



STATE OF MARYLAND

DEPARTMENT OF STATE POLICE

OFFICE OF THE STATE FIRE MARSHAL



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Colonel Thomas E. Hutchins
Acting Superintendent

William E. Barnard
State Fire Marshal

JOB ANNOUNCEMENT

RECRUITMENT FOR: Fire Protection Engineer II

SALARY: \$42,453 - \$66,022

POSITION DUTIES: This is a mid-level position to perform professional-level fire protection engineering work in the Office of State Fire Marshal.

MINIMUM QUALIFICATIONS:

Education: Possession of a bachelor's degree in fire protection engineering from an accredited four-year college or university.

Experience: Two years of professional experience in fire protection engineering work.

OR

Education: Possession of a bachelor's degree in engineering from an accredited four-year college or university.

Experience: Four years of professional experience in fire protection engineering work.

Note: Pertinent volunteer and/or part-time experience is acceptable. Document the number of hours spent per week in this type of experience on the application.

Desired qualification: Experience in plan review and inspection for compliance with fire protection and life safety requirements.

EXAMINATION: The examination will consist of rating your education, training and experience related to the requirements of this job. You may be required to complete a qualifications supplement.

SELECTION PROCESS: Open to all qualified candidates. Successful candidates will be placed on an employment list categorized as **BEST QUALIFIED, BETTER QUALIFIED** or **QUALIFIED** and remain eligible for consideration for at least one year from the date of the examination. The list will be used by the hiring agency to select employees.

Interested parties contact John F. Bender, Chief Fire Protection Engineer, 800-525-3124

STATE OF MARYLAND
DEPARTMENT OF BUDGET AND MANAGEMENT
OFFICE OF HUMAN RESOURCES
301 West Preston Street
Baltimore, Maryland 21201

POSITION DESCRIPTION

REVIEW INSTRUCTIONS PRIOR TO COMPLETION

PART I. IDENTIFYING POSITION INFORMATION

ITEMS 1-6 to be completed by Agency Personnel Office

1. PIN

2. CLASS CODE

3. SERVICE

4. IS THIS POSITION DESIGNATED AS A
SPECIAL APPOINTMENT?

5. OVERTIME STATUS

6. AGENCY APPROPRIATION CODE

ITEMS 7-13 to be completed by the supervisor

7. Current Employee's Name, if applicable

8. Class Title Fire Protection Engineer I

Working title, if different Fire Protection Engineer

9. Department or Agency Name Office of the State Fire Marshal

Division, Unit or Section

10. Work Location/Address Southern Maryland Regional Office, Prince Frederick, MD

11. Name of Immediate Supervisor John F. Bender

Title of Immediate Supervisor Chief Fire Protection Engineer

12. Work Schedule: (Check all that apply)

Permanent Day Shift

Rotating Shift

Permanent Evening Shift

Full Time

Permanent Night Shift

Part Time

Other (Explain) _____

13. If applicable, how long has the current employee been performing the duties listed below? N/A

PART II. POSITION FUNCTIONS

ITEMS 1-7 If additional space is required, attach a separate sheet

1. **MAIN PURPOSE OF THE JOB** Briefly describe the main purpose of this position and how it relates to the mission of the agency

To apply and approve professional fire protection engineering principles and practices to ensure compliance with fire laws included in the Annotated Code of Maryland and requirements of the State Fire Prevention Code as applicable to design, construction, and use of new and existing buildings and hazardous processes from a life safety and property protection standpoint; serve as a technical code enforcement resource at the regional level to the staff of the agency; implement and coordinate code requirements with local fire and building officials and numerous state agencies; provide appropriate professional level of fire protection engineering services as directed by the Chief Fire Protection Engineer; provide code interpretation and fire protection engineering assistance to architects, engineers and other design professionals consistent with agency policies.

This is an entry level position. The employee works under the close supervision of the Chief Fire Protection Engineer and is assigned work commensurate with the employee's level of experience and training.

2. **ESSENTIAL JOB FUNCTIONS AND OTHER ASSIGNED DUTIES** - List duty and responsibility statements that identify the essential job functions and other assigned duties. Essential job functions are the fundamental job duties of a position that if not performed will alter the job. (Identify essential job functions by highlighting, underlining, etc.)

