and combustible liquids storage, dispensing, and use
12. Welding and thermal cutting operations
13. Dipping and coating operations
14. Quenching operations
15. Dry cleaning operations
16. Asphalt and tar kettles
17. Semiconductor/Electronics manufacturing

Requisite Skills: The ability to observe, communicate, apply codes and standards, recognize problems, and make decisions.

401-4.3.9 Compare an approved plan to an existing fire protection system, given approved plans and field observations, so that any modifications to the system are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.

Requisite Knowledge:

1. Fire protection symbols
2. Terminology

Requisite Skills: The ability to read and comprehend plans for fire protection systems, observe, communicate, apply codes and standards, recognize problems, and make decisions.

401-4.3.10 Verify that emergency planning and preparedness measures are in place and have been practiced, given field observations, copies of emergency plans, and records of exercises, so that plans are prepared and exercises have been performed in accordance with applicable codes and standards and deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.

Requisite Knowledge:

1. Requirements relative to emergency evacuation drills that are required within the jurisdiction
   a. Emergency planning
   b. Emergency preparation

2. Ways to conduct and/or evaluate fire drills in various occupancies
   a. Fire drills
   b. Announcements
   c. Evacuation plans
   d. Fire department access
   e. Response personnel
   f. Standby personnel

3. Human behavior during fires and other emergencies

Requisite Skills: The ability to identify the emergency evacuation requirements contained in the applicable codes and standards and interpret plans and reports.

401-4.3.11 Inspect emergency access for an existing site, given field observations, so that the required access for emergency responders is maintained and deficiencies are identified, documented, and corrected in accordance with the applicable codes, standards, and policies of the jurisdiction.

A.4.3.11 Emergency access includes emergency vehicle access roadways, pathway access from roadways to the building, key box facilities, gate access, and door access into structures. The Fire Inspector I is expected to be able to find and correct deficiencies and obstructions to fire and emergency personnel access into buildings, such as blocked roadways, missing or outdated keys in key boxes, locked gates, and inaccessible doors. Actual response operations, safe zones, and vehicle size, width, and turning capabilities should be evaluated for a given site. For sites with topographical limitations, such as a riverfront or mountainside setting, alternate methods to provide access should be evaluated based upon the requirements of the responding personnel to approach and address incidents within the site.

Requisite Knowledge:

1. Applicable codes and standards

2. Policies of the jurisdiction

3. Emergency access and accessibility requirements

Requisite Skills: The ability to identify the emergency access requirements contained in the applicable codes and standards, observe, make decisions, and use measuring tools.

401-4.3.12 Verify code compliance for incidental storage, handling, and use of flammable and combustible liquids and gases, given field observations and inspection guidelines from the AHJ, so that applicable codes and standards are addressed and deficiencies are identified, documented, in accordance with the applicable codes and standards and the policies of the jurisdiction.

401-A.4.3.12 It is anticipated that the Fire Inspector I will find nominal amounts of flammable and combustible liquids or gases in occupancies usually considered to be "low-hazard." These nominal amounts, referred to as incidental or exempt amounts, depending on the code adopted by the jurisdiction, are needed for normal maintenance or daily operations could include cleaning fluids, lubricating oils, or propane for a forklift. Once incidental or exempt amounts are exceeded, additional building and fire requirements are triggered. At that point, the inspection should be referred to the Fire Inspector II.

Requisite Knowledge:

1. Classification

2. Properties

3. Labeling

4. Storage

5. Handling

6. Use of incidental amounts of flammable and combustible liquids and gases

7. Applicable codes and standards (Incidental or exempt amounts allowed)

Requisite Skills: The ability to observe, communicate, apply codes and standards, recognize problems, and make decisions.

401-4.3.13 Verify code compliance for incidental storage, handling, and use of hazardous materials, given field observations, so that applicable codes and standards for each hazardous material encountered are addressed and deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.

401-A.4.3.13 Moderate amounts of hazardous materials will be found in many occupancies that are not classified as "Hazardous" or "Group H" occupancies. These materials could be on display in a wholesale/retail setting or used for maintenance purposes or operation of equipment. They could include swimming pool or water purification chemicals, refrigeration equipment, or a single chemical process such as a dip tank. These moderate amounts of hazardous materials are referred to as incidental or exempt amounts, depending on the code adopted by the jurisdiction. Once incidental or exempt amounts are exceeded — whether in storage, use, or wholesale/retail sales settings — additional building and fire requirements are triggered. At that point, the inspection should be referred to the Fire Inspector II.

Requisite Knowledge:

1. Classification
2. Properties
3. Labeling
4. Transportation
5. Storage
6. Handling
7. Use of hazardous materials
8. Applicable codes and standards (Incidental or exempt amounts allowed)
9. **Hazardous Materials Awareness Level Personnel ((NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents* section 4.2 – Analyzing the Incident)**

    a. **The Fire Inspector candidate shall identify and be able to describe the purpose, goals, and definitions of the NFPA standards applicable to Hazardous Materials/WMD.**
    b. **The Fire Inspector candidate shall demonstrate knowledge of safety principles applicable to hazardous materials /WMD response.**
    c. **The Fire Inspector candidate shall identify how hazardous materials incidents are different from other emergencies.**
    d. **The Fire Inspector candidate shall identify principles pertaining to the recognition of hazardous materials/WMD.**
    e. **The Fire Inspector candidate shall identify the definition of hazardous materials/WMD.**
    f. **The Fire Inspector candidate shall identify the following nine UN/DOT hazardous classes or divisions and give examples of common materials in each hazard class or division, and the primary hazards associated with each hazard class or division.**
        i. **Class 1 – Explosives**
        ii. **Class 2 – Gases**

iii. Class 3 – Flammable liquids
iv. Class 4 – Flammable solids
v. Class 5 – Oxidizers
vi. Class 6 – Non-gaseous poisonous materials
vii. Class 7 – Radioactive material
viii. Class 8 – Corrosive
ix. Class 9 – Miscellaneous

g. The Fire Inspector candidate shall identify typical occupancies and locations in the community or facility where hazardous materials /WMD are manufactured, transported, stored, used or disposed of.
h. The Fire Inspector candidate, given various examples of typical container shapes, shall identify:
   i. Those which may contain a hazardous material /WMD
   ii. Those which would contain liquids, gases, or solids
   iii. Markings on fixed facility containers that would indicate:
      a) Size of container
      b) Product contained
      c) Site identification numbers
i. The Fire Inspector candidate shall identify facility and transportation markings and colors that indicate hazardous materials/WMD, including the following:
   i. Transportation markings, including UN/NA identification number marks, marine pollutant mark, elevated temperature (HOT) mark, commodity markings, and inhalation hazard mark
   ii. NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response, markings
   iii. Military hazardous materials/WMD markings
   iv. Special hazard communication markings for each hazard class
   v. Pipeline markings
   vi. Container markings
j. The Fire Inspector candidate, given an example of an NFPA 704 marking, shall identify the significance of the following components.
   i. Five degrees of hazard - (4-0)
   ii. Three categories of hazard
      a) Health - Blue color
      b) Flammability - Red color
      c) Reactivity - Yellow color
      d) Special information – White color
   iii. Special hazards that may be indicated
      a) ACID - Acid
      b) ALK - Alkali
      c) COR- Corrosive
      d) OX – Oxidizer
      e) ~~W~~ – Reacts with water

k. The Fire Inspector candidate shall identify and describe U.S. and Canadian placards and labels that would indicate hazardous materials/WMD.
l. The Fire Inspector candidate shall identify the following information from material safety data sheets (MSDS) and shipping papers that indicates hazardous materials/WMD.
    i. The Fire Inspector candidate shall identify where to find MSDS
        a) Manufacturer
        b) CHEMTREC
        c) Shipper
        d) Fixed facility
    ii. Entries on an MSDS that indicate the presence of hazardous materials/WMD containers by their shape
    iii. The Fire Inspector candidate shall identify the following in regards to shipping papers:
        a) Information that would indicate the presence of hazardous materials/WMD
        b) Name of the shipping papers in regards to the mode of transportation
            i) Air - Air Bill
            ii) Highway - Bill of Lading or Freight Bill
            iii) Water - Dangerous Cargo Manifest
            iv) Rail - Waybill and/or Consist
        c) Where the shipping papers are found in each mode of transportation
        d) The person responsible for having the shipping papers in each mode of transportation
        e) Where the shipping papers may be found in an emergency in each mode of transportation
m. The Fire Inspector candidate shall identify examples of clues (other than occupancy/location, container shape, markings/color, placards/labels, MSDS, and shipping papers) that use the senses of sight, sound, and odor to indicate hazardous materials/WMD.
    i. Odors
    ii. Gas leak
    iii. Fire
    iv. Vapor cloud
    v. Visible corrosive actions
    vi. Visible chemical reactions
    vii. Pooled liquids
    viii. Sound of a pressure release
    ix. Condensation line on pressure tank
    x. Injured persons or casualties
n. The Fire Inspector candidate shall describe the limitations of using the senses in determining the presence or absence of hazardous materials/WMD.
o. The Fire Inspector candidate shall identify at least four types of locations that could become targets for criminal or terrorist activity using hazardous materials/WMD.

i. Public assembly
ii. Public building
iii. Mass transit system
iv. Places with high economic impact
v. Telecommunications facilities
vi. Places with historical or symbolic significance
vii. Military installations
viii. Airports
ix. Industrial facilities

p. The Fire Inspector candidate shall describe the difference between a chemical and a biological incident.
q. The Fire Inspector candidate shall identify at least four indicators of possible criminal or terrorist activity involving chemical agents.
r. The Fire Inspector candidate shall identify at least four indicators of possible criminal or terrorist activity involving biological agent
s. The Fire Inspector candidate shall identify at least four indicators of possible criminal or terrorist activity involving radiological agents.
t. The Fire Inspector candidate shall identify at least four indicators of possible criminal or terrorist activity involving illicit laboratories (clandestine laboratories, weapons lab, and ricin lab).
u. The Fire Inspector candidate shall identify at least four indicators of possible criminal or terrorist activity involving explosives.
v. The Fire Inspector candidate shall identify at least four indicators of secondary devices.
w. The Fire Inspector candidate shall identify the hazardous materials/WMD in each situation by name, UN/NA identification number, or type placard applied, and meet the following requirements, given examples of facility and transportation situations involving hazardous materials/WMD:
    i. Identify difficulties in determining specific names of hazardous materials/WMD in both facilities and transportation.
    ii. Identify sources for obtaining the names of, UN/NA identification numbers for, or types of placard associated with hazardous materials/WMD in transportation.
    iii. Identify sources for obtaining the names of hazardous materials/WMD in a facility.
x. The Fire Inspector candidate, utilizing the most current edition of the DOT Emergency Response Guidebook, shall:
    i. Identify the three methods for determining the appropriate guide page for a specific hazardous material/WMD.
        a) Locate UN number in the yellow-bordered pages.
        b) Locate name of material in the alphabetic listing in the blue-bordered pages.
        c) Locate a matching placard in the table of placards and consult the two-digit guide number located next to the similar placard.

ii. **Identify at least two general types of hazards found on each guide page.**
   a) **Fire**
   b) **Explosion**
   c) **Health**

Requisite Skills: The ability to observe, communicate, apply codes and standards, recognize problems, and make decisions.

401-4.3.14 Recognize a hazardous fire growth potential in a building or space, given field observations, so that the hazardous conditions are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.

Requisite Knowledge:
1. Basic fire behavior
2. Flame spread ratings of contents
3. Smoke development ratings of contents
4. Interior finishes
5. Building construction elements
6. Decorations
7. Decorative materials
8. Furnishings
9. Safe housekeeping practices

Requisite Skills: The ability to observe, communicate, apply codes and standards, recognize hazardous conditions, and make decisions.

401-4.3.15 Determine code compliance, given the codes, standards, and policies of the jurisdiction and a fire protection issue, so that the applicable codes, standards, and policies are identified and compliance is determined.

401-A.4.3.15 The Fire Inspector should be able to identify the correct code, standard, or policy, including edition, and correctly interpret and apply the adopted codes, standards, and referenced documents.

Requisite Knowledge:
1. Basic fire behavior
2. Flame spread ratings of contents
3. Smoke development ratings of contents

4. Interior finishes
5. Building construction elements
6. Life safety systems
7. Decorations
8. Decorative materials
9. Furnishings
10. Safe housekeeping practices

Requisite Skills: The ability to observe, communicate, apply codes and standards, recognize hazardous conditions, and make decisions.

401-4.3.16 Verify fire flows for a site, given fire flow test results and water supply data, so that required fire flows are in accordance with applicable codes and standards and deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.

Requisite Knowledge:
1. Types of water distribution systems
2. Other water sources in the local community
3. Water distribution system testing
4. Characteristics of public water supply systems
5. Characteristics of private water supply systems
6. Flow testing procedures

Requisite Skills: The ability to use Pitot tubes, gauges, and other data gathering devices as well as calculate and graph fire flow results.

401-4.4 Plans Review

There are no plan review job performance requirements for Fire Inspector I.

