NFPA 1041

Standard for

Fire Service Instructor Professional Qualifications

2007 Edition

This edition of NFPA 1041, *Standard for Fire Service Instructor Professional Qualifications*, was prepared by the Technical Committee on Fire Service Instructor Professional Qualifications and released by the Technical Correlating Committee on Professional Qualifications. It was issued by the Standards Council on December 1, 2006, with an effective date of December 20, 2006, and supersedes all previous editions.

This edition of NFPA 1041 was approved as an American National Standard on December 20, 2006.

Origin and Development of NFPA 1041

In 1971, the Joint Council of National Fire Service Organizations (JCNFSO) created the National Professional Qualifications Board for the Fire Service (NPQB) to facilitate the development of nationally applicable performance standards for uniformed fire service personnel. On December 14, 1972, the Board established four technical committees to develop those standards using the National Fire Protection Association (NFPA) standards-making system. The initial committees addressed the following career areas: fire fighter, fire officer, fire service instructor, and fire inspector and investigator.

In compliance with this direction, the Technical Committee for Fire Service Instructor Qualifications met in several general sessions and subcommittee sessions in 1973, 1974, and 1975. A survey was conducted through the State Directors of Fire Service Training in an effort to obtain information on existing qualifications for fire service instructor. A great deal of material was reviewed by the committee. Through this information and much committee deliberation, and through the courtesy of the Delaware State Fire School, a flow chart of a training program was constructed. From this chart, the committee identified four distinct levels of instructor responsibilities: (1) to teach; (2) to develop teaching material; (3) to supervise the teaching staff and program; and (4) to manage, budget, and implement the program. From this chart, the committee endeavored to establish a series of objectives for four instructor levels and to identify curriculum that would aid instructor candidates in meeting these objectives.

In the report of the Wingspread Conference, 1966, certain criteria for Fire Service Professionalization were adopted. One criterion stated was "Professionalization Begins with Education." To this end, keeping in mind that the quality of any educational program is only as good as its instructional staff, the Fire Service Professional Standards Committee for Fire Service Instructor Qualifications provides these standards. This standard was first issued in 1976 and was revised by the Fire Service Instructor Qualifications Committee in 1981 and 1987.

The original concept of the professional qualification standards, as directed by the JCNFSO and the NPQB, was to develop an interrelated set of performance standards specifically for the fire service. The various levels of achievement in the standards were to build on each other within a strictly defined career ladder. In the late 1980s, revisions of the standards recognized that the documents should stand on their own merit in terms of job performance requirements (JPRs) for a given field. Accordingly, the strict career ladder concept was abandoned, except for the progression from fire fighter to fire officer. The later revisions, therefore, facilitated the use of the documents by other than the uniformed fire services.

In 1990, responsibility for the appointment of professional qualifications committees and the development of the professional qualifications standards was assumed by the NFPA. The Correlating Committee on Professional Qualifications was appointed by the NFPA Standards Council in 1990 and assumed the responsibility for coordinating the requirements of all of the professional qualifications documents.

The intent of the technical committee was to develop clear and concise JPRs that can be used to determine that an individual, when measured to the standard, possesses the skills and knowledge to perform as a fire service instructor. The committee further contends that these JPRs can be used in any fire department in any city, town, or private organization throughout North America. The 1996 edition of the standard was revised based on a complete job task analysis for the position of fire service instructor. The document was reformatted into a Job Performance Requirement format. All JPRs were reviewed to ensure they were up-to-date and job-related.

The Level IV instructor requirements were dropped because these requirements essentially dealt with managing a training program. The technical committee was asked to concentrate on the requirements for the instructor/developer, and not cover management issues pertaining to administering and running a training program.

For the 2002 edition, the 1996 edition of the standard was reviewed by the technical committee, and the document was formatted to comply with the *Manual of Style for NFPA Technical Committee Documents*.

In the 2007 edition of this standard, the technical committee has made changes to provide consistency within the Professional Qualifications project as directed by the technical correlating committee, and has updated reference documents.

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This list represents the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the back of the document.

NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

Committee Scope: This Committee shall have primary responsibility for the management of the NFPA Professional Qualifications Project and documents related to professional qualifications for fire service, public safety, and related personnel.

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Committee Scope: This Committee shall have primary responsibility for documents on professional competence required of fire service instructors.

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Changes other than editorial are indicated by a vertical rule beside the paragraph, table, or figure in which the change occurred. These rules are included as an aid to the user in identifying changes from the previous edition. Where one or more complete paragraphs have been deleted, the deletion is indicated by a bullet (•) between the paragraphs that remain.

A reference in brackets [ ] following a section or paragraph indicates material that has been extracted from another NFPA document. As an aid to the user, the complete title and edition of the source documents for extracts in mandatory sections of the document are given in Chapter 2 and those for extracts in informational sections are given in Annex D. Editorial changes to extracted material consist of revising references to an appropriate division in this document or the inclusion of the document number with the division number when the reference is to the original document. Requests for interpretations or revisions of extracted text shall be sent to the technical committee responsible for the source document.

Information on referenced publications can be found in Chapter 2 and Annex D.

Chapter 1 Administration

1.1 Scope.

This standard identifies minimum job performance requirements (JPRs) for fire service instructors.

1.2 Purpose.

The purpose of this standard is to provide minimum JPRs for individuals serving as fire service instructors.

1.2.1 This standard does not restrict any jurisdiction from exceeding these minimum requirements nor from using it for other subject material instructors.

1.2.2 This standard shall cover the requirements for three levels of progression, that is, Fire

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Service Instructor I, Fire Service Instructor II, and Fire Service Instructor III.

1.3* General.

1.3.1 All JPRs for any level of fire service instructor shall be performed to a level of competence that shall be established by the authority having jurisdiction (AHJ).

1.3.2 It is not required that the JPRs be mastered in the order that they appear in each of the levels of progression.

1.3.3* The AHJ shall select instructors who have appropriate subject matter skill, knowledge, and ability. The AHJ shall establish a policy and process that identifies and verifies the minimum experience and training requirements necessary to provide instruction on any topic or subject matter.