% OF TIME AND/
OR WEIGHT OF
IMPORTANCE

JOB DUTY

PLAN REVIEW (60%)

* Performs detailed technical review and evaluation of a broad scope and complexity of preliminary design and construction documents, including plans and specifications, of all types of new construction projects and hazardous industrial processes for agency approval and compliance with applicable State fire laws, regulations and related referenced codes and standards in accordance with guidelines and priorities established by the State Fire Marshal and Chief Fire Protection Engineer.

* Performs critical review of various fire protection system "shop drawings" prepared by fire protection sub-contractors. Such systems include automatic sprinkler; detection and alarm; standpipe hose; smoke control; emergency lighting and control; and other highly specialized fire protection systems. Engineering calculations are made to verify and determine adequacy of design and performance of the system in accordance with required standards and good engineering practice.

* Confers with and provides professional fire protection engineering advice, guidance and direction to architects, engineers, and other design professionals on acceptable methods and materials of achieving compliance with fire protection criteria of fire and building codes. Approval is given to proper methods

and designs impacting on the architectural, mechanical, electrical, plumbing and structural aspects of construction, equipment and processes from a fire protection engineering standpoint.

* Researches, analyzes, interprets and applies code criteria and standards for enforcement of the State Fire Code and associated codes and standards, relevant to building construction materials, fire resistance of materials, fire detection and suppression requirements, potential fire hazards and exit design. Prepares technical reports and conducts presentation on such matters when assigned.

INSPECTIONS (14%)

* Conducts Life Safety Code Surveys of various new and existing facilities licensed by the Department of Health and Mental Hygiene and/or certified by the federal Health Care Finance Administration. These surveys include evaluation and documentation of the building's fire protection systems, structural features, egress arrangement and operating features.

* Conducts surveys of complicated hazardous industrial processes and occupancies for evaluation of potential fire hazards, exit analysis and construction features relevant to safeguards which ensure reasonable life safety from fire for occupants and the general public. Recommends and approves methods of construction by correlating their fire resistance design to fire test data, code criteria and sound fire protection engineering principles.

* Witnesses and supervises, when appropriate, the testing and analysis of all types of fire control, detection, alarm and suppression systems including smoke control; fire alarm and other notification systems; automatic sprinkler systems and associated water supply and distribution systems; fire pumps and all associated equipment; and other specialized extinguishing systems. Applies established design criteria and actual installation procedures for all such systems to ensure proper operation and code compliance.

OTHER ASSIGNED DUTIES (14%)

* Provides appropriate technical and administrative information, guidance and direction with regard to a broad range of telephone inquiries from other State, federal, local regulatory agencies, architects, engineers, contractors, and the general public regarding fire code requirements and general fire safety practices. At times, such inquiries may involve further research and resolution of conflicting legal or technical requirements or interests with other regulatory authorities and/or reference of such inquiries to other regulatory or informational agencies.

* Provides technical assistance and support, as appropriate, to regional supervisors and Deputy Fire Marshals in the conduct of fire hazard analysis, code review and interpretations, code compliance, inspection procedures and testing of various fire protection, alarm and detection systems.

* Performs various administrative duties as required such as completion of bi-weekly time and activities reports; monthly individual statistical report; plan review and inspection fee data report by project; monthly mileage, travel and expense reports; health care time and survey reports; and other related duties as assigned.

* Provides professional and expert testimony for public hearings, legal depositions and court cases regarding all types of fire code and fire protection related matters. Such testimony may be required before federal, State or local governing bodies, appeals boards, the State Fire Prevention Commission as well as State or local court systems.

* Provides professional engineering assistance on the investigation of fires involving loss of life or major property damage conducted by this agency. Assists in the preparation, presentation and description of architectural and construction features of the structures involved in the incident, as well as an evaluation of all relevant fire codes and standards which may have contributed or inhibited losses due to fire and

associated effects. This assistance is provided as requested or in conjunction with the major incident response team.

* Performs other related duties as assigned which may not be specifically listed within the position description but are within the general occupational category and responsibility level typically associated with the employee's class of work.

MEETINGS (9%)

* Meets and confers with other State and local building and fire officials for the purpose of reviewing and approving construction plans for fire code compliance and coordination of uniform interpretation and application of specific fire code regulations. Assists State and local officials on matters affecting economic and community development initiatives to "streamline" the regulatory permit process.

