

New York State Department of Civil Service

DIVISION OF CLASSIFICATION & COMPENSATION

Classification Standard

Occ. Code 4063205

Professional Engineer 2 (Civil), Grade 27	4063205
Professional Engineer 2 (Civil/Construction), Grade 27	4063210
Professional Engineer 2 (Civil/Environmental), Grade 27	4063215
Professional Engineer 2 (Civil/Geotechnical), Grade 27	4063220
Professional Engineer 2 (Civil/Materials), Grade 27	4063225
Professional Engineer 2 (Civil/Structural), Grade 27	4063230
Professional Engineer 2 (Civil/Transportation), Grade 27	4063235
Professional Engineer 2 (Electrical), Grade 27	4063240
Professional Engineer 2 (Environmental), Grade 27	4063245
Professional Engineer 2 (Gas Pipeline Safety), Grade 27	4063265
Professional Engineer 2 (Industrial), Grade 27	4063250
Professional Engineer 2 (Mechanical), Grade 27	4063255
Professional Engineer 2 (Mechanical/HVAC), Grade 27	4063260

Brief Description of Class Series

Incumbents of these positions apply their knowledge of the mathematical, physical, and engineering sciences in several specialty areas. They provide the full range of professional engineering services including consultation, evaluation, planning, systems design, engineering surveys, or project oversight in order to ensure work conforms to accepted engineering standards. They supervise and evaluate the work of subordinate professional engineers and technicians in engineering projects from design to completion and assure that work performed complies with established policies, procedures and program objectives. They analyze existing conditions concerning environmental factors affecting public health and safety, and direct projects for the construction, extension, alteration, remodeling, and maintenance of roads, buildings, bridges, public and private water and sewer systems, for electrical and power supply systems, industrial safety systems, fire protection systems and environmental remediation systems.

These positions are classified in several State agencies, although the majority of positions are in the Office of General Services, the Department of Transportation, the Department of Environmental Conservation, and the Thruway Authority.

Distinguishing Characteristics

Professional Engineer 2 (All Parenthetics): first supervisory level; under the general direction of higher level staff, supervise subordinate licensed professional engineering and technical staff; plan, direct, and review major projects, indicating by their seal that work conforms to accepted engineering standards; and serve as head of an engineering section. Positions may be assigned to serve as the principal assistant to a higher level professional engineer responsible for an engineering program in a region or responsible for a statewide engineering program. For any assignment, incumbents supervise at least two teams headed by Professional Engineers 1 (Various Parenthetics) engaged in a wide variety of engineering activities, performing the full range of supervisory duties including approving leave and tracking time and attendance; identifying staff development needs; evaluating staff performance; and completing performance evaluations.

Related Classes

Professional Engineers 1 (all parenthetics) independently perform the full range of engineering services, are licensed, and typically indicate by their seal on project plans that work conforms to accepted engineering standards and/or review and comment on an engineering submittal whereby the comment or approval letter must be under the signature of a licensed professional engineer.

Professional Engineers 3 (all parenthetics) are characterized by their predominant assignment to function as assistant director or director of an engineering program, managing projects that span different geographic areas. They administratively supervise multiple engineering sections headed by Professional Engineers 2 (all parenthetics) engaged in a wide variety of engineering activities.

Illustrative Duties

Professional Engineer 2 (Civil)

Perform professional engineering duties related to oversight of new construction, renovation, or long term maintenance projects; report to higher level staff concerning multiple projects; direct and evaluate the application of engineering standards for construction or rehabilitation projects; review and approve project work plans, contract changes and agreements; and provide technical advice to subordinate professional engineers, assistant engineers, legal staff, consultants and department or institution contract management and budget staff on the financial, structural or construction requirements of projects.

Professional Engineer 2 (Civil/Construction)

Perform professional engineering duties related to oversight of construction design, project budget, estimates, work plans and contract changes; direct large complex building construction projects for conformity to specifications and standards; coordinate the work of several contractors; review, analyze, and report on new and revised provision of law; supervise other engineers; may recommend new or revised provisions of law concerning structural safety, adequacy and stability; and advise code enforcement officials, architects, engineers and contractors in the interpretation of provisions of the codes.

Professional Engineer 2 (Civil/Environmental)

Perform professional engineering duties related to oversight of soil and water testing, evaluation and direction of projects to apply water and soil conservation engineering or coordination of water management activities as they relate to hydropower, irrigation and recreational use of inland waterways systems.

Professional Engineer 2 (Civil/Geotechnical)

Perform professional engineering duties related to oversight of geotechnical engineering projects primarily focusing on determining soil and field material, ground seepage and detailed soil mechanics; gather data relating to bedrock, foundations, and aquifer mapping and recommend subsurface construction plans; and ensure that project plans and changes from project design through to project completion are consistent with accepted standards.

Professional Engineer 2 (Civil/Materials)

Perform professional engineering duties related to oversight of a functional group and/or section of the Materials Bureau and represent the Bureau in engineering matters. These positions manage the development and/or revision of specifications, quality assurance programs and the analysis of special material engineering problems, and establish sampling and inspection methods and assist the regional offices in implementing the procedures. Following implementation, positions in this class develop performance surveys to evaluate design, construction and maintenance procedures.