1.3.4 Fire service instructors at all levels of progression shall know their roles and responsibilities to the AHJ and their students as defined in the agency's policies and procedures.

1.3.5* Fire service instructors at all levels of progression shall remain current and comply with all applicable laws, regulations, and standards applying to the delivery of training.

1.3.6* The performance of each requirement of this standard shall be evaluated by individuals approved by the AHJ.

1.3.7 The fire service instructor shall maintain professional competency through continuing education, networking, instructional development and delivery, and membership in professional organizations.

Chapter 2 Referenced Publications

2.1 General.

The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

2.2 NFPA Publications. (Reserved)

2.3 Other Publications.

Merriam-Webster's Collegiate Dictionary, 11th edition, Merriam-Webster, Inc., Springfield, MA, 2003.

2.4 References for Extracts in Mandatory Sections.

NFPA 1000, *Standard for Fire Service Professional Qualifications Accreditation and Certification Systems,* 2006 edition.

NFPA 1002, *Standard for Fire Apparatus Driver/Operator Professional Qualifications,* 2003 edition.

Chapter 3 Definitions

3.1 General.

 The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not defined in this chapter or within another chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used. *Merriam-Webster's Collegiate Dictionary*, 11th edition, shall be the source for the ordinarily accepted meaning.

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the authority having jurisdiction.

3.2.2* Authority Having Jurisdiction (AHJ). An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

3.2.3 Shall. Indicates a mandatory requirement.

3.3 General Definitions.

3.3.1 Duty. A major subdivision of the work performed by one individual.

3.3.2 Instructor Classification.

3.3.2.1 Instructor I. A fire service instructor who has demonstrated the knowledge and ability to deliver instruction effectively from a prepared lesson plan, including instructional aids and evaluation instruments; adapt lesson plans to the unique requirements of the students and authority having jurisdiction; organize the learning environment so that learning is maximized; and meet the record-keeping requirements of authority having jurisdiction.

3.3.2.2 Instructor II. A fire service instructor who, in addition to meeting Instructor I qualifications, has demonstrated the knowledge and ability to develop individual lesson plans for a specific topic including learning objectives, instructional aids, and evaluation instruments; schedule training sessions based on overall training plan of authority having jurisdiction; and supervise and coordinate the activities of other instructors.

3.3.2.3 Instructor III. A fire service instructor who, in addition to meeting Instructor II qualifications, has demonstrated the knowledge and ability to develop comprehensive training curricula and programs for use by single or multiple organizations; conduct organization needs analysis; and develop training goals and implementation strategies.

3.3.3 Job Performance Requirement. A written statement that describes a specific job task, lists the items necessary to complete the task, and defines measurable or observable outcomes and evaluation areas for the specific task. [**1000,** 2006]

3.3.4 Task. A specific job behavior or activity. [**1002,** 2003]

Chapter 4 Instructor I

4.1 General.

4.1.1 The Fire Service Instructor I shall meet the JPRs defined in Sections 4.2 through 4.5 of this standard.

4.2 Program Management.

4.2.1 Definition of Duty. The management of basic resources and the records and reports essential to the instructional process.

4.2.2 Assemble course materials, given a specific topic, so that the lesson plan and all materials, resources, and equipment needed to deliver the lesson are obtained.

(A) Requisite Knowledge. Components of a lesson plan, policies and procedures for the procurement of materials and equipment, and resource availability.

(B) Requisite Skills. None required.

4.2.3 Prepare training records and report forms, given policies and procedures and forms, so that required reports are accurately completed and submitted in accordance with the procedures.

(A) Requisite Knowledge. Types of records and reports required, and policies and procedures for processing records and reports.

(B) Requisite Skills. Basic report writing and record completion.

4.3 Instructional Development.

4.3.1* Definition of Duty. The review and adaptation of prepared instructional materials.

4.3.2* Review instructional materials, given the materials for a specific topic, target audience and learning environment, so that elements of the lesson plan, learning environment, and resources that need adaptation are identified.

(A) Requisite Knowledge. Recognition of student limitations, methods of instruction, types of resource materials, organization of the learning environment, and policies and procedures.

(B) Requisite Skills. Analysis of resources, facilities, and materials.

4.3.3* Adapt a prepared lesson plan, given course materials and an assignment, so that the needs of the student and the objectives of the lesson plan are achieved.

(A)* Requisite Knowledge. Elements of a lesson plan, selection of instructional aids and methods, and origination of learning environment.

(B) Requisite Skills. Instructor preparation and organizational skills.

4.4 Instructional Delivery.

4.4.1 Definition of Duty. The delivery of instructional sessions utilizing prepared course materials.

4.4.2 Organize the classroom, laboratory, or outdoor learning environment, given a facility and an assignment, so that lighting, distractions, climate control or weather, noise control, seating, audiovisual equipment, teaching aids, and safety are considered.

(A) Requisite Knowledge. Classroom management and safety, advantages and limitations of audiovisual equipment and teaching aids, classroom arrangement, and methods and techniques of instruction.

(B) Requisite Skills. Use of instructional media and materials.

4.4.3 Present prepared lessons, given a prepared lesson plan that specifies the presentation method(s), so that the method(s) indicated in the plan are used and the stated objectives or learning outcomes are achieved.

(A) Requisite Knowledge. The laws and principles of learning, teaching methods and techniques, lesson plan components and elements of the communication process, and lesson plan terminology and definitions.

(B) Requisite Skills. Oral communication techniques, teaching methods and techniques, and utilization of lesson plans in the instructional setting.

4.4.4* Adjust presentation, given a lesson plan and changing circumstances in the class environment, so that class continuity and the objectives or learning outcomes are achieved.

(A) Requisite Knowledge. Methods of dealing with changing circumstances.

(B) Requisite Skills. None required.

4.4.5 Adjust to differences in learning styles, abilities, and behaviors, given the instructional environment, so that lesson objectives are accomplished, disruptive behavior is addressed, and a safe learning environment is maintained.