~~***401-9.1 Hazardous Materials***~~

~~401-9.1.1 The Fire Inspector candidate shall identify and be able to describe the purpose, goals, and definitions of the NFPA standards applicable to Hazardous Materials.~~

1) NFPA 472

401-9.1.2 The Fire Inspector candidate shall demonstrate knowledge of safety principles applicable to hazardous materials response.

1) The Fire Inspector candidate shall identify how hazardous materials incidents are different from other emergencies.

401-9.1.3 The Fire Inspector candidate shall demonstrate knowledge of hazardous material incident management concepts as applicable to hazardous materials incident response.

401-9.1.4 The Fire Inspector candidate shall identify principles pertaining to the recognition of hazardous materials.

1) The Fire Inspector candidate shall identify the definition of hazardous materials.

401-9.1.5 The Fire Inspector candidate shall identify the following nine UN/DOT hazardous classes or divisions and give examples of common materials in each hazard class or division, and the primary hazards associated with each hazard class or division.

x. Class 1 – Explosives

xi. Class 2 – Gases

xii. Class 3 – Flammable liquids

xiii. Class 4 – Flammable solids

xiv. Class 5 – Oxidizers

xv. Class 6 – Non-gaseous poisonous materials

xvi. Class 7 – Radioactive material

xvii. Class 8 – Corrosive

xviii. Class 9 – Miscellaneous

401-9.1.6 The Fire Inspector candidate shall identify typical occupancies and locations in the community or facility where hazardous materials may be manufactured, transported, stored, used or disposed of.

401-9.1.7 The Fire Inspector candidate, given various examples of containers, shall identify:

iv. Those which may contain a hazardous material by the container shape

v. Those which would contain liquids, gases, or solids by the container shape

vi. Markings on fixed facility containers that would indicate:
a) Size of container
b) Product contained
c) Site identification numbers

401-9.1.8 The Fire Inspector candidate shall identify and describe the following types of specialized marking systems found at fixed facilities and on modes of transportation that indicate hazardous materials:

vii. Transportation markings, including UN/NA identification number marks, marine pollutant mark, elevated temperature (HOT) mark, commodity markings, and inhalation hazard mark

viii. NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response, markings

ix. Military hazardous materials markings

x. Special hazard communication markings for each hazard class

xi. Pipeline markings

xii. Container markings

401-9.1.9 The Fire Inspector candidate, given an example of an NFPA 704 marking, shall identify the significance of the following components.

ii. Three categories of hazard
a) Health - Blue color
b) Flammability - Red color
c) Reactivity - Yellow color

iii. Special hazards that may be indicated
f) W
g) OX
h) Five degrees of hazard - (4-0)

401-9.1.10 The Fire Inspector candidate shall identify and describe U.S. and Canadian placards and labels that would indicate hazardous materials.

~~401-9.1.11 The Fire Inspector candidate shall identify the following information from material safety data sheets (MSDS) and shipping papers that indicates hazardous materials.~~

~~iv. The Fire Inspector candidate shall list four organizations from which to obtain a material safety data sheet (MSDS)~~
~~a) Manufacturer~~
~~b) CHEMTREC~~
~~c) Shipper~~
~~d) Fixed facility~~

~~v. Entries on an MSDS that indicate the presence of hazardous materials containers by their shape~~

~~vi. The Fire Inspector candidate shall identify the following in regards to shipping papers:~~
~~a) Information that would indicate the presence of hazardous materials~~
~~b) Name of the shipping papers in regards to the mode of transportation~~
~~i) Air - Air Bill~~
~~ii) Highway - Bill of Lading or Freight Bill~~
~~iii) Water - Dangerous Cargo Manifest~~
~~iv) Rail - Waybill and/or Consist~~
~~c) Where the shipping papers are found in each mode of transportation~~
~~d) The person responsible for having the shipping papers in each mode of transportation~~
~~e) Where the shipping papers may be found in an emergency in each mode of transportation~~

~~401-9.1.12 The Fire Inspector candidate shall identify examples of clues (other than occupancy/location, container shape, markings/color, placards/labels, MSDS, and shipping papers) that use the senses of sight, sound, and odor to indicate hazardous materials.~~

~~xi. Odors~~

~~xii. Gas leak~~

~~xiii. Fire~~

~~xiv. Vapor cloud~~

~~xv. Visible corrosive actions~~

~~xvi. Visible chemical reactions~~

~~xvii. Pooled liquids~~

~~xviii. Sound of a pressure release~~

xix. Condensation line on pressure tank

xx. Injured persons or casualties

401-9.1.13 The Fire Inspector candidate shall describe the limitations of using the senses in determining the presence or absence of hazardous materials.

401-9.1.14 The Fire Inspector candidate shall identify at least four types of locations that could become targets for criminal or terrorist activity using hazardous materials.

x. Public assembly

xi. Public building

xii. Mass transit system

xiii. Places with high economic impact

xiv. Telecommunications facilities

xv. Places with historical or symbolic significance

xvi. Military installations

xvii. Airports

xviii. Industrial facilities

401-9.1.15 The Fire Inspector candidate shall describe the difference between a chemical and a biological incident.

401-9.1.16 The Fire Inspector candidate shall identify at least four indicators of possible criminal or terrorist activity involving chemical agents.

401-9.1.17 The Fire Inspector candidate shall identify at least four indicators of possible criminal or terrorist activity involving biological agents.

401-9.1.18 The Fire Inspector candidate shall identify the hazardous material(s) in each situation by name, UN/NA identification number, or type placard applied, and also meet the following requirements, given examples of facility and transportation situations involving hazardous materials:

iv. Identify difficulties in determining specific names of hazardous materials in both facilities and transportation.

v. Identify sources for obtaining the names of, UN/NA identification numbers for, or types of placard associated with hazardous materials in transportation.

~~vi. Identify sources for obtaining the names of hazardous materials in a facility.~~

~~401-9.1.19 The Fire Inspector candidate, utilizing the Emergency Response Guidebook, shall:~~

~~iii. Identify the three methods for determining the appropriate guide page for a specific hazardous material.~~
~~a) Locate UN number in the yellow-bordered pages.~~
~~b) Locate name of material in the alphabetic listing in the blue-bordered pages.~~
~~c) Locate a matching placard in the table of placards and consult the two-digit guide number located next to the similar placard.~~

~~iv. Identify two general types of hazards found on each guide page.~~

~~a) Fire/explosive~~
~~b) Health~~

SECTION 402

INSPECTOR II

402-5.1 ***General***

The Fire Inspector II shall meet the job performance requirements defined in Chapter 4 and Sections 5.2 through 5.4.

402-5.2 ***Administration***

This duty involves conducting research, interpreting codes, implementing policy, testifying at legal proceedings, and creating forms and job aids, according to the following job performance requirements.

402-5.2.1 Process a permit application, given a specific request, so that the application is evaluated and a permit is issued or denied in accordance with the applicable codes, standards, policies, and procedures of the jurisdiction.

Requisite Knowledge:

1. Permit application process
2. Applicable codes, standards, policies, and procedures of the jurisdiction

Requisite Skills: The application of the requisite knowledge.

402-5.2.2 Process a plan review application, given a specific request, so that the application is evaluated and processed in accordance with the applicable codes and standards and the policies of the jurisdiction.

Requisite Knowledge:

1. Plan review application process
2. Code requirements of the jurisdiction
3. Policies and procedures of the jurisdiction

Requisite Skills: The ability to communicate orally and in writing on matters related to code requirements, policies, and procedures of the jurisdiction.

402-5.2.3 Investigate complex complaints, given a reported situation or condition, so that complaint information is recorded, the investigation process is initiated, and the complaint is resolved in accordance with the applicable codes and standards and the policies of the jurisdiction.

402-A.5.2.3 The objective of a complaint investigation is the recognition and correction or removal of a fire or life safety hazard. At this professional level, the resolution of the complaint will depend heavily on the technical evaluation of the complaint and the selection of possible corrective actions. More than one solution might be available.

Requisite Knowledge:

1. Applicable codes and standards adopted by the jurisdiction

2. Policies of the jurisdiction

Requisite Skills: The ability to interpret codes and standards, recognize problems, and refer complaints to other agencies when required.

402-5.2.4 Recommend modifications to the adopted codes and standards of the jurisdiction, given a fire safety issue, so that the proposed modifications address the problem, need, or deficiency.

402-A.5.2.4 Local or regional modifications to codes and standards developed through the consensus process can be made to address specific local environmental and societal factors with adequate input from affected parties and oversight by the jurisdiction's governing body. Such modifications should be based on substantiated information, compiled and presented to justify the impacts of the regulation or modification proposed. Data professionally presented can support a request for a governing body to modify a code or a standard far more effectively than supposition or fear.

Requisite Knowledge:

1. State statutes or local ordinances establishing or empowering the agency to adopt, enforce, and revise codes and standards

2. The legal instruments establishing or adopting codes and standards

3. The development and adoption process for fire and life safety legislation or regulations

Requisite Skills: The ability to recognize problems, collect and develop potential solutions, and identify cost/risk benefits.

402-5.2.5 Recommend policies and procedures for the delivery of inspection services, given management objectives, so that inspections are conducted in accordance with the policies of the jurisdiction and due process of the law is followed.

402-A.5.2.5 Mandated inspection frequencies, follow-up visits, and timely response to complaints require good time-management skills of the Fire Inspector and a coordinated management program. Improvements in the delivery of inspection services can often be originated at the inspector level.

Requisite Knowledge:

1. Policies and procedures of the jurisdiction related to code enforcement

2. Sources of detailed and technical information relating to fire protection and life safety
    a. Fire loss data
        i. Local (e.g., fire department reporting system)
        ii. State (e.g. Texas Fire Incident Reporting System – TEXFIRS)

iii. Federal (e.g., National Fire Incident Reporting System – NFIRS, National Institute of Occupational Safety and Health – NIOSH, US Fire Administration, National Fire Academy)
iv. NFPA

b. Loss prevention bulletins (e.g. Factory Mutual Global, Consumer Product Safety Commission, Underwriter's Laboratory)

Requisite Skills: 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.

402-5.3 ***Field Inspection***

This duty involves code enforcement inspections and analyses of new and existing structures and properties for construction, occupancy, fire protection, and exposures, according to the following job performance requirements.

402-5.3.1 Compute the maximum allowable occupant load of a multi-use building, given field observations or a description of its uses, so that the maximum allowable occupant load calculation is in accordance with applicable codes and standards.

Requisite Knowledge:

1. How to calculate occupant loads for an occupancy and
2. How to calculate occupant loads for building use
3. Code requirements presented by various occupancies
   a. International Building Code (IBC)
   b. National Fire Protection Association (NFPA)
4. Regulations presented by various occupancies
   a. Local regulatory agencies
   b. Other regulatory agencies
5. Operational features presented by various occupancies
6. Fire hazards presented by various occupancies

Requisite Skills: The ability to calculate occupant loads, identify occupancy factors related to various occupancy classifications, use measuring tools, read plans, and use a calculator.

402-5.3.2 Identify the occupancy classifications of a mixed-use building, given a description of the uses, so that each area is classified in accordance with applicable codes and standards.

402-A.5.3.2 Judgment should be exercised in the classification of occupancies within a mixed-use building. Small uses that are accessory to a major occupancy should be evaluated within the framework of the adopted codes and standards,

recognizing that not all spaces require separation while some spaces will always require separation.

Requisite Knowledge:

1. Occupancy classification presented by various occupancies
   a. Building code use
   b. Use groups
   c. Incidental use area
   d. Accessory use area

2. Applicable codes and standards presented by various occupancies
   a. IBC
   b. NFPA

3. Operational features presented by various occupancies

4. Fire hazards presented by various occupancies

Requisite Skills: The ability to interpret code requirements and recognize building uses that fall into each occupancy classification.

402-5.3.3 Evaluate a building's area, height, occupancy classification, and construction type, given an approved set of plans and construction features, so that it is verified that the building is in accordance with applicable codes and standards.

402-A.5.3.3 The Fire Inspector II should be able to assess proper construction type based on new construction or changes to a building that have occurred since the original occupancy of the building. Examples of such changes may include renovations or additions, changes in storage commodity, changes in occupancy classification, and similar changes that might occur throughout the life of a building.

Requisite Knowledge:

1. Building construction with emphasis on fire-rated construction

2. Evaluation of methods of construction

3. Assemblies for fire rating

4. Analysis of test results

5. Manufacturer's specifications

Requisite Skills: The ability to identify characteristics of each type of building construction and occupancy classification.

402-5.3.4 Evaluate fire protection systems and equipment provided for life safety and property protection, given field observations of the facility and documentation, the hazards protected, and the system specifications, so that the fire protection systems provided are approved for the occupancy or hazard being protected.

402-A.5.3.4 Includes buildings under construction or demolition. Building documentation includes performance-based design documents to ensure input features remain applicable to the building as it is currently configured. The design documentation should include an Operations and Maintenance Manual, which acts as a user guide to the performance-based design. The Operations and Maintenance Manual includes the assumptions and estimates made during the design regarding concepts such as selected fire scenarios and fuel loads, building use, occupant characteristics, and system reliability. The inspector should be able to compare these original assumptions and estimates to those that would be used to evaluate the building as it is currently configured.