* Provides fire protection engineering consulting services to other State and local government agencies involved in design and construction of State-owned, occupied, funded or regulated buildings and facilities in order to recommend and coordinate appropriate and cost effective fire protection solutions.

* Represents the State of Maryland and fire officials on technical committees of the National Fire Protection Association and other nationally recognized code development organizations for the purpose of developing, updating, coordinating and interpreting codes and standards as adopted by the State Fire Prevention Code.

* Participates in the planning, administration and presentation of state-wide conferences and seminars providing a variety of life safety information to other fire protection professionals, code enforcement officials and the general public.

* Serves as a member of special committees to review and recommend proposed consensus codes and standards and associated amendments for incorporation as a part of the State Fire Prevention Code.

TRAINING (3%)

* Receives training on technical and administrative policies and procedures.

* Researches, prepares and conducts in-service training classes regarding the enforcement, application and interpretation of the State Fire Prevention Code and associated codes and standards, as well as other relevant fire protection issues.

* Prepares for and speaks before technical professional engineering societies, other related professional and trade organizations and the general public on fire code requirements, fire protection engineering subjects and general fire safety issues.

PERFORMANCE CHARACTERISTICS

* Provides timely, complete, accurate, courteous, professional service and response in all technical matters and professional relationships with the general public, public officials and all agency personnel consistent with generally recognized standards of conduct expected of this classification and in accordance with established agency policies and procedures.

* Establishes and promotes accurate and timely application of fire protection engineering services by developing and maintaining a professional working relationship with allied agencies and Deputy Fire Marshals within an assigned region in accordance with established guidelines and priorities.

- * Prepares reports, both orally and in writing, for detailed analysis of fire protection features of design and assessments of levels of fire safety for code compliance, impacting on life safety from fire.
- * Uses computer technology to aid in the research and application of current and developing fire protection technology and information to current fire protection problems and solutions.

3. **LEVEL, FREQUENCY AND PURPOSE OF WORK CONTACTS:** List the contacts that this position has with individuals within the division, agency and department as well as other State agencies, other government agencies, private companies, clients, customers, vendors and the general public. These contacts may be in person, in writing, or by telephone. Indicate how often the contact occurs. State the purpose of each contact, for example, to provide information, to explain procedures or decisions, to persuade or negotiate.

This position requires direct contact with other regulatory officials, as well as design professionals and the general public, in order to determine compliance with all applicable fire codes and standards. The fire protection engineers are the primary contact for all technical matters relating to codes and standards. In many instances substantial research and the application of accepted engineering standards are required to properly address these inquiries. Contacts are either in person, in writing, or by telephone or other electronic medium on a constant daily basis. These contacts include the following:

Agency Contacts: State Fire Marshal, Executive Assistant, Chief Fire Protection Engineer, Chief Deputy, Deputy Chiefs, Deputy Fire Marshals, Public Information Officer, Research Analyst, Management Associate, Administrative Aids and Fee Schedule Administrator.

The purpose of these contacts is primarily to answer technical code related questions and help resolve specific code enforcement issues and to provide general information for the technical and administrative operations of the agency. This occurs on a frequent daily basis.

State Agencies: Departments of Health and Mental Hygiene, General Services, Public Safety & Corrections, Social Services, Transportation, Port Administration, Aviation Administration, Mass Transit Administration, Child Care Administration, Juvenile Services, Aging, Licensing and Regulation, Education, Comptroller, Housing and Community Development, University of Maryland System, Dept. of Environment,

The purpose of these contacts is to ensure appropriate coordination and compliance with all state fire laws and standards for the construction, renovation and occupancy of all buildings and processes handled by each individual department. This includes general guidance and direction in all matters of code enforcement for accepted levels of life safety as well as cost effective alternatives and corrective actions. This occurs on the basis of several times per week.

Federal Government Agencies: U.S. Fire Administration, National Fire Academy, General Services Administration, U.S. Coast Guard, Department of Justice, Health and Human Services, Housing and Urban Development,

The purpose of these contacts is to administer on a contract basis the laws and requirements of certain federal regulatory authorities and to coordinate other federal regulations with the laws and regulations of the state. This occurs several times per month.