(A)* Requisite Knowledge. Motivation techniques, learning styles, types of learning disabilities and methods for dealing with them, and methods of dealing with disruptive and unsafe behavior.

(B) Requisite Skills. Basic coaching and motivational techniques, and adaptation of lesson plans or materials to specific instructional situations.

4.4.6 Operate audiovisual equipment and demonstration devices, given a learning environment and equipment, so that the equipment functions properly.

(A) Requisite Knowledge. Components of audiovisual equipment.

(B) Requisite Skills. Use of audiovisual equipment, cleaning, and field level maintenance.

4.4.7 Utilize audiovisual materials, given prepared topical media and equipment, so that the intended objectives are clearly presented, transitions between media and other parts of the presentation are smooth, and media are returned to storage.

(A) Requisite Knowledge. Media types, limitations, and selection criteria.

(B) Requisite Skills. Transition techniques within and between media.

4.5 Evaluation and Testing.

4.5.1* Definition of Duty. The administration and grading of student evaluation instruments.

4.5.2 Administer oral, written, and performance tests, given the lesson plan, evaluation instruments, and the evaluation procedures of the agency, so that the testing is conducted according to procedures and the security of the materials is maintained.

(A) Requisite Knowledge. Test administration, agency policies, laws affecting records and disclosure of training information, purposes of evaluation and testing, and performance skills evaluation.

(B) Requisite Skills. Use of skills checklists and oral questioning techniques.

4.5.3 Grade student oral, written, or performance tests, given class answer sheets or skills checklists and appropriate answer keys, so the examinations are accurately graded and properly secured.

(A) Requisite Knowledge. Grading and maintaining confidentiality of scores.

(B) Requisite Skills. None required.

4.5.4 Report test results, given a set of test answer sheets or skills checklists, a report form, and policies and procedures for reporting, so that the results are accurately recorded, the forms are forwarded according to procedure, and unusual circumstances are reported.

(A) Requisite Knowledge. Reporting procedures and the interpretation of test results.

(B) Requisite Skills. Communication skills and basic coaching.

4.5.5* Provide evaluation feedback to students, given evaluation data, so that the feedback is timely; specific enough for the student to make efforts to modify behavior; and objective, clear, and relevant; also include suggestions based on the data.

(A) Requisite Knowledge. Reporting procedures and the interpretation of test results.

(B) Requisite Skills. Communication skills and basic coaching.

Chapter 5 Instructor II

5.1 General.

The Fire Service Instructor II shall meet the requirements for Fire Service Instructor I and the JPRs defined in Sections 5.2 through 5.5 of this standard.

5.2 Program Management.

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5.2.1 Definition of Duty. The management of instructional resources, staff, facilities, and records and reports.

5.2.2 Schedule instructional sessions, given department scheduling policy, instructional resources, staff, facilities and timeline for delivery, so that the specified sessions are delivered according to department policy.

(A) Requisite Knowledge. Departmental policy, scheduling processes, supervision techniques, and resource management.

(B) Requisite Skills. None required.

5.2.3 Formulate budget needs, given training goals, agency budget policy, and current resources, so that the resources required to meet training goals are identified and documented.

(A) Requisite Knowledge. Agency budget policy, resource management, needs analysis, sources of instructional materials, and equipment.

(B) Requisite Skills. Resource analysis and forms completion.

5.2.4 Acquire training resources, given an identified need, so that the resources are obtained within established timelines, budget constraints, and according to agency policy.

(A) Requisite Knowledge. Agency policies, purchasing procedures, and budget management.

(B) Requisite Skills. Forms completion.

5.2.5 Coordinate training record-keeping, given training forms, department policy, and training activity, so that all agency and legal requirements are met.

(A) Requisite Knowledge. Record-keeping processes, departmental policies, laws affecting records and disclosure of training information, professional standards applicable to training records, and databases used for record-keeping.

(B) Requisite Skills. Record auditing procedures.

5.2.6 Evaluate instructors, given an evaluation form, department policy, and JPRs, so that the evaluation identifies areas of strengths and weaknesses, recommends changes in instructional style and communication methods, and provides opportunity for instructor feedback to the evaluator.

(A) Requisite Knowledge. Personnel evaluation methods, supervision techniques, department policy, and effective instructional methods and techniques.

(B) Requisite Skills. Coaching, observation techniques, and completion of evaluation forms.

5.3 Instructional Development.

5.3.1 Definition of Duty. The development of instructional materials for specific topics.

5.3.2 Create a lesson plan, given a topic, audience characteristics, and a standard lesson plan

format, so that the JPRs for the topic are achieved, and the plan includes learning objectives, a lesson outline, course materials, instructional aids, and an evaluation plan.

(A) Requisite Knowledge. Elements of a lesson plan, components of learning objectives, instructional methods and techniques, characteristics of adult learners, types and application of instructional media, evaluation techniques, and sources of references and materials.

(B) Requisite Skills. Basic research, using JPRs to develop behavioral objectives, student needs assessment, development of instructional media, outlining techniques, evaluation techniques, and resource needs analysis.

5.3.3 Modify an existing lesson plan, given a topic, audience characteristics, and a lesson plan, so that the JPRs for the topic are achieved and the plan includes learning objectives, a lesson outline, course materials, instructional aids, and an evaluation plan.

(A) Requisite Knowledge. Elements of a lesson plan, components of learning objectives, instructional methods and techniques, characteristics of adult learners, types and application of instructional media, evaluation techniques, and sources of references and materials.

(B) Requisite Skills. Basic research, using JPRs to develop behavioral objectives, student needs assessment, development of instructional media, outlining techniques, evaluation techniques, and resource needs analysis.

5.4 Instructional Delivery.

5.4.1 Definition of Duty. Conducting classes using a lesson plan.

5.4.2 Conduct a class using a lesson plan that the instructor has prepared and that involves the utilization of multiple teaching methods and techniques, given a topic and a target audience, so that the lesson objectives are achieved.

(A) Requisite Knowledge. Use and limitations of teaching methods and techniques.