Requisite Knowledge:

1. Applicable codes and standards for fire protection systems
2. Basic physical science as it relates to fire behavior and fire suppression
3. Implications and hazards associated with system operation
4. Installation techniques
5. Acceptance inspection
6. Testing
7. Reports of maintenance of completed installations
8. Use and function of various systems

Requisite Skills: The ability to recognize problems, use codes and standards, and read reports, plans, and specifications.

402-5.3.5 Analyze the egress elements of a building or portion of a building, given observations made during a field inspection, so that means of egress elements are provided and located in accordance with applicable codes and standards and deficiencies are identified, documented, and reported in accordance with the policies of the jurisdiction.

Requisite Knowledge: Acceptable means of egress devices.

Requisite Skills: The ability to calculate egress requirements, read plans, and make decisions related to the adequacy of egress.

402-5.3.6 Evaluate hazardous conditions involving equipment, processes, and operations, given field observations and documentation, so that the equipment, processes, or operations are installed in accordance with applicable codes and standards and deficiencies are identified, documented, and reported in accordance with the policies of the jurisdiction.

402-A.5.3.6 The Fire Inspector II is expected to have knowledge of processes and operations that include milling operations and the manufacture, storage, and use of hazardous chemicals and explosives.

Requisite Knowledge:

1. Applicable codes and standards
2. Accepted fire protection practices
3. Fire behavior
4. Ignition sources
5. Safe housekeeping practices
6. Additional reference materials related to protection of hazardous processes and code enforcement.

Requisite Skills: The ability to observe, communicate, interpret codes, recognize problems, and make decisions.

402-5.3.7 Evaluate emergency planning and preparedness procedures, given existing or proposed plans and procedures and applicable codes and standards, so that compliance is determined.

402-A.5.3.7 Emergency planning might include components for building evacuation, sheltering of occupants in place, and securing occupants from outside threats.

Requisite Knowledge:

1. Occupancy requirements for emergency evacuation plans
2. Fire safety programs for crowd control
3. Roles of agencies and individuals in implementation and development of emergency plans
4. Information sources for emergency evacuation plans
    a. Other occupancies with approved plans
    b. Other jurisdictions
    c. Emergency response agencies (e.g. Red Cross)

Requisite Skills: The ability to compare submitted plans and procedures with applicable codes and standards adopted by the jurisdiction.

402-5.3.8 Verify code compliance for storage, handling, and use of flammable and combustible liquids and gases, given field observations and inspection guidelines from the authority having jurisdiction, so that deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.

Requisite Knowledge:

1. Flammable and combustible liquids properties and hazards
2. Material safety data sheet
3. Safe handling practices
4. Applicable codes and standards
    a. Quantity
    b. Limits
5. Fire protection systems and equipment approved for the material
6. Fire behavior
7. Safety procedures
8. Storage compatibility

Requisite Skills: The ability to identify typical fire hazards associated with processes or operations utilizing flammable and combustible liquids and to observe, communicate, interpret codes, recognize problems, and make decisions.

402-5.3.9 Evaluate code compliance for the storage, handling, and use of hazardous materials, given field observations, so that deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.

Requisite Knowledge:

1. Hazardous materials properties and hazards
2. Material safety data sheet
3. Safe handling practices
4. Applicable codes and standards
    a. Quantity
    b. Limits
5. Fire protection systems
6. Equipment approved for the material
7. Fire behavior
8. Safety procedures
9. Chemical reactions

10. Storage compatibility

Requisite Skills: 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.

402-5.3.10 Determine fire growth potential in a building or space, given field observations or plans, so that the contents, interior finish, and construction elements are evaluated for compliance, and deficiencies are identified, documented, and corrected in accordance with the applicable codes and standards and the policies of the jurisdiction.

402-A.5.3.10 Fire growth is dependent on several factors, including heat content of the materials involved, exposed surface area, material height and array, continuity of combustible materials within a space, ceiling height, and ventilation or openness of the space. Availability of an ignition source is usually not considered since fire growth is evaluated on the assumption that a fire has already begun and is not predicated on whether a fire will or will not start.

Requisite Knowledge:
1. Basic fire behavior
2. Flame spread ratings of contents
3. Smoke development ratings of contents
4. Interior finishes
5. Building construction elements
6. Decorations
7. Decorative materials
8. Furnishings
9. Safe housekeeping practices

Requisite Skills: The ability to observe, communicate, interpret codes and standards, recognize hazardous conditions, and make decisions.

~~402-5.3.11 Inspect emergency access for a site, given field observations, so that the required access for emergency responders is provided, approvals are issued, or deficiencies are identified, documented, and corrected in accordance with the applicable codes, standards, and policies of the jurisdiction.~~

~~**Requisite Knowledge:** Applicable codes and standards, policies of the jurisdiction, and emergency access and accessibility requirements.~~

1) Applicable codes and standards

2) Policies of the jurisdiction

3) Emergency access and accessibility requirements

4) Access for buildings and facilities

5) Access for special conditions
   a) High-piled storage
   b) Additional access based on impairment of a single road

6) Specifications
   a) Dimensions – width, height, turning radius
   b) Authority to increase access widths
   c) Surface - support the apparatus load, all weather, non-erodable
   d) Dead ends
   e) Bridges and elevated surfaces
   f) Marking and identification
   g) Obstruction of fire apparatus access roads
   h) Gates and barriers

7) Access to building openings and roofs
   a) Required access, access walkways, exterior openings
   b) Maintenance of exterior doors and openings
   c) Stairway access to roof

8) Premises identification
   a) Address numbers
   b) Street or road signs

9) Key boxes
   a) When required
   b) Locks
   c) Key box maintenance

402-5.3.11 Verify compliance with construction documents, given a performance-based design, so that life safety systems and building services equipment are installed, inspected, and tested to perform as described in the engineering documents and the operations and maintenance manual that accompanies the design, so that deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.

402-A.5.3.11 Performance-based design involves the evaluation of risk through a systematic process. See Rose, Flamberg, and Leverenz, *Guidance Document for*

Incorporating Risk Concepts into NFPA Codes and Standards, for further information.

Requisite Knowledge:

1. Applicable codes and standards for installation and testing of fire protection systems
   a. Fire sprinklers (e.g. NFPA 13)
   b. Standpipe systems (e.g. NFPA 14)
   c. Fire alarm systems (e.g. NFPA 72)
   d. Fire pumps (e.g. NFPA 20)
   e. Means of egress (e.g. International Building Code or NFPA 101)
   f. Smoke control (e.g. International Building Code or NFPA 92A)
   g. Emergency and/or standby power requirements (e.g. International Building Code and applicable electrical code(s))
   h. Heaving Ventilation Air Conditioning (HVAC) (e.g. International Mechanical Code, NFPA 90A)
   i. Elevator and moving pedestrian equipment (e.g. International Building Code)
2. Means of egress
3. Building services equipment

Requisite Skills: The ability to witness and document tests of fire protection systems and building services equipment.

402-5.3.12 Verify code compliance of heating, ventilation, air conditioning, and other building service equipment and operations, given field observations, so that the systems and other equipment are maintained in accordance with applicable codes and standards and deficiencies are identified, documented, and reported in accordance with the policies of the jurisdiction.

402-A.5.3.12 The Fire Inspector II should coordinate that have other agencies within the jurisdiction with expertise in the area of mechanical equipment to provide a uniform approach to achieve a fire-safe environment.

Requisite Knowledge:

1. **Types of building service equipment**
2. **Installation of building service equipment**
3. **Maintenance of building service equipment**
4. **Use of building service equipment**
5. **Operation of smoke and heat vents**
6. **Installation of kitchen cooking equipment (including hoods and ducts)**

7. **Installation of laundry chutes**

8. **Installation of elevators**

9. **Installation of escalators**

10. **Applicable codes and standards adopted by the jurisdiction**

Requisite Skills: The ability to observe, recognize problems, interpret codes and standards, and write reports.

402-5.4 ***Plans Review***

This duty involves field verification of shop drawings, plans, and construction documents to ensure that they meet the intent of applicable codes and standards for fire and life safety, according to the following job performance requirements.

402-5.4.1 Classify the occupancy, given a set of plans, specifications, and a description of a building, so that the classification is made in accordance with the applicable codes and standards and the policies of the jurisdiction.

Requisite Knowledge:

1. Occupancy classification of various occupancies

2. Applicable codes and standards of various occupancies

3. Regulations for various occupancies (e.g. applicable state licensing rules, Texas Health and Safety Code)

4. Operational features presented by various occupancies

5. Fire hazards presented by various occupancies
    a. Assembly (e.g. decorations)
    b. Business (e.g. combustible waste)
    c. Education (e.g. ignition sources)
    d. Factory/Industrial (e.g. fabrication)
    e. High-hazard (e.g. hazardous materials)
    f. Institutional (e.g., egress)
    g. Mercantile (e.g., fire load)
    h. Residential (e.g., occupant activities)
    i. Storage (e.g., storage arrangement)
    j. Utility/miscellaneous (e.g. combustible waste)

Requisite Skills: The ability to read plans.

402-5.4.2 Compute the maximum allowable occupant load, given a floor plan of a building or portion of the building, so that the calculated occupant load is in accordance with the applicable codes and standards and the policies of the jurisdiction.

Requisite Knowledge:

1. How to calculate occupant loads for an occupancy and building use

2. Code requirements

3. Regulations

4. Operational features such as fixed seating

5. Fire hazards presented by various occupancies
    a. Assembly (e.g. decorations)
    b. Business (e.g. combustible waste)
    c. Education (e.g. ignition sources)
    d. Factory/Industrial (e.g. fabrication)
    e. High-hazard (e.g. hazardous materials)
    f. Institutional (e.g., egress)
    g. Mercantile (e.g., fire load)
    h. Residential (e.g., occupant activities)
    i. Storage (e.g., storage arrangement)
    j. Utility/miscellaneous (e.g. combustible waste)

6. Mixed-use occupancies
    a. Incidental use areas
    b. Accessory use areas

7. Design Occupant Load
    a. Actual occupant load
    b. Occupant load factors
    c. Occupant load combinations
    d. Increased occupant load

8. Posting of occupant load

9. Outdoor area occupant loads

Requisite Skills: The ability to calculate accurate occupant loads, identify occupancy factors related to various occupancy classifications, use measuring tools, read plans, and use a calculator.

402-5.4.3 Review the proposed installation of fire protection systems, given shop drawings and system specifications for a process or operation, so that the system is reviewed for code compliance and installed in accordance with the approved drawings, and deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.

Requisite Knowledge:

1. Proper selection, distribution, location, and testing of portable fire extinguishers (e.g. NFPA 10, International Fire Code*)*

2. methods used to evaluate the operational readiness of water supply systems used for fire protection (e.g. NFPA 24, 25, 13, 14)

3. Evaluation and testing of automatic sprinkler, water spray, and standpipe systems and fire pumps (e.g. NPFA 13, 14, 17, 20)

4. Evaluation and testing of fixed fire suppression systems (e.g. NFPA 15, 16, 17A, 18, 19)

5. Evaluation and testing of automatic fire detection and alarm systems and devices (e.g. NFPA 72, International Fire Code)

Requisite Skills: The ability to read basic floor plans or shop drawings and identify symbols used by the jurisdiction.

402-5.4.4 **Review the installation of fire protection systems, given an installed system, shop drawings, and system specifications for a process or operation, so that the system is reviewed for code compliance and installed in accordance with the approved drawings, and deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.**

Requisite Knowledge:

1. **Proper selection, distribution, location and testing of portable fire extinguishers**

2. **Methods used to evaluate the operational readiness of water supply systems used for fire protection**

3. **Evaluation and testing of automatic sprinkler, water spray, and standpipe systems and fire pumps**

4. **Evaluation and testing of fixed fire suppression systems**

5. **Evaluation and testing of automatic fire detection and alarm systems and devices**

Requisite Skills: The ability to read basic floor plans or shop drawings.

402-5.4.5 Verify that means of egress elements are provided, given a floor plan of a building or portion of a building, so that all elements are identified and checked against applicable codes and standards and deficiencies are discovered and communicated in accordance with the policies of the jurisdiction.