Local Government (County & Municipal Agencies): Building Permits, Planning & Zoning, Fire Marshal, Fire Departments, Public Works, Board of Education, Economic Development Office,

The purpose of these contacts is to coordinate and resolve all code related issues between locally recognized building standards and zoning regulations and the State Fire Code. This occurs on a frequent daily basis.

Other Regulatory Agencies: Joint Commission for Accreditation of Hospitals, Underwriters Laboratories, Factory Mutual Engineering and Research Corporation, Consumer Product Safety Commission,

The purpose of these contacts is to ensure the proper application of recognized standards and product evaluations for enforcement of the State Fire Prevention Code. This occurs several times per week.

National Organizations: National Fire Protection Association, Society of Fire Protection Engineers, Building Officials and Code Administrators, International, Fire Marshals Association of North America,

The purpose of these contacts is to seek interpretative guidance of nationally written codes and standards for code enforcement application and to provide input to national standards for promulgation of such regulations by the state of Maryland. This occurs on the basis of several times per week.

Private Companies: Architects; engineers; general building contractors; fire protection equipment, designers, manufacturers and distributors including: fire alarm and detection systems, fire sprinkler systems, specialized fire suppression systems, portable fire extinguishing equipment; various other building trade sub-contractors for electrical, plumbing, mechanical, structural, elevator, fireproofing; various vendors of all types of fire safety products and other fire code regulated products such as furniture and furnishings, interior finishes, building hardware, construction materials,

The purpose of these contacts is to respond to their inquiries regarding the application of specific fire code requirements as well as applicable compensatory features and equivalencies. This occurs on a frequent daily basis.

General Public: Day care providers, health care administrators, building owners and managers, routine citizen complaints.

The purpose of these contacts is to respond to inquiries regarding specific fire code requirements and general fire safety issues. This occurs on a daily basis.

4. **DECISIONS AND RECOMMENDATIONS:** List the decisions and recommendations that this position makes which are necessary to carry out essential job functions. State to whom recommendations are made.

The following typical decisions and recommendations made by this position are disseminated to all contacts listed above on a regular basis:

- A. Application and interpretation of all relevant regulations, laws, codes and standards for the review and approval of architectural and mechanical designs of new and renovation projects.
 - B. Determination and approval of fire resistance ratings: enclosure requirements for hazards; protection of shafts, ducts and stairways: adequacy of means of egress; number, size and location of exits; capacity of exits; and adequacy of fire extinguishing and detection systems for all occupancy types.
 - C. Application of the fire code to existing buildings to the extent that reasonable life safety against the hazards of fire and associated products of combustion, explosion, and panic is provided and maintained.
 - D. Approval of the use of systems, methods, or devices of equivalent quality, strength, resistance, effectiveness, durability and safety to those prescribed by the codes after evaluation of technical data to demonstrate equivalency from a life safety and fire protection engineering standpoint. All such approvals are made with due consideration to existing physical and financial restraints which preclude the strict enforcement of applicable laws and fire safety standards.
5. EQUIPMENT USED-List equipment, machinery and tools used to complete this job, e.g. personal computer, calculator, typewriter, hand tools, measuring devices and lab equipment.

Automobile, personal computer, scientific calculator, camera, architectural scale, engineering scale, fire protection system and water supply testing equipment such as pressure gauges, nozzles, hydrant cap and wrench, tachometer, basic drafting equipment such as straight edge, triangles, curves, pencils, measuring tape, personal protective equipment, and other related office equipment.

6. NATURE OF SUPERVISION RECEIVED - Check the type of supervision that is given to this position. See instructions Part II, Item 6 for definition of terms.

- Close Supervision
- Moderate Supervision
- General Supervision
- Managerial Supervision

7. WORKING CONDITIONS: (Check all that apply)

- Work involves exposure to uncomfortable or unpleasant surroundings. (Explain)
- Work involves exposure to hazardous conditions which may result in injury. (Explain)
- Work involves special physical demands such as lifting 50 pounds or more, climbing ladders, etc.