(B)* Requisite Skills. Transition between different teaching methods.

5.4.3* Supervise other instructors and students during training, given a training scenario with increased hazard exposure, so that applicable safety standards and practices are followed, and instructional goals are met.

(A) Requisite Knowledge. Safety rules, regulations, and practices; the incident command system used by the agency; and leadership techniques.

(B) Requisite Skills. Implementation of an incident management system used by the agency.

5.5 Evaluation and Testing.

5.5.1 Definition of Duty. The development of student evaluation instruments to support instruction and the evaluation of test results.

5.5.2 Develop student evaluation instruments, given learning objectives, audience characteristics, and training goals, so that the evaluation instrument determines if the student has achieved the learning objectives; the instrument evaluates performance in an objective,

reliable, and verifiable manner; and the evaluation instrument is bias-free to any audience or group.

(A) Requisite Knowledge. Evaluation methods, development of forms, effective instructional methods, and techniques.

(B) Requisite Skills. Evaluation item construction and assembly of evaluation instruments.

5.5.3 Develop a class evaluation instrument, given agency policy and evaluation goals, so that students have the ability to provide feedback to the instructor on instructional methods, communication techniques, learning environment, course content, and student materials.

(A) Requisite Knowledge. Evaluation methods and test validity.

(B) Requisite Skills. Development of evaluation forms.

5.5.4 Analyze student evaluation instruments, given test data, objectives and agency policies, so that validity is determined and necessary changes are accomplished.

(A) Requisite Knowledge. Test validity, reliability, and item analysis.

(B) Requisite Skills. Item analysis techniques.

Chapter 6 Instructor III

6.1 General.

The Fire Service Instructor III shall meet the requirements for Fire Service Instructor II and the JPRs defined in Sections 6.2 through 6.5 of this standard.

6.2 Program Management.

6.2.1 Definition of Duty. The administration of agency policies and procedures for the management of instructional resources, staff, facilities, records, and reports.

6.2.2* Administer a training record system, given agency policy and type of training activity to be documented, so that the information captured is concise, meets all agency and legal requirements, and can be readily accessed.

(A) Requisite Knowledge. Agency policy, record-keeping systems, professional standards addressing training records, legal requirements affecting record-keeping, and disclosure of information.

(B) Requisite Skills. Development of forms and report generation.

6.2.3 Develop recommendations for policies to support the training program, given agency policies and procedures and the training program goals, so that the training and agency goals are achieved.

(A) Requisite Knowledge. Agency procedures and training program goals, and format for agency policies.

(B) Requisite Skills. Technical writing.

6.2.4 Select instructional staff, given personnel qualifications, instructional requirements, and agency policies and procedures, so that staff selection meets agency policies and achievement of agency and instructional goals.

(A) Requisite Knowledge. Agency policies regarding staff selection, instructional requirements, selection methods, the capabilities of instructional staff, and agency goals.

(B) Requisite Skills. Evaluation techniques.

6.2.5 Construct a performance-based instructor evaluation plan, given agency policies and procedures and job requirements, so that instructors are evaluated at regular intervals, following agency policies.

(A) Requisite Knowledge. Evaluation methods, agency policies, staff schedules, and job requirements.

(B) Requisite Skills. Evaluation techniques.

6.2.6 Write equipment purchasing specifications, given curriculum information, training goals, and agency guidelines, so that the equipment is appropriate and supports the curriculum.

(A) Requisite Knowledge. Equipment purchasing procedures, available department resources, and curriculum needs.

(B) Requisite Skills. Evaluation methods to select the equipment that is most effective and preparation of procurement forms.

6.2.7 Present evaluation findings, conclusions, and recommendations to agency administrator, given data summaries and target audience, so that recommendations are unbiased, supported, and reflect agency goals, policies, and procedures.

(A) Requisite Knowledge. Statistical evaluation procedures and agency goals.

(B) Requisite Skills. Presentation skills and report preparation following agency guidelines.

6.3 Instructional Development.

6.3.1 Definition of Duty. Plans, develops, and implements comprehensive programs and curricula.

6.3.2 Conduct an agency needs analysis, given agency goals, so that instructional needs are identified.

(A) Requisite Knowledge. Needs analysis, task analysis, development of JPRs, lesson planning, instructional methods, characteristics of adult learners, instructional media, curriculum development, and development of evaluation instruments.

(B) Requisite Skills. Conducting research, committee meetings, and needs and task analysis; organizing information into functional groupings; and interpreting data.

6.3.3 Design programs or curricula, given needs analysis and agency goals, so that the

agency goals are supported, the knowledge and skills are job-related, the design is performance-based, adult learning principles are utilized, and the program meets time and budget constraints.

(A) Requisite Knowledge. Instructional design, adult learning principles, principles of performance-based education, research, and fire service terminology.

(B) Requisite Skills. Technical writing and selecting course reference materials.

6.3.4 Modify an existing curriculum, given the curriculum, audience characteristics, learning objectives, instructional resources, and agency training requirements, so that the curriculum meets the requirements of the agency, and the learning objectives are achieved.

(A) Requisite Knowledge. Instructional design, adult learning principles, principles of performance-based education, research, and fire service terminology.

(B) Requisite Skills. Technical writing and selecting course reference materials.

6.3.5 Write program and course goals, given JPRs and needs analysis information, so that the goals are clear, concise, measurable, and correlate to agency goals.

(A) Requisite Knowledge. Components and characteristics of goals, and correlation of JPRs to program and course goals.

(B) Requisite Skills. Writing goal statements.

6.3.6 Write course objectives, given JPRs, so that objectives are clear, concise, measurable, and reflect specific tasks.

(A) Requisite Knowledge. Components of objectives and correlation between JPRs and objectives.

(B) Requisite Skills. Writing course objectives and correlating them to JPRs.

6.3.7 Construct a course content outline, given course objectives, reference sources, functional groupings and the agency structure, so that the content supports the agency structure and reflects current acceptable practices.

(A) Requisite Knowledge. Correlation between course goals, course outline, objectives, JPRs, instructor lesson plans, and instructional methods.