Requisite Knowledge:

1. Applicable codes and standards adopted by the jurisdiction

2. Identification of standard symbols used in plans

3. **Field verification practices**

4. Exit access

5. Exit

6. Exit discharge

7. Ceiling height

8. Protruding objects
a. Headroom
b. Free standing objects
c. Horizontal projections
d. Clear width

9. Floor surface

10. Elevation change

11. Means of egress continuity

12. Elevators, escalators and moving walks

13. Exiting from multiple levels

14. Egress convergence

15. Mezzanine levels

16. Fixed seating

17. Outdoor areas

18. Multiple occupancies and egress

19. Egress width

20. Door encroachment

21. Means of egress illumination
a. Illumination level
b. Emergency power
c. Performance of system

22. Accessible means of egress
a. Applicability to occupants who are physically impaired

b. Continuity and components
c. Elevators
d. Exit stairways
e. Platform lifts
f. Areas of refuge
g. Signage
h. Exterior areas for assisted rescue

23. Doors
a. Size of doors
b. Projections into clear width
c. Door swing
d. Special doors
e. Revolving doors
f. Power operated doors
g. Horizontal sliding doors
h. Access controlled egress doors
i. Security grilles
j. Floor elevation
k. Landings at doors
l. Thresholds
m. Door arrangement
n. Door operations
o. Hardware
p. Locks and latches
q. Delayed egress locks
r. Stairway doors
s. Panic and fire exit hardware

24. Gates

25. Turnstiles

26. Stairways

27. Ramps

28. Exit signs

29. Handrails

30. Guards

31. Exit and exit access doorways

32. Exit access travel distance

~~33. Corridors~~

~~34. Number of exits and continuity~~

~~35. Vertical exit enclosures~~

~~36. Exit passageways~~

~~37. Horizontal exits~~

~~38. Exterior exit ramps and stairways~~

~~39. Exit discharge~~

~~40. Assembly occupancy means of egress~~

~~41. Emergency escape and rescue~~

~~42. Means of egress for existing buildings~~

~~43. Maintenance of the means of egress~~

~~44. Field verification practices (e.g. Underwriter's Laboratory labeling, performance evaluation, comparison of plans to final installation, progress inspections)~~

Requisite Skills: The ability to read plans and research codes and standards.

402-5.4.6 Verify the construction type of a building or portion thereof, given a set of approved plans and specifications, so that the construction type complies with the approved plans and applicable codes and standards.

Requisite Knowledge:

1. Building construction with emphasis on fire-rated construction
2. Evaluation of methods of construction and assemblies for fire rating
3. Analysis of test results
4. Manufacturer's specifications

~~5) Fire tests (e.g., ASTM 119)~~

~~6) Exterior walls~~

~~7) Fire walls~~

~~8) Fire barriers~~

~~9) Shaft enclosures~~

~~10) Fire partitions~~

~~11) Smoke barriers~~

~~12) Smoke partitions~~

~~13) Horizontal assemblies~~

~~14) Penetrations~~

~~15) Fire resistant joint systems~~

~~16) Fire Resistance eating of structural members~~

~~17) Opening protection (e.g. Doors, Windows, Glass, Shutters)~~

~~18) Ducts and air transfer openings~~

~~19) Concealed spaces (e.g. Fire Blocking)~~

~~20) Fire resistance requirements for plaster~~

~~21) Thermal and sound insulating materials~~

~~22) Floor and roof assembly systems-prescriptive (e.g. International Building Code)~~

~~23) Calculated fire resistance (e.g. International Building Code)~~

Requisite Skills: The ability to identify characteristics of each type of building construction.

SECTION 470

PLAN EXAMINER I

470-7.1 ***General***

The Plan Examiner I shall meet the job performance requirements defined in Sections 7.2 and 7.3.

470-7.2 ***Administration***

This duty involves the review of plans, preparation of correspondence and plan review reports, communication with fire inspectors and emergency response personnel, handling of complaints, maintenance of records, participation in legal proceedings, identification of when additional expertise is required, and familiarity with procedures used by the jurisdiction to evaluate alternative methods, according to the following job performance requirements.

470-7.2.1 Prepare reports, given observations from a plan review, so that the report is clear and concise, and reflects the findings of the plan review in accordance with applicable codes and standards and the policies and procedures of the jurisdiction.

Requisite Knowledge:

1. Codes and standards
    a. Reasons for construction permits
    b. Ordinances
    c. Code amendments
    d. Code models
    e. Code types
    f. Code references
    g. Plans review checklists

2. Legal requirements for plan review reports
    a. Administrative
    b. Judicial

3. Accepted practices, policies, and procedures of the jurisdiction
    a. Plan review
    b. Building and life safety components
    c. Design, permitting and construction processes
    d. Plans review organizations
    e. Plans

Requisite Skills: The ability to conduct code-related research and write reports.

470-7.2.2 Facilitate the resolution of deficiencies identified during the plan review, given a submittal and the established policies and procedures of the jurisdiction, so that deficiencies are identified, documented, and reported to the plan submitter with applicable references to codes and standards.

470-A.7.2.2 The plan review process should not select or direct the design of fire protection features; it is intended to evaluate the compliance of a proposed fire protection feature for a given hazard.

Requisite Knowledge:

1. Policies and procedures of the jurisdiction regarding the communication of discrepancies

2. The appeals process
    a. Plans review process
    b. Plan submittal and processing
    c. Legal proceedings

3. Codes and standards
    a. Code references

4. Alternate design
    a. Materials
    b. Methods
    c. Equivalencies
    d. Board of appeals
    e. Performance-based codes
    f. Performance-based design process

Requisite Skills: The ability to communicate orally and in writing.

470-7.2.3 Process plan review documents, given a set of plans and specifications, so that required permits are issued in accordance with the policies of the jurisdiction.

Requisite Knowledge:

1. Plan review policies and procedures of the jurisdiction
    a. Design analysis
    b. Abbreviations and symbols
    c. Measurements
    d. Plan set organization

2. Site, plot, utility and landscape plans

3. Architectural plans

4. Structural plans

5. Mechanical plans

6. Electrical plans

7. Fire protection system plans

8. Hazardous materials and processes

9. Membrane structures and tents

Requisite Skills: The ability to review applications for completeness.

470-7.2.4 Determine the applicable code or standard, given a fire protection issue, so that the proper document, edition, and section are referenced.

470-A.7.2.4 The plan examiner should enforce only those codes and standards that have been legally adopted by the jurisdiction. The plan examiner should retroactively apply codes and standards only when authorized to do so by the jurisdiction.

Requisite Knowledge:

1. Applicable codes and standards adopted by the jurisdiction
    a. Automatic sprinkler systems
    b. Standpipes
    c. Fire alarm and detection systems
    d. Automatic elevators
    e. Fire command center
    f. Restaurant kitchen systems
    g. Gaseous extinguishing agents and systems
    h. Smoke control systems
    i. Portable fire extinguishers

2. Format of codes and standards
    a. Code models
    b. Code types
    c. Code references

3. Interrelationship of codes and standards
    a. Nationally recognized codes and standards
    b. Jurisdiction adopted codes and amendments
    c. State statute, rules and regulations

4. Procedures adopted by the organizations responsible for promulgating these documents
    a. Model code groups
    b. Nationally recognized standards
    c. Local jurisdiction

Requisite Skills: The ability to conduct code-related research, apply codes and standards, and make decisions.

470-7.3 ***Plans Review***

This duty involves the review and approval of plans for life and fire issues including interior finish, occupancy type, height and area limitations, construction type, and general fire safety and the identification of the requirements for fire

protection systems and permits, to ensure that the plans meet the intent of applicable codes and standards for fire and life safety, according to the following job requirements.

470-7.3.1 Identify the requirements for fire protection or a life safety system, given a set of plans, so that deficiencies are identified, documented, and reported in accordance with the policies and procedures of the jurisdiction.

Requisite Knowledge:

1. Applicable code requirements for life safety systems
   a. Occupancy classification
   b. Means of egress
   c. Fire protection features
   d. Building services
2. Interior finish
3. Third-party testing and evaluation

Requisite Skills: The ability to read basic floor plans or shop drawings and identify symbols used and apply codes and standards.

470-7.3.2 Verify the ~~classification of the occupancy type~~ **occupancy classification**, given a set of plans, specifications, and a description of a building and its intended use, so that the classification is made in accordance with the applicable codes and standards and the policies of the jurisdiction.

Requisite Knowledge:

1. How to calculate occupant loads for an occupancy and for building use
2. Code requirements presented by various occupancies
3. Regulations for various occupancies
4. Operational features presented by various occupancies
5. Fire hazards presented by various occupancies

Requisite Skills: The ability to calculate occupant loads, identify occupancy factors related to various occupancy types, and use measuring tools.

470-7.3.3 Verify the construction type, given a set of plans, including the occupancy classification area, height, number of stories, and location, so that the building is in accordance with applicable codes and standards and deficiencies are identified, documented, and reported.

Requisite Knowledge:

1. Types of construction

2. Fire-related construction components

3. Typical building construction methods and materials

4. Code requirements related construction types

Requisite Skills: The ability to read plans, determine construction types, and conduct code-related research.

470-7.3.4 Verify the occupant load, given a set of plans, so that the maximum allowable occupant load is in accordance with applicable codes and standards.

Requisite Knowledge:
1. How to calculate occupant loads for an occupancy and for building use

2. Code requirements presented by various occupancies

3. Regulations for various occupancies

4. Operational features presented by various occupancies

5. Fire hazards presented by various occupancies

Requisite Skills: The ability to calculate occupant loads, identify occupancy factors related to various occupancy types, and use measuring tools.

470-7.3.5 Verify that ~~adequate~~ **required** egress is provided, given a set of plans and an occupant load, so that all required egress elements are provided and deficiencies are identified, documented, and reported in accordance with the policies of the jurisdiction.

470-A.7.3.5 This individual should be able to calculate occupant loads and determine occupant egress capabilities and systems. He or she should be able to cite multiple references from various codes and standards that reflect an understanding of the topic.

Requisite Knowledge:

1. Applicable code requirements for means of egress elements
    a. Components
    b. Capacity
    c. Number
    d. Arrangement
    e. Travel distance
    f. Discharge
    g. Illumination
    h. Emergency lighting
    i. Marking

j. Special provisions

2. Occupancy egress requirements
   a. General
   b. Specific

3. The relationship of fixed fire protection systems to egress requirements
   a. Fire alarm
   b. Fire suppression
   c. Smoke control
   d. Elevator controls

Requisite Skills: The ability to determine egress requirements based on occupant load and research codes.

470-7.3.6 Evaluate code compliance for required fire flow and hydrant location and spacing, given a plan, codes and standards, and fire flow test results, so that hydrants are correctly located, required fire flow is determined, and deficiencies are identified, documented, and reported in accordance with the policies and procedures of the jurisdiction.

Requisite Knowledge:
1. Standard civil engineering symbols
2. Types of water supply and distribution systems
3. Water distribution system test methods
4. Characteristics of public and private water supply systems
5. Water meters, backflow prevention and other devices that can impact on fire flow
6. The effects of friction loss and elevation on water flow
7. Potential impact of state health regulations on fire flow
8. The applicable codes and standards related to fire flow in the jurisdiction

Requisite Skills: The ability to interpret fire flow test results, determine fire hydrant locations and spacing, and read fire flow graphs.

470-7.3.7 Evaluate ~~code compliance of~~ emergency vehicle access, given a plan, so that emergency access is provided in accordance with applicable codes and standards and deficiencies are identified, documented, and reported in accordance with the policies of the jurisdiction.

Requisite Knowledge:
1. Operating requirements for fire department apparatus

a. Minimum inside/outside radii
b. Minimum width
c. Minimum vertical clearance
d. Weight

2. Planning and zoning requirements

3. Emergency access and accessibility requirements of applicable codes and standards
    a. Acceptable surfaces
    b. Specifications for dead end roads, turnarounds, cul-de-sacs and access gates
    c. Markings

Requisite Skills: The ability to interpret and use plan scale.

470-7.3.8 Recommend policies and procedures for the delivery of plan review services, given management objectives, so that plan reviews are conducted in accordance with the policies of the jurisdiction and due process of the law is followed.

Requisite Knowledge:
1. Policies and procedures of the jurisdiction related to plan review

2. Sources of detailed and technical information relating to fire protection and life safety
    a. Nationally recognized codes and standards
    b. Professional organizations
    c. Trade organizations

Requisite Skills: The ability to identify construction methods and materials related to fire safety, read and interpret construction plans and specifications, communicate orally and in writing, educate, research, make decisions, recognize problems, and resolve conflicts.

470-7.3.9 Participate in legal proceedings, given the findings of a plan review and consultation with legal counsel, so that testimony is accurate and the plan reviewer's demeanor is appropriate to the proceeding.

470-A.7.3.9 The committee intends that this requirement encompass preparation, documentation, and presentation in a formal proceeding, such as a deposition, administrative hearing, or court proceeding.

Requisite Knowledge:
1. The legal requirements pertaining to evidence rules in the legal system
    a. Vernon's Civil Statutes
    b. Code of Criminal Procedure
    c. Texas Rules of Evidence

2. The types of legal proceedings
   a. Civil
   b. Criminal
   c. Administrative (e.g., Board of Appeals, sanctions, fire marshal order)
   d. Statutory

Requisite Skills: Familiarity with courtroom demeanor, communication, and listening skills and the ability to differentiate facts from opinions.

470-7.3.10 Evaluate plans for the installation of fire protection and life safety systems, given a plan submittal, so that the fire protection systems, including pre-engineered systems, and equipment are reviewed and deficiencies are identified, documented, and reported in accordance with the policies and procedures of the jurisdiction.

Requisite Knowledge:

1. Applicable codes and standards for fire protection systems
2. Basic physical science as it relates to fire behavior and fire suppression
3. Basic system design criteria
4. Material listing requirements
5. Material specifications
6. Installation techniques
7. Acceptance inspection/testing of completed installations
8. Construction types and techniques
9. Classification of occupancies

Requisite Skills: The ability to review specifications, read plans, classify occupancies, and apply standards.