Work requires use of protective equipment such as goggles, gloves, mask, etc.
(Explain)

Explanation: Certain functions of this position require special physical demands to enter spaces with limited access and exposure to uncomfortable or unpleasant surroundings when conducting inspections of hazardous processes, atmospheres, construction sites and restricted or unconditioned spaces. Personal protective equipment such as firefighter's turnout clothing, boots, helmet, hard hat, safety shoes, safety goggles, coveralls, etc. are required when performing inspections or assisting the Deputy Fire Marshal's on fire investigations at fire scenes or witnessing tests of fire protection systems and equipment.

PART III. RESPONSIBILITY FOR THE WORK OF OTHERS

This section should be completed if this position is responsible for the work of others, this includes full and part-time permanent employees, contractual or emergency employees, volunteers, reimbursables or loaned employees. If additional space is required, attach a separate sheet.

NATURE AND LEVEL OF RESPONSIBILITY FOR WORK OF OTHERS:

A supervisor assigns and reviews the work of others, trains employees, recommends the selection, promotion and termination of employees, approves leave and signs time cards, signs annual performance evaluations, determines and resolves procedural problems within the unit, serves as a spokesperson for subordinates, explains policy and directives from management and issues formal disciplinary reminders, warnings, and reprimands.

A lead worker assigns and reviews the work of others, instructs and motivates workers, is available for immediate assistance or review and performs the work of the classification.

- a) Does this position supervise employees? Yes _____ No
- b.) Does this position lead employees? Yes No _____

If yes, to A or B, list the names and classifications of the employees that this position supervises or leads.

Provides training and guidance to Deputy Fire Marshals on matters related to the application and interpretation of fire laws and regulations.

- c) Check the ways that this position supervises or leads these employees. (check all that apply)

- Assign and review work
 Approve leave, sign timecard
 Sign annual performance ratings
 Interview & select new employees
 Train employees
 Discipline employees (counsel, recommend suspension & termination)

- d). Do any of the employees supervised have supervisory responsibility? If so, list them and the names and classifications of those they supervise or attach an approved organization chart. N/A

PART IV. PERFORMANCE STANDARDS

PERFORMANCE STANDARDS- For each essential job function described in Part II, list the standard(s) necessary for satisfactory performance. If additional space is required, attach a separate sheet.

A. Plan Review:

1. Almost always reviews assigned plans within guidelines established by the Chief Fire Protection Engineer.
2. Thoroughly and completely reviews, with knowledge of good engineering practice, construction documents of a broad scope and complexity for compliance with all jurisdictional codes in the area of fire protection.
3. Thoroughly and completely reviews shop drawings that encompass a broad scope and complexity, with the knowledge of good engineering practice, for compliance with all jurisdictional codes.
4. Performs necessary engineering calculations in determining design adequacy and successfully defends these findings against engineers, architects, and fire protection system designers, as may be necessary from time to time.
5. Prepares accurate and timely correspondence related to review results specifying the deficiency and code reference.
6. Performs other related construction document evaluation and administration duties as assigned.
7. Develops and maintains a knowledge of related construction methods, materials, and standards. Uses this knowledge to interpret and apply the fire protection code requirements to projects under review.

B. Inspections

1. Performs accurate and timely field inspections of health care facilities and complex or hazardous facilities and processes as assigned from a fire protection engineering standpoint to determine compliance with jurisdictional codes.
2. Evaluates special fire protection problems when assigned or requested by the Chief Fire Protection Engineer or regional office staff.

C. Other Assigned Duties

1. Conducts research of technical literature, codes, and standards when assigned.
2. Prepares technical reports and briefings related to fire protection systems, equipment, products, and hazardous processes when assigned.
3. Prepares code interpretations, equivalencies, reports and other correspondence of an important or urgent nature for the Chief Fire Protection Engineer when assigned.
4. Prepares correspondence, reports, and other writings, using care to edit properly for grammar, spelling and writing style.

D. Training

1. Prepares for and conducts training sessions on fire protection matters for in-house Deputy Fire Marshal staff and other fire protection engineers when directed.
2. Prepares for and conducts training sessions for various professional societies on matters related to enforcement of the State Fire Prevention Code.

PART V. SIGNATURES

The following signatures indicate acknowledgment by the employee of the information on this form, when applicable, and approval by the supervisor and appointing authority.

Employee's Signature

Date

Supervisor's Signature

Date

Appointing Authority or Designee

Date