(B) Requisite Skills. None required.

6.4 Instructional Delivery.

No JPRs at the Instructor III Level.

6.5 Evaluation and Testing.

6.5.1 Definition of Duty. Develops an evaluation plan; collects, analyzes, and reports data; and utilizes data for program validation and student feedback.

6.5.2 Develop a system for the acquisition, storage, and dissemination of evaluation results, given agency goals and policies, so that the goals are supported and so that those affected by

the information receive feedback consistent with agency policies and federal, state, and local laws.

(A) Requisite Knowledge. Record-keeping systems, agency goals, data acquisition techniques, applicable laws, and methods of providing feedback.

(B) Requisite Skills. The evaluation, development, and use of information systems.

6.5.3 Develop course evaluation plan, given course objectives and agency policies, so that objectives are measured and agency policies are followed.

(A) Requisite Knowledge. Evaluation techniques, agency constraints, and resources.

(B) Requisite Skills. Decision making.

6.5.4 Create a program evaluation plan, given agency policies and procedures, so that instructors, course components, and facilities are evaluated and student input is obtained for course improvement.

(A) Requisite Knowledge. Evaluation methods and agency goals.

(B) Requisite Skills. Construction of evaluation instruments.

Annex A Explanatory Material

Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

A.1.3 The specialized and hazardous nature of fire service requires that applicants become qualified in their area of specialty. The committee recognizes that it is important that fire service instructors be competent in that area of specialty. The fire service instructors should also possess the physical abilities necessary to conduct instruction in the specialty area. It is not within the scope of this committee, nor is it their intent, to define minimum levels of specific subject matters, knowledge, or proficiency required by instructors. These minimum levels should be determined by the authority having jurisdiction. *(See Annex B for information regarding the management of training programs.)*

Education. In developing the fire service instructor standards, the committee identified certain objectives that it found necessary to qualify fire service instructors at the three levels of progression. It was not the intent of the committee to establish standardized instructor training programs, but to utilize programs already in existence throughout the country. The knowledge and skills required to perform the stated objectives can be obtained from various sources such as state fire service training agencies, vocational-technical institutions, community colleges, universities, self-study, experience, and other educational mediums.

The committee realizes that some instructor candidates might qualify at the various levels without formal training, and although formal training is not a prerequisite, it is strongly recommended that every fire service instructor successfully complete approved formal courses of instruction, attend periodic career development and improvement courses, and

remain active within a fire service training program.

A.1.3.3 This standard does not identify the level of skill and knowledge of the fire service instructor in the subject matter to be taught.

A.1.3.5 Fire service training can be affected by various organizational, local, state, provincial, or federal laws and regulations, and fire service professional standards. These laws, regulations, and standards include, but are not limited to, issues such as the following:

(1) Health and safety

(2) Human resource policies

(3) Environment

(4) Equipment

(5) Personal safety equipment

(6) Live fire training

(7) Training facilities

(8) Copyright laws

(9) Laws or regulations pertaining to the release of student and training records

A.1.3.6 It is recommended, where practical, that evaluators be individuals who were not directly involved as instructors for the requirement being evaluated.

A.3.2.1 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

A.3.2.2 Authority Having Jurisdiction (AHJ). The phrase "authority having jurisdiction," or its acronym AHJ, is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do their responsibilities. Where public safety is primary, the authority having jurisdiction may be a federal, state, local, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the authority having jurisdiction. In many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction; at government installations, the commanding officer or departmental official may be the authority having jurisdiction.

A.4.3.1 The Instructor I should not alter the content or the lesson objectives in this process.

A.4.3.2 The Instructor I, prior to the start of the course, should be able to evaluate local conditions, evaluate facilities for appropriateness, meet local standard operating procedures (SOPs), and evaluate limitations of students.

A.4.3.3 The Instructor I should be able to modify the method of instruction and course materials to meet the needs of the student and accommodate the instructor's style. This includes adaptations necessary due to the learning environment, audience, capability of facilities, and types of equipment.

A.4.3.3(A) Presentation methods for the Instructor I include the following:

(1)   Demonstration

(2)   Illustration

(3)   Lecture

(4)   Individualized instruction

A lesson plan should include the following components:

(1)   Job title or topic

(2)   Level of instruction

(3)   Behavioral objectives, performance objectives, or learning outcomes

(4)   Instructional materials needed

(5)   References

(6)   Preparation step (motivation)

(7)   Presentation step

(8)   Application step

(9)   Lesson summary

(10)   Evaluation step

(11)   Assignment

The elements of the communication process include the following:

(1)   Encoding

(2)   Transmitting

(3)   Receiving

(4)   Decoding

A.4.4.4 The Instructor I should be able to adjust to such changing circumstances as the following:

(1)   Equipment failure

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(2)   Weather

(3)   Audio and visual distractions

(4)   Safety

(5)   Limited resources

(6)   Presentation location

The Instructor I should not alter the content of the lesson or the lesson objectives in this process.

A.4.4.5(A) Factors that could influence the learning process include the following:

(1)   Attitude

(2)   Experience

(3)   Knowledge

(4)   Education

(5)   Personality

(6)   Physical condition (fatigue, illness, etc.)

(7)   Unsafe behavior

(8)   Motivation

(9)   Competing demands for time

A.4.5.1 This duty primarily deals with student evaluation; however, the Instructor I could be required to conduct program evaluations according to policies and procedures.

A.4.5.5 The Instructor I is expected to be able to assess student test results and identify areas requiring additional study and communicate this information to the student.

A.5.4.2(B) The Instructor II should acquire skills to effectively utilize problem-solving techniques, to facilitate and lead conferences, and to use discussion methods of presentation. These techniques are frequently used to conduct small group sessions where participants have advanced knowledge and experience in the subject matter and the goal is to reach a group solution to a problem or issue.

A.5.4.3 Examples of increased hazard exposure training include live fire exercises, hazardous materials, above- and below-grade rescue, and evolutions that involve the use of power tools. See Annex C of NFPA 1403, *Standard on Live Fire Training Evolutions,* for information regarding the responsibilities of personnel involved in live fire training evolutions.