4. **Presentation of information and discussion regarding Pro Board Certification history and process.**

5. **Discussion and possible recommendation regarding proposed rule changes to 37 TAC, Chapter 431, Minimum Standards For Arson Investigation Certification, including, but not limited to §431.1, Minimum Standards For Arson Investigation Personnel; §431.3, Minimum Standards For Basic Arson Investigator Certification; §431.13, International Fire Service Accreditation Congress (IFSAC) Seal; Subchapter B Minimum Standards for Fire Investigator Certification; §431.201, Minimum Standards for Fire Investigation Personnel.**

CHAPTER 431

FIRE INVESTIGATION

Subchapter A

MINIMUM STANDARDS FOR ARSON INVESTIGATOR CERTIFICATION

§431.1. Minimum Standards for Arson Investigation Personnel.

(a) Fire protection personnel who are assigned arson investigation duties must be certified, as a minimum, as a basic arson investigator as specified in §431.3 of this title (relating to Minimum Standards for Basic Arson Investigator Certification) within one year from the date of initial appointment to such position.

(b) Prior to being appointed to arson investigation duties, fire protection personnel must complete a commission approved basic fire investigator training program**,** ~~and~~ successfully pass the commission examination pertaining to that curriculum~~.~~**, and possess a current peace officer license from the Texas Commission on Law Enforcement Officer Standards and Education or document that the individual is a federal law enforcement officer.**

(c) Personnel holding any level of arson investigation certification shall be required to comply with the continuing education requirements in §441.15 of this title (relating to Continuing Education Requirements for Arson Investigator or Fire Investigator).

§431.3. Minimum Standards for Basic Arson Investigator Certification.

In order to be certified by the Commission as a Basic Arson Investigator an individual must:

(1) possess a current basic peace officer's license from the Texas Commission on Law Enforcement Officer Standards and Education or documentation that the individual is a federal law enforcement officer;

(2) hold a current ~~commission~~ **license** as a peace officer **and notify the Commission on the prescribed form regarding the law enforcement agency currently holding the individual's peace officer license** ~~with the employing entity for which the arson investigations will be done~~; and

(3) possess valid documentation of accreditation from the International Fire Service Accreditation Congress as a Fire Investigator; or

(4) complete a Commission-approved basic fire investigation training program and successfully pass the Commission examination as specified in Chapter 439 of this title (relating to Examinations for Certification). An approved fire investigation training program shall consist of one of the following:

(A) completion of the Commission-approved Fire Investigator Curriculum, as specified in Chapter 5 of the Commission's Certification Curriculum Manual;

(B) successful completion of an out-of-state, NFA, or military training program which has been submitted to the Commission for evaluation and found to meet the minimum requirements

as listed in the Commission-approved Fire Investigator Curriculum as specified in Chapter 5 of the Commission's Certification Curriculum Manual; or

(C) successful completion of the following college courses: Arson Investigator, 3 semester hours; Hazardous Materials, 3 semester hours; Building Construction, 3 semester hours; Fire Protection Systems, 3 semester hours. Total semester hours, 12. The three semester hour course "Building Codes and Construction" may be substituted for Building Construction. Arson Investigator I or II may be used to satisfy the requirements of Arson Investigation. Hazardous Materials I or II may be used to satisfy the requirements of Hazardous Materials.

§431.5. Minimum Standards for Intermediate Arson Investigator Certification.

(a) Applicants for Intermediate Arson Investigator Certification must complete the following requirements:

(1) hold as a prerequisite a Basic Arson Investigator Certification as defined in §431.3 of this title (relating to Minimum Standards for Basic Arson Investigator Certification); and

(2) acquire a minimum of four years of fire protection experience and complete the requirements listed in one of the following options:

(A) Option 1--Successfully complete six semester hours of fire science or fire technology from an approved Fire Protection Degree Program and submit documentation as required by the commission that the courses comply with subsections (b) and (c) of this section; or

(B) Option 2—Completion of coursework from either the A-List or the B-List courses. Acceptable combinations of courses are as follows: two A-List courses; or eight B-List courses; or one A-List course and four B-List courses. (See the exception outlined in subsection (c) of this section); or

(C) Option 3—Completion of coursework from either the A-List or the B-List courses in combination with college courses in fire science or fire protection. Acceptable combinations of courses are three semester hours meeting the requirements of Option 1 with either one A-List course or four B-List courses (See the exception outlined in subsection (c) of this section); or

(D) Option 4—Hold current Intermediate Peace Officer certification from the Texas Commission on Law Enforcement Officer Standards and Education (TCLEOSE) with four additional law enforcement courses applicable for fire investigations. (See exception outlined in subsection (c) of this section.)

(b) Non-traditional credit awarded at the college level, such as credit for experience or credit by examination obtained from attending any school in the commission's Certification Curriculum Manual or for experience in the fire service, may not be counted toward this level of certification.

(c) The training required in this section must be in addition to any training used to qualify for any lower level of Arson Investigator Certification. Repeating a course or a course of similar content cannot be used towards this level of certification.

§431.7. Minimum Standards for Advanced Arson Investigator Certification.

(a) Applicants for Advanced Arson Investigator certification must complete the following requirements:

(1) hold as a prerequisite an Intermediate Arson Investigator Certification as defined in §431.5 of this title (relating to Minimum Standards for Intermediate Arson Investigator Certification); and

(2) acquire a minimum of eight years of fire protection experience and complete the requirements listed in one of the following options:

(A) Option 1--Successfully complete six semester hours of fire science or fire technology from an approved Fire Protection Degree Program and submit documentation as required by the commission that the courses comply with subsections (b) and (c) of this section; or

(B) Option 2—Completion of coursework from either the A-List or the B-List courses. Acceptable combinations of courses are as follows: two A-List courses; or eight B-List courses; or one A-List course and four B-List courses. (See the exception outlined in subsection (c) of this section); or

(C) Option 3—Completion of coursework from either the A-List or the B-List courses in combination with college courses in fire science or fire protection. Acceptable combinations of courses are three semester hours meeting the requirements of Option 1 with either one A-List course or four B-List courses (See the exception outlined in subsection (c) of this section); or

(D) Option 4--Advanced Arson for Profit or Complex Arson Investigative Techniques (Bureau of Alcohol, Tobacco, Firearms, and Explosives resident or field course, 80 hours); or

(E) Option 5—Hold current Advanced Peace Officer certification from the Texas Commission on Law Enforcement Officer Standards & Education (TCLEOSE) with four additional law enforcement courses applicable for fire investigations. (See exception outlined in subsection (c) of this section.)

(b) Non-traditional credit awarded at the college level, such as credit for experience or credit by examination obtained from attending any school in the commission's Certification Curriculum Manual or for experience in the fire service, may not be counted toward this level of certification.

(c) The training required in this section must be in addition to any training used to qualify for any lower level of Arson Investigator Certification. Repeating a course or a course of similar content cannot be used towards this level of certification.

§431.9. Minimum Standards for Master Arson Investigator Certification.

(a) Applicants for Master Arson Investigator Certification must complete the following requirements:

(1) hold as a prerequisite an Advanced Arson Investigator Certification as defined in §431.7 of this title (relating to Minimum Standards for Advanced Arson Investigator Certification); and

(2) acquire a minimum of twelve years of fire protection experience, and 60 college semester hours or an associate degree, which includes at least 18 college semester hours in fire science subjects.

(b) College level courses from both the upper and lower division may be used to satisfy the education requirement for Master Arson Investigator Certification.

§431.11. Minimum Standards for Arson Investigator Certification for Law Enforcement Personnel.

(a) A law enforcement officer employed or commissioned by a law enforcement agency as a peace officer who is designated as an arson investigator by an appropriate local authority is eligible for certification on a voluntary basis by complying with this chapter.

(b) An individual holding commission certification as a fire investigator who becomes a law enforcement officer employed or commissioned by a law enforcement agency as a peace officer, and who is designated as an arson investigator by an appropriate local authority will qualify for a similar level arson

investigator certificate. To obtain a printed certificate the individual must make application to the commission to include confirmation of commission.

§431.13. International Fire Service Accreditation Congress (IFSAC) Seal.

(a) Individuals holding a current commission Arson Investigator certification **received prior to March 10, 2003** may be granted an International Fire Service Accreditation Congress (IFSAC) seal as a Fire Investigator by making application to the commission for the IFSAC seal and paying applicable fees.

(b) Individuals completing a commission-approved basic fire investigator program and passing the applicable state examination may be granted an IFSAC seal as a Fire Investigator by making application to the commission for the IFSAC seal and paying applicable fees.

SUBCHAPTER B

MINIMUM STANDARDS FOR FIRE INVESTIGATOR CERTIFICATION

§431.201. Minimum Standards for Fire Investigation Personnel.

(a) Fire protection personnel who ~~are appointed~~ **receive temporary or probationary appointment to** fire investigation duties must be~~, as a minimum,~~ certified as a ~~structure fire protection personnel or~~ fire investigator by the commission~~.~~ **within one year of appointment to such duties.**

(b) Prior to being appointed to fire investigation duties, personnel ~~who are not certified as structure fire protection personnel~~ must**:**

(1) complete a commission approved basic fire investigator training program and successfully pass the commission examination pertaining to that curriculum**; or**

(2) hold current certification as structure fire protection personnel.

(c) Individuals holding a Fire Investigator certification shall be required to comply with the continuing education requirements in §441.15 of this title (relating to Continuing Education Requirements for Arson Investigator or Fire Investigator).

(d) Individuals certified under this subchapter shall limit their investigation to determining fire cause and origin. If evidence of a crime is discovered, custody and control of the investigation shall be immediately transferred to a certified arson investigator or licensed peace officer.

(e) Individuals who previously held arson investigator certification, who no longer hold a current commission as a peace officer, will qualify for certification as a fire investigator of similar level upon notice to the commission. To obtain a printed certificate the individual will be required to make application to the commission.

§431.203. Minimum Standards for Fire Investigator Certification.

(a) In order to be certified by the Commission as a Fire Investigator an individual must complete the requirements specified in §431.3(a)(3) or (4) of this title (relating to Minimum Standards for Basic Arson Investigator Certification).

(b) A person who holds or is eligible to hold a certificate as a Fire Investigator may be certified as an Arson Investigator by meeting the requirements of Chapter 431, Subchapter A, but shall not be required to repeat the applicable examination requirements.

§431.205. Minimum Standards for Intermediate Fire Investigator Certification.

(a) Applicants for Intermediate Fire Investigator must complete the following requirements:

(1) hold as a prerequisite a Basic Fire Investigator Certification as defined in §431.203 of this title (relating to Minimum Standards for Fire Investigator Certification); and

(2) acquire a minimum of four years of fire protection experience and complete the training listed in one of the following options:

(A) Option 1—Successfully complete six semester hours of fire science or fire technology from an approved Fire Protection Degree Program and submit documentation as required by the commission that the courses comply with subsections (b) and (c) of this section; or

(B) Option 2—Completion of coursework from either the A-List or the B-List courses. Acceptable combinations of courses are as follows: two A-List courses; or eight B-List courses; or one A-List and four B-List courses. (See the exception outlined in subsection (c) of this section.); or

(C) Option 3—Completion of coursework from either the A-List or the B-List courses in combination with college courses in fire science or fire protection. Acceptable combinations of courses are three semester hours meeting the requirements of Option 1 with either one A-List course or four B-List courses. (See the exception outlined in subsection (c) of this section.)

(b) Non-traditional credit awarded at the college level, such as credit for experience or credit by examination obtained from attending any school in the commission's Certification Curriculum Manual or for experience in the fire service, may not be counted toward this level of certification.

(c) The training required in this section must be in addition to any training used to qualify for any lower level of Fire Investigator Certification. Repeating a course or a course of similar content cannot be used towards this level of certification.

§431.207. Minimum Standards for Advanced Fire Investigator Certification.

(a) Applicants for Advanced Fire Investigator must complete the following requirements:

(1) hold as a prerequisite an Intermediate fire Investigator Certification as defined in §431.203 of this title (relating to Minimum Standards for Fire Investigator Certification); and

(2) acquire a minimum of eight years of fire protection experience and complete the training listed in one of the following options:

(A) Option 1—Successfully complete six semester hours of fire science or fire technology from an approved Fire Protection Degree Program and submit documentation as required by the commission that the courses comply with subsections (b) and (c) of this section; or

(B) Option 2—Completion of coursework from the either A-List or the B-List courses. Acceptable combinations of courses are as follows: two A-List courses; or eight B-List courses; or one A-List and four B-List courses. (See the exception outlined in subsection (c) of this section.); or

(C) Option 3—Completion of coursework from either the A-List the B-List courses in combination with college courses in fire science or fire protection. Acceptable combinations of courses are three semester hours meeting the requirements of Option 1 with either one A-List course or four B-List courses. (See the exception outlined in subsection (c) of this section.)

(b) Non-traditional credit awarded at the college level, such as credit for experience or credit by examination obtained from attending any school in the commission's Certification Curriculum Manual or for experience in the fire service, may not be counted toward this level of certification.

(c) The training required in this section must be in addition to any training used to qualify for any lower level of Fire Investigator Certification. Repeating a course or a course of similar content cannot be used towards this level of certification.

§431.209. Minimum Standards for Master Fire Investigator Certification.

(a) Applicants for Master Fire Investigator Certification must complete the following requirements:

(1) hold as a prerequisite an Advanced Fire Investigator Certification as defined in §431.207 of this title (relating to Minimum Standards for Advanced Fire Investigator Certification); and

(2) acquire a minimum of twelve years of fire protection experience, and sixty college semester hours or an associate degree, which includes at least eighteen college semester hours in fire science subjects.

(b) College level courses from both the upper and lower division may be used to satisfy the education requirement for Master Fire Investigator Certification.

§431.211. International Fire Service Accreditation Congress (IFSAC) Seal -- Fire Investigator.

(a) Individuals holding a current commission Fire Investigator certification **received prior to March 10, 2003** may be granted an International Fire Service Accreditation Congress (IFSAC) seal as a Fire Investigator by making application to the commission for the IFSAC seal and paying applicable fees.

(b) Individuals completing a commission-approved basic fire investigator program and passing the applicable state examination may be granted an IFSAC seal as a Fire Investigator by making application to the commission for the IFSAC seal and paying applicable fees.

6. **Discussion and possible recommendation regarding proposed rule changes to 37 TAC, Chapter 435, Fire Fighter Safety, including, but not limited to new §435.25,Courage to be Safe Program**

Chapter 435

FIRE FIGHTER SAFETY

§435.1. Protective Clothing.

(a) A regulated fire department shall:

(1) purchase, provide, and maintain a complete set of protective clothing for all fire protection personnel who would be exposed to hazardous conditions from fire or other emergencies or where the potential for such exposure exists. A complete set of protective clothing shall consist of garments including bunker coats, bunker pants, boots, gloves, helmets, and protective hoods, worn by fire protection personnel in the course of performing fire-fighting operations;

(2) ensure that all protective clothing which are used by fire protection personnel assigned to fire suppression duties comply with the minimum standards of the National Fire Protection Association suitable for the tasks the individual is expected to perform. The National Fire Protection Association standard applicable to protective clothing is the standard in effect at the time the entity contracts for new, rebuilt, or used protective clothing; and

(3) maintain and provide upon request by the Commission, a departmental standard operating procedure regarding the use, selection, care, and maintenance of protective clothing which complies with NFPA 1851, Standard on Selection, Care, and Maintenance of Structural Fire Fighting Protective Ensembles.

(b) An entity may continue to use protective clothing in use or contracted for before a change in the National Fire Protection Association standard, unless the Commission determines that the protective clothing constitutes an undue risk to the wearer, in which case the Commission shall order that the use be discontinued and shall set an appropriate date for compliance with the revised standard.

(c) Protective clothing in use or contracted for prior to January 1, 2002, shall be exempted from the record keeping requirements contained in Section 2.3, Records, of NFPA 1851.

(d) In accordance with §419.043, Texas Government Code and subsection (b) of this section as set out hereinabove and consistent with past practice with respect to the implementation of NFPA standards when immediate implementation of a standard as written is impractical for Texas, the modifications contained in Sections 10.1.2, 10.1.3, and 10.1.3.1 of the 2008 Edition of NFPA 1851 (effective June 24, 2007) shall be implemented as follows:

(1) with respect to Section 10.1.2, structural fire fighting ensembles and ensemble elements shall be retired in accordance with Section 10.2.1 of the 2008 Edition of NFPA 1851, no more than 12 years from the date the ensembles or ensemble elements were manufactured, or no more than 10 years from the date the ensemble or ensemble elements were first put into service;

(2) with respect to Section 10.1.3, proximity fire fighting ensembles and ensemble elements shall be retired in accordance with Section 10.2.1 of the 2008 Edition of NFPA 1851, no more than 12 years from the date the ensembles or ensemble elements were manufactured, or no more than ten years from the date the ensemble or ensemble elements were first put into service; and

(3) with respect to Section 10.1.3.1, the radiant reflective outer shells shall be retired in accordance with Section 10.2.1 of the 2008 Edition of NFPA 1851, no more than 7 years from the date the outer shells are manufactured or no more than 5 years from the date the outer shells were first put into service.

(e) Subsections (d) and (e) of this section will expire March 1, 2011.

§435.3. Self-Contained Breathing Apparatus.

The employing entity shall:

(1) purchase, provide, and maintain a complete self-contained breathing apparatus for each on-duty fire protection personnel who engage in operations where IDLH atmospheres may be encountered, where the atmosphere is unknown or would be exposed to hazardous atmospheres from fire or other emergencies or where the potential for such exposure exists;

(2) ensure that all self-contained breathing apparatus used by fire protection personnel complies with the minimum standards of the National Fire Protection Association identified in NFPA 1981, Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire Fighters.

(A) the National Fire Protection Association standard applicable to a self-contained breathing apparatus is the standard in effect at the time the entity contracts for new, rebuilt, or used self-contained breathing apparatus;

(B) an entity may continue to use a self-contained breathing apparatus in use or contracted for before a change in the National Fire Protection Association standard, unless the Commission determines that the continued use of the self-contained breathing apparatus constitutes an undue risk to the wearer, in which case the Commission shall order that the use be discontinued and shall set an appropriate date for compliance with the revised standard;

(3) develop an air quality program that complies with the most recent edition of the NFPA 1989 Standard on Breathing Air Quality for Emergency Services Respiratory Protection;

(4) maintain and supply upon request by the Commission, records and reports documenting compliance with Commission requirements concerning self-contained breathing apparatus and breathing air. Records of all tests shall be made and the records shall be retained for a period of no less than three years;

(5) maintain and provide upon request by the Commission, a departmental standard operating procedure regarding the use of self-contained breathing apparatus; and

(6) maintain and provide upon request by the Commission, a department standard operating procedure regarding the selection, care, and maintenance of self-contained breathing apparatus that complies with the most recent edition of the NFPA 1852 Standard on Selection, Care, and Maintenance of Open-Circuit Self-Contained Breathing Apparatus (SCBA).

§435.5. Commission Recommendations.

The commission recommends that all employing entities use as a guide the following publications:

(1) NFPA 1403 "Live Fire Training Evolutions";

(2) NFPA 1500 "Fire Department Occupational Safety and Health Program;"

(3) IAFF/IAFC - “Fire Service Joint Labor Management Wellness-Fitness Initiative.”

§435.7. Fire Department Staffing Studies.

(a) Section 419.022(a)(4) Texas Government Code provides that the commission may "on request, assist in performing staffing studies of fire departments." Staffing studies must take into consideration all the objectives and missions of the fire department. The commission does not have the resources or the staff to directly assist in performing the necessary tasks to perform a staffing study. Many staffing studies have been developed that can be used to assist in evaluating the needs of a fire department.

(b) A city should ultimately decide on the level of fire protection it is willing to provide to its citizens. The city and fire department should, as a minimum, address the needs of prevention, investigation and suppression as outlined in the appropriate NFPA Standards. That decision should be based on facts, the safety of its citizens, and the safety of the fire fighters providing that protection.

(c) The commission will assist by maintaining information pertinent to fire department staffing. The information shall be maintained in the Ernest A. Emerson Fire Protection Resource Library at the Texas Commission on Fire Protection. Copies shall be made available, free of charge, to anyone requesting such information to the extent permitted by copyright laws.

§435.9. Personal Alert Safety System (PASS).

The employing entity shall:

(1) purchase, provide, and maintain a PASS device for each on duty fire protection personnel who engage in operations where IDLH atmospheres may be encountered, or where the atmosphere is unknown, or where hazardous conditions from fire or other emergencies exist, or where the potential for such exposure exists;

(2) ensure that all PASS devices used by fire protection personnel comply with the minimum standards of the National Fire Protection Association identified in NFPA 1982, Standard on Personal Alert Safety Systems (PASS) for Fire Fighters:

(A) the National Fire Protection Association standard applicable to a PASS device is the standard in effect at the time the entity contracts for new, rebuilt, or used PASS devices;

(B) an entity may continue to use a PASS device that meets the requirements of an earlier edition of NFPA 1982, unless the commission determines that the continued use of the PASS device constitutes an undue risk to the wearer, in which case the commission shall order that the use be discontinued and shall set an appropriate date for compliance with the revised standard;

(3) ensure that the PASS device assigned to an individual user be inspected at the beginning of each duty period and before each use.

(4) maintain and provide upon request by the commission, a departmental standard operating procedure regarding the proper use, selection, care and maintenance of PASS devices.

§435.11. Incident Management System (IMS)

(a) The fire department shall develop, maintain and use an incident management system.

(b) The incident management system shall:

(1) include a written operating procedure for the management of emergency incidents;

(2) require that the IMS be used at all emergency incidents;

(3) require operations to be conducted in a manner that recognizes hazards and assists in the prevention of accidents and injuries;

(4) require that all fire protection personnel be trained in the use of the IMS; and

(5) require that the IMS be applied to all drills, exercises and all other situations that involve hazards similar to those encountered at an actual emergency.

(c) The IMS shall meet the requirements of the applicable sections of the National Fire Protection Association 1561, Standard on Fire Department Incident Management System.

(d) The Commission recommends departments follow the National Incident Management System (NIMS) when developing their incident management system.

§435.13. Personnel Accountability System.

(a) The fire department shall develop, maintain and use a personnel accountability system that provides for a rapid accounting of all personnel at an emergency incident.

(b) The accountability system shall:

(1) require all fire protection personnel be trained in the use of the accountability system;

(2) require that the fire protection personnel accountability system be used at all incidents;

(3) require that all fire protection personnel operating at an emergency incident to actively participate in the personnel accountability system; and

(4) require that the incident commander be responsible for the overall personnel accountability system for the incident.

(c) The fire department shall be responsible for developing the system components required to make the personnel accountability system effective.

(d) The personnel accountability system shall meet the minimum standards required by the National Fire Protection Association 1561, Standard on Fire Department Incident Management System. If the standard is revised, the fire department shall have one (1) year from the effective date of the new standard to comply.

§435.15. Operating At Emergency Incidents.

(a) The fire department shall develop, maintain and use a standard operating procedure for fire protection personnel operating at emergency incidents.

(b) The standard operating procedure shall:

(1) specify an adequate number of personnel to safely conduct emergency scene operations;

(2) limit operations to those that can be safely performed by personnel at the scene;

(3) require all personnel to be trained in and use the standard operating procedures; and

(4) comply with §435.17 (Procedures for Interior Structural Fire Fighting).

(c) The fire department may use standards established by the National Fire Protection Association for fire protection personnel operating at an emergency incident.

§435.17. Procedures for Interior Structural Fire Fighting (2-In/2-Out Rule).

(a) The fire department shall develop written procedures that comply with the Occupational Safety and Health Administration’s Final Rule, 29 CFR Section 1910.134(g)(4) by requiring:

(1) a team of at least four fire protection personnel must be assembled before an interior fire attack can be made when the fire has progressed beyond the incipient stage;

(2) at least two fire protection personnel to enter the IDLH atmosphere and remain in visual or voice (not radio) contact with each other;

(A) Visual means that the fire protection personnel must be close enough to see each other.

(B) Voice means that the fire protection personnel of the entry team must be close enough to speak to one another without the use of radios.

(3) at least two fire protection personnel remain located outside the IDLH atmosphere to perform rescue of the fire protection personnel inside the IDLH atmosphere;

(4) all fire protection personnel engaged in interior structural fire fighting use self-contained breathing apparatus and be clothed in a complete set of protective clothing as identified in Chapter 435;

(5) all fire protection personnel located outside the IDLH atmosphere be equipped with appropriate retrieval equipment where retrieval equipment would contribute to the rescue of the fire protection personnel that have entered the IDLH atmosphere;

(6) one of the outside fire protection personnel must actively monitor the status of the inside fire protection personnel and not be assigned other duties. The second outside fire protection personnel may be assigned to an additional role, including, but not limited to, incident commander, safety officer, driver-operator, command technician or aide, or fire fighter/EMS personnel, so long as this individual is able to perform assistance or rescue activities without jeopardizing the safety or health of any fire protection personnel working at the scene;

(7) the fire protection personnel outside the IDLH atmosphere must remain in communication (including, but not limited to, radio) with the fire protection personnel in the IDLH atmosphere. Use of a signal line (rope) as a communications instrument for interior fire fighting is not permitted by the commission. This does not preclude the use of rescue guide ropes (guide line or lifeline or by what ever name they may be called) used during structural searches; and

(8) each outside fire protection personnel must have a complete set of protective clothing and self-contained breathing apparatus, as identified in Chapter 435, immediately accessible for use if the need for rescue activities inside the IDLH atmosphere is necessary.

(b) The fire department shall comply with the 2-in/2-out rule as described in this section except in an imminent life-threatening situation when immediate action could prevent the loss of life or serious injury before the team of four fire protection personnel are assembled.

§435.19. Enforcement of Commission Rules.

(a) The Commission shall enforce all Commission rules at any time, including, but not limited to, Commission investigations, fire department inspections, or upon receiving a written complaint from an identified person or entity of an alleged infraction of a Commission rule.