A.6.2.2 See NFPA 1401, *Recommended Practice for Fire Service Training Reports and Records*.

Annex B Management of Training Programs

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

B.1

The training manager can be either a uniformed officer or a civilian. The manager should have experience in fire service training; a clear understanding of the fire department culture, structure, operations, and mission; and knowledge of adult learning principles, course development, instructional methods, and evaluation of training. This individual should also be an effective leader and manager who can determine the training needs of the organization, develop goals and objectives to achieve those needs, implement training programs, evaluate the effectiveness of training, and develop the resources needed to sustain an effective and efficient training program.

B.2

The management of fire service training programs requires a manager, regardless of fire service affiliation or instructor level, who is able to accomplish the following tasks:

(1)   Budgeting

(2)   Resource management

(3)   Management of personnel

(4)   Management of instruction

(5)   Program evaluation

(6)   Training needs analysis

(7)   Scheduling

(8)   Goal setting

(9)   Networking with other training agencies

(10)   Technical writing

(11)   Effective verbal and written communication

Annex C Explanation of the Standard and Concepts of JPRs

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

C.1 Explanation of the Standards and Concepts of Job Performance Requirements (JPRs).

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The primary benefit of establishing national professional qualification standards is to provide both public and private sectors with a framework of the job requirements for the fire service. Other benefits include enhancement of the profession, individual as well as organizational growth and development, and standardization of practices.

NFPA professional qualifications standards identify the minimum JPRs for specific fire service positions. The standards can be used for training design and evaluation, certification, measuring and critiquing on-the-job performance, defining hiring practices, and setting organizational policies, procedures, and goals. (Other applications are encouraged.)

Professional qualifications standards for a specific job are organized by major areas of responsibility, defined as duties. For example, the fire fighter's duties might include fire suppression, rescue, and water supply, and the public fire educator's duties might include education, planning and development, and administration. Duties are major functional areas of responsibility within a job.

The professional qualifications standards are written as JPRs. JPRs describe the performance required for a specific job. JPRs are grouped according to the duties of a job. The complete list of JPRs for each duty defines what an individual should be able to do in order to successfully perform that duty. Together, the duties and their JPRs define the job parameters; that is, the professional qualification standard as a whole is a description of a job.

C.2 Breaking Down the Components of a Job Performance Requirement.

The JPR is the assembly of three critical components. (*See Table C.2.*) These components are as follows:

(1)   The task to be performed

(2)   Tools, equipment, or materials that should be provided to successfully complete the task

(3)   Evaluation parameters and/or performance outcomes

Table C.2 Example of a JPR

(1) Task	(1) Ventilate a pitched roof
(2) Tools, equipment, or materials	(2) Given an ax, a pike pole, an extension ladder, and a roof ladder
(3) Evaluation parameters and/or performance outcomes	(3) So that a 1.22 m × 1.22 m (4 ft × 4 ft) hole is created; all ventilation barriers are removed; ladders are properly positioned for ventilation; ventilation holes are correctly placed; and smoke, heat, and combustion by-products are released from the structure

The Task to Be Performed. The first component is a concise, brief statement of what the person is supposed to do.

Tools, Equipment, or Materials That Should Be Provided to Successfully Complete the Task. This component ensures that all individuals completing the task are given the same

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minimal tools, equipment, or materials when being evaluated. By listing these items, the performer and evaluator know what should be provided in order to complete the task.

Evaluation Parameters and/or Performance Outcomes. This component defines how well one should perform each task — for both the performer and evaluator. The JPR guides performance towards successful completion by identifying evaluation parameters and performance outcomes. This portion of the JPR promotes consistency in evaluation by reducing the variables used to gauge performance.

In addition to these three components, the JPRs contain requisite knowledge and skills. Just as the term *requisite* suggests, these are the necessary knowledge and skills one must have prior to being able to perform the task. Requisite knowledge and skills are the foundation for task performance.

Once the components and requisites are put together, the JPR might read as follows:

C.2.1 Example 1. Ventilate a pitched roof, given an ax, a pike pole, an extension ladder, and a roof ladder, so that a 1.22 m × 1.22 m (4 ft × 4 ft) hole is created; all ventilation barriers are removed; ladders are properly positioned for ventilation; and ventilation holes are correctly placed.

(A) Requisite Knowledge. Pitched roof construction; safety considerations with roof ventilation; the dangers associated with improper ventilation; knowledge of ventilation tools; the effects of ventilation on fire growth; smoke movement in structures; signs of backdraft; and the knowledge of vertical and forced ventilation.

(B) Requisite Skills. The ability to remove roof covering; properly initiate roof cuts; use the pike pole to clear ventilation barriers; use the ax properly for sounding, cutting, and stripping; position ladders; and climb and position self on ladder.

C.2.2 Example 2. Interpret burn patterns, given standard equipment and tools and some structural/content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.

(A) Requisite Knowledge. Fire development and the interrelationship of heat release rate, form, and ignitability of materials.

(B) Requisite Skills. The ability to interpret the effects of burning characteristics on different types of materials.

C.3 Examples of Potential Uses.

Certification. JPRs can be used to establish the evaluation criteria for certification at a specific job level. When used for certification, evaluation must be based on the successful completion of JPRs.

First, the evaluator would verify the attainment of requisite knowledge and skills prior to JPR evaluation. Verification might be through documentation review or testing.

Next, the candidate would then be evaluated on completing the JPRs. The candidate would perform the task and be evaluated based on the evaluation parameters, performance outcomes, or both. This performance-based evaluation can be either practical (for

psychomotor skills such as "ventilate a roof") or written (for cognitive skills such as "interpret burn patterns").

Note that psychomotor skills are those physical skills that can be demonstrated or observed. Cognitive skills (or mental skills) cannot be observed, but are evaluated on how one completes the task (process-oriented) or the task outcome (product-oriented).