(b) The Commission shall not provide prior notification of an inspection to a fire department.

(c) Upon receipt of a signed complaint alleging a violation of a Commission rule, the Commission shall have 30 days to initiate an investigation and report back to the complainant its progress.

(d) Upon substantiating the validity of a written complaint, the Commission shall follow the procedures outlined in Government Code, Chapter 419, §419.011(b) and (c).

§435.21. Fire Service Joint Labor Management Wellness-Fitness Initiative.

(a) A fire department shall assess the wellness and fitness needs of the personnel in the department. The procedure used to make this assessment shall be written and made available for commission inspection.

(b) A fire department shall develop and maintain a standard operating procedure to address those needs.

(c) The approach to the fitness needs of the department shall be based on the local assessment and local resources.

(d) The standard operating procedure shall be made available to the commission for inspection.

§435.23. Fire Fighter Injuries.

(a) A fire department shall report all Texas Workers' Compensation Commission reportable injuries that occur to on-duty regulated fire protection personnel on the Commission form.

(b) Minor injuries are those injuries that do not result in the fire fighter missing more than one duty period or does not involve the failure of personal protective equipment. Minor injuries shall be reported within 30 business days of the injury event.

(c) Major injuries are those that require the fire fighter to miss more than one duty period. Major injuries shall be reported within five business days of the injury event.

(d) Investigatable injuries are those resulting from the malfunction of personal protective equipment, failure of personal protective equipment to protect the fire fighter from injury, or injuries sustained from failure to comply with any provision of Commission mandated department SOPs. Investigatable injuries shall be reported within five business days of the injury event.

(e) The regulated entity shall secure any personal protective equipment involved in a fire fighter injury and shall be made available to the Commission for inspection.

§435.25. Courage To Be Safe Program

(a) In an effort to improve firefighter safety in the State of Texas, all firefighters regulated by the Texas Commission on Fire Protection as of -------are required to complete the Courage to be Safe Curriculum utilizing an instructor approved by the National Fallen Firefighter Foundation by ---------(date five years from the adoption date).

(b) TCFP Inspectors will verify training records that all regulated members have accomplished this training after this date.

(c) Regulated fire fighters hired after the date when training is to be completed will be required to complete this training within one year of being hired by a fire department.

City of Lancaster
FIRE DEPARTMENT
PROTECT THE PUBLIC BE POLITE GO HOME SAFE
1650 N. Dallas Avenue. * Lancaster, TX 75134 * 972.218.2600 * 972.218.2699 FAX
www.lancaster-tx.com

August 17, 2010

Texas Commission on Fire Protection

P.O. Box 2286

Austin, TX 78768 2286

Fax (512) 936-3808

The **Lancaster Fire Department** supports the Texas Commission on Fire Protection requiring all regulated firefighters to complete the National Fallen Firefighter Foundation, Courage to Be Safe Program. This program reviews the 16 Firefighter Life Safety Initiatives in an effort to reduce LODDs. The rule change proposed to the Commission allows a firefighter five years to complete this course from its adoption date and after this period all new firefighters must complete it within one year of their hire date. These training hours will count towards the 20 hours of continuing education required by the Commission for each firefighter. The Courage to be Safe program is three to four hours long and there will be numerous train-the-trainer courses offered for fire departments to provide internal training to their members. There will also be an Internet version of the course as an alternative means to complete this class.

In closing, the **Lancaster Fire Department** supports this effort to reduce LODDs in the fire service.

Sincerely,

Dick Knopf, Fire Chief

CITY OF HOUSTON

Fire Department

Annise D. Parker
Mayor

Rick Flanagan
Acting Fire Chief
1205 Dart Street
Houston, Texas 77007
T.713.247.5083
F.713.247.5004
www.cityofhouston.gov

August 27, 2010

VIA FACSIMILE* (512) *9363808

Texas Commission on Fire Protection
P.O. Box 2286
Austin, TX 78768-2286

The Houston Fire Department supports the Texas Commission on Fire Protection requiring all regulated firefighters to complete the National Fallen Firefighter Foundation, Courage to be Safe Program. This program reviews the 16 Firefighter Life Safety Initiatives in an effort to reduce LODDs. The rule change proposed to the Commission allows a firefighter of five years to complete this course from its adoption date and after this period all new firefighters must complete it within one year of their hire date. These training hours will count towards the 20 hours of continuing education required by the Commission for each firefighter. The Courage to be Safe program is three to four hours long and there will be numerous train-the-trainer courses offered for fire departments to provide internal training to their members and there will also be an Internet version of the course as well as an alternative means to complete this class.

In closing, the Houston Fire Department supports this effort to reduce LODDs in the fire service.

Sincerely,

Rick Flanagan
Acting Fire Chief
Houston Fire Department

CAPITAL AREA FIRE CHIEFS ASSOCIATION

PO Box 162170
Austin, TX 78716-2170

*** Officers***

Gary Warren, President

Ron Moellenberg, V.P.
Mark Warren, Sect./Tres.
Jim Linardos, A. S.

September 2, 2010

Texas Commission on Fire Protection
P.O. Box 2286
Austin, TX 78768-2286
Fax (512) 936-3808

The Capital Area Fire Chiefs Association (CAFCA) supports the Texas Commission on Fire Protection requiring all regulated firefighters to complete the National Fallen Firefighter Foundation, Courage to be Safe Program. This program reviews the 16 Firefighter Life Safety Initiatives in an effort to reduce LODDs. The rule change proposed to the Commission allows a firefighter five years to complete this course from its adoption date and after this period all new firefighters must complete it within one year of their hire date. These training hours will count towards the 20 hours of continuing education required by the Commission for each firefighter. The Courage to be Safe program is three to four hours long and there will be numerous train-the-trainer courses offered for fire departments to provide internal training to their members and there will also be an Internet version of the course as well as an alternative means to complete this class.

In closing, CAFCA supports this effort to reduce LODDs in the fire service.

Sincerely,

Gary Warren
President, CAFCA

7. Discussion and possible recommendation regarding proposed rule changes to 37 TAC, Chapter 437, Fees, including, but not limited to §437.1, Purpose and Scope; §437.5, Renewal Fees, §437.7,Standards Manual and Certification Curriculum Manual Fees.

CHAPTER 437

FEES

§437.1. Purpose and Scope.

(a) The purpose of these sections is to set forth requirements governing the fees charged for the issuance of certificates to fire protection personnel, to establish the procedures for the collection of annual renewal fees, ~~fees for commission manuals,~~ and copying fees as prescribed by the Government Code, §419.025 and §419.026, and commission rule.

(b) These sections shall govern all proceedings before and dealing with the commission concerning certification fees, renewal fees, fees for commission manuals, and copying fees. Hearings and appellate proceedings regarding these fees shall be governed by these sections where applicable and by the rules of the practice and procedure of the commission and the Administrative Procedure Act and Texas Register Act, Chapter 2001, of the Texas Government Code.

(c) If a fee submitted in the form of a check is returned for insufficient funds the certification, seal or test for which the fee was collected will be invalidated.

§437.3. Certification Fees.

(a) A $35.00 non-refundable application fee is required for each certificate issued by the Commission. If a certificate is issued within the time provided in §401.125 of this title (relating to Processing Periods), the fee will be applied to the certification. If the certificate is denied, the applicant must pay a new certification application fee to file a new application.

(b) The regulated employing entity shall be responsible for all certification fees required as a condition of appointment.

(c) Nothing in this section shall prohibit an individual from paying a certification fee for any certificate which he or she is qualified to hold, providing the certificate is not required as a condition of appointment (see subsection (b) of this section concerning certification fees).

(d) Any person who holds a certificate, and is no longer employed by an entity that is regulated by the Commission may submit in writing, a request, together with the required fee to receive a one-time certificate stating the level of certification in each discipline held by the person on the date that person left employment pursuant to the Texas Government Code, §419.033(b).

Multiple certifications may be listed on the one-time certificate. The one-time fee for the one-time certificate shall be the same as the current certification fee provided in subsection (a) of this section.

(e) A facility that provides basic level training for any discipline for which the Commission has established a Basic Curriculum must be certified by the Commission. The training facility will be charged a separate certification fee for each discipline.

§437.5. Renewal Fees.

(a) A $35.00 non-refundable annual renewal fee shall be assessed for each certified individual and certified training facility. If an individual or certified training facility holds more than one certificate, the Commission may collect only one $35.00 renewal fee, which will renew all certificates held by the individual or certified training facility.

(b) A regulated employing entity shall pay the renewal fee for all certificates which a person must possess as a condition of employment.

(c) If a person re-enters the fire service whose certificate(s) has been expired for less than one year, the regulated entity must pay all applicable renewal fee(s) and any applicable additional fee(s). Upon payment of the required fees, the certificates previously held by the individual, for which he or she continues to qualify, will be renewed.

(d) If a person reapplies for a certificate(s) which has been expired less than one year and the individual is not employed by a regulated employing entity as defined in subsection (b) of this section, the individual must pay all applicable renewal fee(s) and any applicable additional fee(s). Upon payment of the required fee(s), the certificate(s) previously held by the individual, for whom he or she continues to qualify, will be renewed.

(e) Nothing in this section shall prohibit an individual from paying a renewal fee for any certificate which he or she is qualified to hold providing the certificate is not required as a condition of employment.

(f) Certification renewal statements will be mailed to all regulated employing entities and individuals holding certification at least 60 days prior to October 31 of each calendar year. Certification renewal statements will be mailed to certified training facilities at least 60 days prior to February 1 of each calendar year. ~~Certification renewal statements will be mailed to individuals holding certification at least 60 days prior to April 30 of each calendar year.~~

(g) All certification renewal fees must be returned with the renewal statement to the Commission.

(h) All certification renewal fees must be paid on or before the renewal date posted on the certification renewal statement to avoid additional fee(s).

(i) The certification period shall be a period not to exceed one year. The certification period for employees of regulated employing entities, and individuals holding certification is November 1 to October 31. The certification period of certified training facilities is February 1 to January 31. ~~The certification period of individual certificate holders is May 1 to April 30.~~

(j) ~~Individual certificate holders that possess a certification that expires on October 31 will receive a renewal statement during the regulated entity's renewal cycle for a six month renewal period to align that individual to the individual holding certification renewal cycle as defined in subsection (i) of this section.~~

(~~k~~) ~~A regulated entity that hires an individual holding certification that is current and has a renewal expiration date of April 30 will receive a renewal statement during the individual holding certification renewal cycle to align the renewal period as defined in subsection (i) of this section~~.

(~~l~~) k All certification renewal fees received from one to 30 days after the renewal date posted on the renewal notice will cause the individual or entity responsible for payment to be assessed a non-refundable $17.50 late fee in addition to the renewal fee for each individual for which a renewal fee was due.

(~~m~~)l All certification renewal fees received more than 30 days after the renewal date posted on the renewal notice will cause the individual or entity responsible for payment to be assessed a non-refundable $35.00 late fee in addition to the renewal fee for each individual for which a renewal fee was due.

(~~n~~)m In addition to any non-refundable late fee(s) assessed for certification renewal, the Commission may hold an informal conference to determine if any further action(s) is to be taken.

(~~o~~) n An individual or entity may petition the Commission for a waiver of the late fees required by this section if the person's certificate expired because of the individual or regulated employing entity's good faith clerical error, or expired as a result of termination of the person's employment where the person has been restored to employment through a disciplinary procedure or a court action. All required renewal fees including applicable late fees and all required continuing education must be submitted before the waiver request may be considered.

(1) Applicants claiming good faith clerical error must submit a sworn statement together with any supporting documentation that evidences the applicant's good faith efforts to comply with Commission renewal requirements and that failure to comply was due to circumstances beyond the control of the applicant.

(2) Applicants claiming restoration to employment as a result of a disciplinary or court action must submit a certified copy of the order restoring the applicant to employment.

(~~p~~)o An individual, upon returning from activation to military service, whose certification has expired, must notify the Commission in writing. The individual will have any normally associated late fees waived and will be required to pay a $35.00 renewal fee.

§437.7. Standards Manual and Certification Curriculum Manual ~~Fees.~~

~~(a) A fee of $12 will be charged for the compact disk containing the Commission's Standards Manual for Fire Protection Personnel and the Certification Curriculum Manual.~~

~~(b) A $12 annual compact disk subscription fee will be charged to receive revisions. The compact disk subscription will contain an entire revision of both manuals.~~

(a) A current version of the Commission's Standards Manual for Fire Protection Personnel and the Curriculum Manual are available for free on the web site at www.tcfp.state.tx.us.

(~~c~~)b The Commission does not provide printed copies of the manuals. A printed copy of the Commission's standards may be obtained from Thomson West, 610 Opperman Drive, Eagan, MN 55123, (800) 328-9352, by requesting "Title 37, Public Safety and Corrections" of the Texas Administrative Code. The web address for Thomson West is www.thomsonwest.com.

§437.11. Copying Fees.

(a) All photographic reproduction of records or documents in the files of the commission and prepared on standard office machines will be furnished for a fee.