Using Example 1 in C.2.1, a practical performance-based evaluation would measure the ability to "ventilate a pitched roof." The candidate passes this particular evaluation if the standard was met, that is, a 1.22 m × 1.22 m (4 ft × 4 ft) hole was created; all ventilation barriers were removed; ladders were properly positioned for ventilation; ventilation holes were correctly placed; and smoke, heat, and combustion by-products were released from the structure.

For Example 2 in C.2.2, when evaluating the task "interpret burn patterns," the candidate might be given a written assessment in the form of a scenario, photographs, and drawings and then be asked to respond to specific written questions related to the JPR's evaluation parameters.

It is important to remember that when a candidate is being evaluated, he or she must be given the tools, equipment, or materials listed in the JPRs before he or she can be properly evaluated.

C.4 Curriculum Development/Training Design and Evaluation.

The statements contained in this document that refer to job performance were designed and written as JPRs. Although a resemblance to instructional objectives might be present, these statements should not be used in a teaching situation until after they have been modified for instructional use.

JPRs state the behaviors required to perform specific skill(s) on the job, as opposed to a learning situation. These statements should be converted into instructional objectives with behaviors, conditions, and standards that can be measured within the teaching/learning environment. A JPR that requires a fire fighter to "ventilate a pitched roof" should be converted into a measurable instructional objective for use when teaching the skill. *[See Figure C.4(a).]*

JPR

The Fire Fighter I shall ventilate a pitched roof given an ax, a pike pole, an extension ladder, and a roof ladder so that a 1.22 m × 1.22 m (4 ft × 4 ft) hole is created, all ventilation barriers are removed, ladders are properly positioned for ventilations, and ventilation holes are correctly placed.

Requisite Knowledge:

Pitched roof construction, safety considerations with roof ventilation, the dangers associated with improper ventilation, knowledge of ventilation tools, the effects of ventilation on fire growth, smoke movement in structures, signs of backdraft, and the knowledge of vertical and forced ventilation.

Requisite Skills:

The ability to remove roof covering; properly initiate roof cuts; use the pike pole to clear ventilation barriers; use ax properly for sounding, cutting, and stripping; position ladders; and climb and position self on ladder.

The JPR, requisite knowledge, and requisite skills are all used as information from which instructional objectives can be written.

JPRs can be converted into any instructional objective format. For demonstration purposes, these examples have been written as terminal and enabling objectives.

EXAMPLE TERMINAL OBJECTIVES

Cognitive/Knowledge Domain

The fire fighter shall describe the methods, processes, and safety precautions to be taken in order to perform ventilation on a pitched roof in a safe manner.

EXAMPLE: ENABLING OBJECTIVES
(Cognitive)

The fire fighter shall list the safety precautions to be taken when performing roof ventilation as stated in the "XYZ" ventilation manual, with "X" percent accuracy on a written evaluation.

The fire fighter shall explain the effects of ventilation on fire growth as it relates to fire spread, intensity, and movement through structures, with "X" percent accuracy on a written evaluation.

Given the conditions surrounding an incident, the fire fighter shall identify backdraft, flashover, and other dangerous conditions created by fire and the effects of ventilation on these conditions with "X" percent accuracy on a written evaluation.

Psychomotor/Skills Domain
(See sample skills checklist)

The fire fighter shall demonstrate ventilating a pitched roof, given the proper tools, within 5 min and with 100 percent accuracy on the skills checklist.

EXAMPLE: ENABLING OBJECTIVES
(Psychomotor)

The fire fighter shall demonstrate removing roof covering in order to prepare a roof for ventilation with 100 percent accuracy on the skills checklist.

The fire fighter shall demonstrate the removal of ventilation obstructions (ceiling materials, insulation, and so forth) in order to clear the ventilation opening with 100 percent accuracy on the skills checklist.

The fire fighter shall demonstrate the proper use of fire-fighting tools used for ventilation with 100 percent accuracy on the skills checklist.
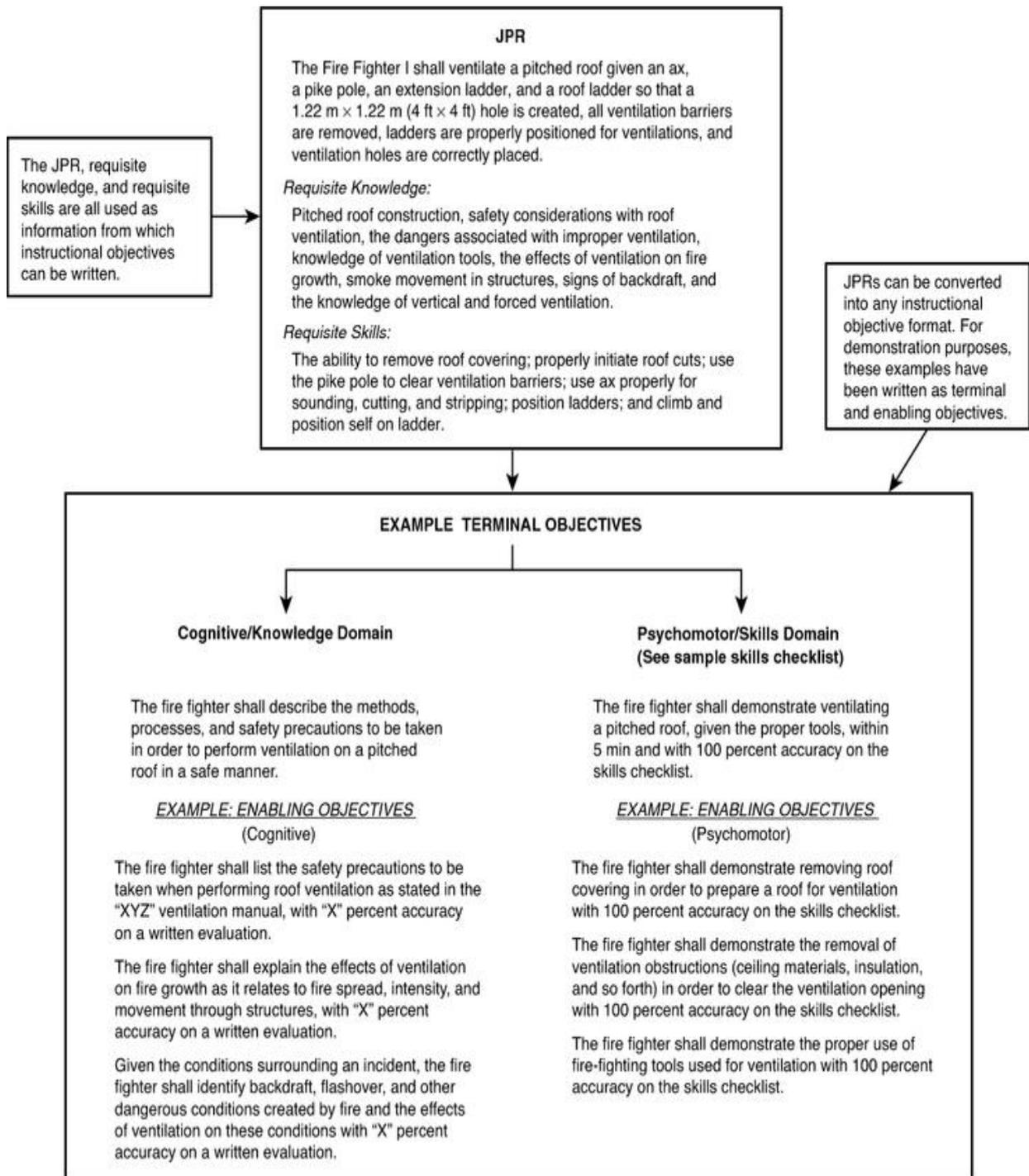
FIGURE C.4(a) Converting JPRs into Instructional Objectives.

Using Example 1 in C.2.1, a terminal instructional objective might read as follows:

The learner will ventilate a pitched roof, given a simulated roof, an ax, a pike pole, an extension ladder, and a roof ladder, so that 100 percent accuracy is attained on a skills checklist. (At a minimum, the skills checklist should include each of the measurement criteria from the JPR.)

Figure C.4(b) is a sample checklist for use in evaluating this objective.

OBJECTIVE: The fire fighter shall demonstrate ventilating a pitched roof, given the proper tools, within 5 minutes and with 100 percent accuracy on the skills checklist.

YES	NO	
☐	☐	1. 1.22 m × 1.22 m (4 ft × 4 ft) hole was created.
☐	☐	2. All ventilation barriers were removed.
☐	☐	3. Ladders were properly positioned.
☐	☐	4. Ventilation holes were correctly placed (directly over fire, at highest point, and so forth).
☐	☐	5. Task completed within validated time parameters established by AHJ. (Time to complete task: _____ .)

FIGURE C.4(b) Skills Checklist.

Although the differences between JPRs and instructional objectives are subtle in appearance, the purpose of each statement differs greatly. JPRs state what is necessary to perform the job in the "real world." Instructional objectives, however, are used to identify what students must do at the end of a training session and are stated in behavioral terms that are measurable in the training environment.

By converting JPRs into instructional objectives, instructors will be able to clarify performance expectations and avoid confusion related to using statements designed for purposes other than teaching. Additionally, instructors will be able to add local/state/regional elements of performance into the standards as intended by the developers.

Requisite skills and knowledge should be converted into enabling objectives. These help to define the course content. The course content should include each of the requisite knowledge and skills. Using Figure C.4(b), the enabling objectives are pitched roof construction, safety considerations with roof ventilation, removal of roof covering, proper initiation of roof cuts, and so forth. These enabling objectives ensure that the course content supports the terminal objective.

Note that it is assumed that the reader is familiar with curriculum development or training design and evaluation.

C.5 Other Uses.

While the professional qualifications standards are principally used to guide the development of training and certification programs, there are a number of other potential uses for the documents. Because they are written in JPR terms, they lend themselves well to any area of the profession where a level of performance or expertise must be determined. These areas might include the following:

(1)   *Employee Evaluation/Performance Critiquing.* The JPRs can be used as a guide by both the supervisor and the employee during an evaluation. The JPRs for a specific job define tasks that are essential to perform on the job, as well as the evaluation criteria to measure when those tasks are completed.

(2) *Establishing Hiring Criteria.* Professional qualifications standards can be used in a number of ways to further the establishment of hiring criteria. The AHJ could simply require certification at a specific job level, for example, Fire Fighter I. The JPRs could also be used as the basis for pre-employment screening by establishing essential minimal tasks and the related evaluation criteria. An added benefit is that individuals interested in employment can work toward the minimal hiring criteria at local colleges.

(3) *Employee Development.* The professional qualifications standards can be useful to both the employee and the employer in developing a plan for the individual's growth within the organization. The JPRs and the associated requisite skills and knowledge can be used as a guide to determine additional training and education required for the employee to master the job or profession.

(4) *Succession Planning.* Succession planning or career pathing addresses the efficient placement of people into jobs in response to current needs and anticipated future needs. A career development path can be established for targeted individuals to prepare them for growth within the organization. The JPRs and requisite knowledge and skills could then be used to develop an educational path to aid in the individual's advancement within the organization or profession.

(5) *Establishing Organizational Policies, Procedures, and Goals.* The JPRs can be incorporated into organizational policies, procedures, and goals where employee performance is addressed.

Annex D Informational References

D.1 Referenced Publications.

The documents or portions thereof listed in this annex are referenced within the informational sections of this standard and are not part of the requirements of this document unless also listed in Chapter 2 for other reasons.

D.1.1 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 1401, *Recommended Practice for Fire Service Training Reports and Records*, 2006 edition.

NFPA 1403, *Standard on Live Fire Training Evolutions*, 2007 edition.

D.1.2 Other Publications. (Reserved)

D.2 Informational References.

The following documents or portions thereof are listed here as informational resources only. They are not a part of the requirements of this document.

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D.3 References for Extracts in Informational Sections. (Reserved)

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