(b) A fee will be charged for address and telephone number lists of fire service agencies.

(c) A fee will be charged for mailing peel-off labels of fire service agencies.

§437.13. Processing Fees for Test Application.

(a) A non-refundable application processing fee of $35.00 shall be charged for each examination.

(b) Fees will be paid in advance with the application or the provider of training may be invoiced or billed if previous arrangements have been made with the Commission.

§437.15. International Fire Service Accreditation Congress (IFSAC) Seal Fees.

A non-refundable $10.00 fee shall be charged for each IFSAC seal issued by the commission.

§437.17. Records Review Fees.

(a) A non-refundable fee of $35 shall be charged for each training records review conducted by the commission for the purpose of determining equivalency to the appropriate commission training program or to establish eligibility to test. Applicants submitting training records for review shall receive a written analysis from the commission.

(b) The fee provided for in this section shall not apply to an individual who holds an advanced certificate from the State Firemen's and Fire Marshals' Association of Texas.

8. **Discussion and possible recommendation regarding proposed rule changes to 37 TAC, Chapter 441, Continuing Education, including, but not limited to §441.3, Definitions; §441.5, Requirements; §441.7, Continuing Education for Structure Fire Protection Personnel; 441.9, Continuing Education for Aircraft Rescue Fire Fighting Personnel; §441.11, Continuing Education for Marine Fire Protection Personnel; §441.13, Continuing Education for Fire Inspection Personnel; §441.15, Continuing Education for Arson Investigator or Fire Investigator; §441.17, Continuing Education for Hazardous Materials Technician; §441.19, Continuing Education for Head of a Fire Department; §441.21, Continuing Education for Fire Service Instructor. This was tabled at June, 2009 meeting.**

CHAPTER 441

CONTINUING EDUCATION

§441.1. Objective.

Continuing education is intended to maintain or increase the knowledge and skills pertinent to the fire service.

§441.3. Definitions.

The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise.

(1) Certification period--That period from the time a certificate is obtained or renewed until it is time for the certificate to be renewed again. See §437.5 of this title (relating to renewal fees) for the definition of certification period.

(2) ~~Track A—~~**Continuing Education--**Training intended to maintain previously learned skills as stated in the commission certification curriculum manual for the certifications held **or to develop new skills not contained in the certification curriculum manual. Continuing education must be conducted in the subjects and hours designated by the commission.**

~~(3) Track B—Fire service training or education intended to develop new skills that are not contained in the commission's certification curriculum manual for certifications held.~~

§441.5. Requirements.

(a) Continuing education shall be required in order to renew certification which has a continuing education requirement stated in this chapter.

(b) The continuing education requirement for renewal of certification shall consist of a minimum of 20 hours of training to be conducted during the certification period. Only 20 total hours of continuing education shall be required to renew all Texas Commission on Fire Protection certificates if any individual holds more than one certificate, except as provided in §441.17 of this title (relating to Continuing Education for Hazardous Materials Technician). All documentation of training used to satisfy the continuing education requirements must be maintained for a period of three years from the date of the training. Continuing education records shall be maintained by the department in accordance with the Texas State Library and Archives Commission, State and Local Records Management Division, Records Schedule, Local Schedule (GR 1050-28), whichever is greater.

(c) ~~Track A~~ **Continuing Education** training must be conducted by a certified instructor **or other qualified person**. Interactive computer-based continuing education training that is supervised and verified by a certified instructor is acceptable**; however rapid intervention and live fire training may not be conducted via the interactive computer-based method**.

(d) The continuing education program of a regulated entity must be administered and maintained in accordance with commission rule by a certified instructor.

(e) **Of those subjects designated by the commission for continuing education,** ~~N~~**n**o more than four hours per year in any one subject ~~of the appropriate chapter of the commission's Certification Curriculum Manual~~ may be counted toward the ~~20-hour~~ continuing education requirement**.** ~~for Track A~~.

(f) Documentation of continuing education training shall be reported to the commission within 60 days following the completion of the training. All documented continuing education required for certification renewal must be submitted to the commission at least 60 days prior to the expiration of certification.

~~(f) There shall be no "hour per subject limit" placed on Track B courses, except that emergency medical courses shall be~~

~~limited to four hours per year.~~

~~(g) The head of a fire department may select subject matter for continuing education appropriate for a particular discipline.~~

(h) The head of a fire department must certify whether or not the individuals whose certificates are being renewed have complied with the continuing education requirements of this chapter on the certification renewal application. Unless exempted from the continuing education requirements, an individual who fails to comply with the continuing education requirements in this chapter shall be notified by the commission of the failure to comply.

(i) After notification from the commission of a failure to comply with continuing education requirements, an individual who holds a certificate is prohibited from performing any duties authorized by a required certificate until such time as the deficiency has been resolved and written documentation is furnished by the department head for approval by the commission, through its Fire Service Standards and Certification Division director. Continuing education hours obtained to resolve a deficiency may not be applied to the continuing education requirements for the current certification period.

(j) Any person who is a member of a paid or volunteer fire department who is on extended leave for a cumulative period of six months or longer due to a documented illness, injury,or activation to military service may be exempted from the continuing education requirement for the applicable renewal period(s). Such exemptions shall be reported by the head of the department to the commission at renewal time, and a copy kept with the department continuing education records for three years.

(k) Any individual who is not a member of a paid or volunteer fire department who is unable to perform work, substantially similar in nature as would be performed by fire protection personnel appointed to that discipline, may be exempted from the continuing education requirement for the applicable renewal period(s). Commission staff shall determine the exemption using documentation of the illness or injury that cumulatively lasts six months or longer, which is provided by the individual and the individual's treating physician or by documentation of activation to military service.

(l) In order to renew certification for any discipline which has a continuing education requirement stated in this chapter, an individual holder of a certificate not employed by a regulated entity must comply with the continuing education requirements for that discipline. Only 20 total hours of continuing education for each certification period shall be required to renew all certificates the individual holds, except as provided in §441.17 of this title (relating to Continuing Education for Hazardous Materials Technician).

(m) An individual certificate holder, not employed by a regulated entity, shall submit documentation of continuing education training ~~at the time of renewal. An example of documentation of continuing education training may include, but not be limited to a Certificate of Completion, a college or training facility transcript, a fire department training roster, etc.~~ **within 60 days following the completion of the training. However, all documented continuing education that is required for certification renewal must be submitted to the commission at least 60 days prior to the expiration of certification.** Commission staff will review and may approve or disapprove such documentation of training in accordance with applicable commission rules and/or procedures. The training for a resident of Texas at the time the continuing education training is conducted shall be administered by a commission instructor, commission certified training facility, an accredited institution of higher education, or a military or nationally recognized provider of training. The training for a nonresident of Texas, shall be delivered by a state fire academy, a fire department training facility, an accredited institution of higher education, or a military or nationally recognized provider of training. The individual must submit training documentation to the commission for evaluation of the equivalency of the training required by this chapter. The individual certificate holder is responsible for maintaining all of his/her training records for a period of three years from the date of the training.

(n) If an individual has completed a commission approved ~~academy~~ **training program** in the 12 months prior to his or her certification expiration date, a copy of that certificate of completion will be acceptable documentation of continuing education for that certification renewal period.

§441.7. Continuing Education for Structure Fire Protection Personnel.

(a) Continuing education will be required for personnel certified as structure fire protection personnel.

~~(b) Subjects selected to satisfy the continuing education requirement may be selected from either Track A, Track B, or a combination of the two.~~

(b) Continuing education for Structure Fire Protection certification shall be chosen from the following subjects:

Self-Contained Breathing Apparatus
Personal Protective Clothing
Fire Fighter Safety
Hazardous Materials
Fire Cause Determination
Rescue
Incident Management/Command
Pre-Incident Planning
Rapid Intervention
Live Fire
Forcible Entry
Portable Fire Extinguishers
Ropes, Knots, Hitches
Ladders
Hose
Salvage/Overhaul
Fire Streams
Ventilation
Inspections
Water Supplies
Fire Protection Systems
Fire Science
Emergency Service Communications
Public Relations and Fire Safety Education
Wildland Fire Suppression
Building Construction
Emergency Medical Training

§441.9. Continuing Education for Aircraft Rescue Fire Fighting Personnel.

(a) Continuing education will be required for personnel assigned as aircraft rescue fire fighting personnel.

(b) Continuing education must, at a minimum, meet the specific training requirements of FAR 139.319(i)(2) and (3) (pertaining to Aircraft Rescue and Fire Fighting Operational Requirements). Continuing education required by this subsection may exceed 20 hours, if necessary, to complete all required subjects.

(c) Continuing education for Aircraft Rescue Fire Protection certification shall be chosen from the following subjects:

Airport Familiarization: Signs, Markings, and Lighting
Aircraft Familiarization
Rescue
Emergency Aircraft Evacuation
Safety
Emergency Communications
Extinguishing Agents
Aircraft Cargo Hazards
Airport Emergency Plans
Live Fire
Emergency Medical Training

§441.11. Continuing Education for Marine Fire Protection Personnel.

(a) Continuing education will be required for personnel certified as marine fire protection personnel ~~for any certification period beginning after October 31, 1993~~.

~~(b) Subjects selected to satisfy the continuing education requirement may be selected from either Track A, Track B, or a combination of the two.~~

(b) Continuing education for Marine Fire Protection certification shall be chosen from the following subjects:

Self-Contained Breathing Apparatus
Personal Protective Clothing,
Fire Fighter Safety
Hazardous Materials
Merchant Vessel Orientation
Marine Rescue Operations
Incident Management/Command
Shipboard Fire Protection, Emergency Equipment and Systems
Water Survival
Live Fire
Emergency Medical Training

§441.13. Continuing Education for Fire Inspection Personnel.

(a) Continuing education will be required for personnel certified as fire inspection personnel.

~~(b) Subjects selected to satisfy the continuing education requirement may be selected from either Track A, Track B, or a combination of the two.~~

(b) Continuing education for Fire Inspector certification shall be chosen from the following subjects:

Occupancy Types
Construction Types
Fire Protection/Suppression Systems
Portable Extinguishers
Occupant Emergency Planning and Preparedness
Hazardous Materials
Fire Behavior
Codes and Ordinances
Plan Reviews
Reports and Records

§441.15. Continuing Education for Arson Investigator or Fire Investigator.

(a) Continuing education will be required for personnel certified as arson investigation or fire investigation personnel.

~~(b) Subjects selected to satisfy the continuing education requirement may be selected from either Track A, Track B, or a combination of the two.~~

(b) Continuing education for Fire Investigator certification shall be chosen from the following subjects:

Legal Considerations
Interviews and Interrogation
Investigation Documentation
Physical Evidence
Fire Patterns

Cause and Origin Determination
Accidental Fires
Incendiary Fires
Fire Science
Hazardous Materials

§441.17. Continuing Education for Hazardous Materials Technician.

(a) Ten hours of continuing education in hazardous materials (technician level) will be required for individuals certified as a hazardous materials technician. This will be in addition to continuing education required by other sections of this chapter.

~~(b) Subjects selected to satisfy the continuing education requirement may be selected from either Track A or Track B, or a combination of the two.~~

(b) Continuing education for Hazardous Materials Technician certification shall be chosen from the following subjects:

Codes, Laws, Standards
Containers, Markings, Colors
Detection, Identification, Monitoring Equipment
Personal Protective Equipment
Incident Management/Command
Decontamination
Responder Safety
Toxicity and Health Effects
Data Collection and Interpretation
Control Equipment and Techniques

§441.19. Continuing Education for Head of a Fire Department.

(a) Continuing education will be required for personnel certified as head of a fire department.

~~(b) Subjects selected to satisfy the continuing education requirement may be selected from either Track A , Track B, or a combination of the two.~~

(b) Continuing education for Head of Department certification shall be chosen from the following subjects:

Human Resource Management
Community Relations
Government Relations
Administration
Emergency Services Delivery
Disaster Planning
Risk Management
Program Development and Implementation
Program Analysis
Incident Management/Command

[(c) Persons holding the rank of chief officer who are assigned primarily to administrative (non-operational) duties may satisfy continuing education requirements by choosing from the subjects listed in this section in addition to any other sections that are applicable to certifications held.]

§441.21. Continuing Education for Fire Service Instructor.

(a) Continuing education will be required for individuals certified as a fire service instructor.

~~(b) Subjects selected to satisfy the continuing education requirement may be selected from either Track A or Track B, or a combination of the two.~~

(b) Continuing education for Fire Service Instructor certification shall be chosen from the following subjects:

Instructional Techniques
Instructional Delivery
Evaluation and Testing
Lesson Plan Development
Training Program Management/Administration
Training Reports and Records
Instructional Aids and Equipment
Learning Characteristics

(c) Persons holding Fire Service Instructor certification may use the hours from any fire protection classes they have conducted to satisfy continuing education requirements, provided no more than 4 hours conducted in any one subject may be counted toward the total required.

9. **Discussion and action to formulating a blue print or plan to evaluate data and work with liaison from commission to develop recommendations to reduce fire protection personnel injuries.**

10. Discussion and possible action on future meeting dates, agenda items, and locations.

11. Adjourn meeting.