Professional Engineer 2 (Civil/Structural)

Perform professional engineering duties related to oversight of structures subject to high loads or high winds; analyze the appropriateness of plans focusing on types of loads; recommend design of structural systems; design and review difficult plans complicated by need to coordinate architectural, mechanical, electrical and plumbing designs; may evaluate and advise on the revision of the Building Construction Code and manuals of construction design; analyze and design structural elements including steel framing, concrete framing, and concrete foundations; and design, review, fabricate, construct,

evaluate and/or inspect bridges and transportation structures according to the American Association of State Highway Transportation Officials (AASHTO) bridge specifications and standards.

Professional Engineer 2 (Civil/Transportation)

Perform professional engineering duties related to oversight of projects concerned with construction of new or rehabilitated roads, bridges, railroads, airport structures, and waterways; and develop, schedule and direct planning programs for construction and improvement of transportation systems and related infrastructure.

Professional Engineer 2 (Electrical)

Perform professional engineering duties related to advising and consulting on design and direction of large multiple electrical systems, and evaluate electrical systems design, construction, operation, and ongoing rehabilitation of existing electrical equipment.

Professional Engineer 2 (Environmental)

Perform professional engineering duties related to oversight of environmental quality programs. These positions direct efforts to ensure engineering standards are met in several environmental areas such as public health and safety, wastewater management, solid waste management, radiological health, public water supply monitoring and water or air pollution control, hazardous waste management spill prevention, response and remediation; evaluate hazardous waste sites and locations affected by pollution control initiatives for compliance; analyze site physical data and design systems that ensure appropriate hydraulic loading; recommend systems for pressure conduits, including those used to transport natural gas and hazardous liquids; evaluate operations and maintenance of natural gas and petroleum transmission and gathering lines; recommend systems for storm water, ground and well water or waste water collection or treatment; and develop environmental pollution prevention and abatement programs.

Professional Engineer 2 (Gas Pipeline Safety)

Perform professional engineering duties related to oversight of the regulation of natural gas, hazardous liquid, liquefied natural gas, liquefied petroleum gas, and steam pipeline systems; perform the most complex construction inspections, investigations of incidents involving natural gas and hazardous liquids pipelines, and facility design reviews including proposed modifications for design plans of construction projects and facilities involved in incidents; provide technical advice to subordinate professional engineers; and use professional engineering expertise to testify on the most difficult issues in major utility rate cases, siting cases, and other administrative proceedings on behalf of the Department of Public Service, as well as to participate in policy development related to utility rates, reliability and safety issues.

Professional Engineer 2 (Industrial)

Perform professional engineering duties related to oversight of design and evaluation of industry standards that affect safety and health of workers and the general public; evaluate work standards that support worksite conditions such as exposure to materials that may affect health and safety; analyze human factors affecting the work environment and environmental factors that affect worker and the general public's exposure to risks to air, water, and land quality; review plans and variances or modifications from mandated safety performance and specification standards.

Professional Engineer 2 (Mechanical)

Perform professional engineering duties related to oversight of construction, reconstruction, operations and maintenance of mechanical elements in buildings, hospitals, utility energy facilities or public housing projects; review and consult on plans, specifications and estimates for mechanical systems and their installations; and advise on new engineering methods and materials.

Professional Engineer 2 (Mechanical/HVAC)

Perform professional engineering duties related to oversight of projects concerned primarily with the design and evaluation of operating systems for heating, ventilating and air conditioning; may advise and recommend systems for energy and power transmission, conservation and distribution, heat transfer and various systems such as for cooling towers, boilers, air quality and ventilation. The scale of projects range from small domestic installations to large steam heating and hot water systems that supplying power for electrical generation to multiple-building institutions.

Minimum Qualifications

Professional Engineer 2 (Civil)

Promotion: New York State Professional Engineer's license and current registration, and one year of service as a Professional Engineer 1 (Civil).

Professional Engineer 2 (Civil/Construction)

Promotion: New York State Professional Engineer's license and current registration, and one year of service as a Professional Engineer 1 (Civil/Construction).

Professional Engineer 2 (Civil/Environmental)

Non-Competitive: New York State Professional Engineer's license and current registration, a bachelor's degree in civil engineering, and four years of progressively

responsible experience in water management related to hydropower, irrigation and recreational use of inland waterways systems.

Professional Engineer 2 (Civil/Geotechnical)

Promotion: New York State Professional Engineer's license and current registration, and one year of service as a Professional Engineer 1 (Civil/Geotechnical).

Professional Engineer 2 (Civil/Materials)

Promotion: New York State Professional Engineer's license and current registration, and one year of service as a Professional Engineer 1 (Civil) or Professional Engineer 1 (Civil/Transportation).

Professional Engineer 2 (Civil/Structural)

Promotion: New York State Professional Engineer's license and current registration, and one year of service as a Professional Engineer 1 (Civil/Structural).

Professional Engineer 2 (Civil/Transportation)

Promotion: New York State Professional Engineer's license and current registration, and one year of service as a Professional Engineer 1 (Civil/Transportation).

Professional Engineer 2 (Electrical)

Promotion: New York State Professional Engineer's license and current registration, one year of service as a Professional Engineer 1 (Electrical).

Professional Engineer 2 (Environmental)

Promotion: New York State Professional Engineer's license and current registration, and one year of service as a Professional Engineer 1 (Environmental).

Professional Engineer 2 (Gas Pipeline Safety)

Promotion: New York State Professional Engineer's license and current registration, and one year of service as a Professional Engineer 1 (Gas Pipeline Safety).

Professional Engineer 2 (Industrial)

Promotion: New York State Professional Engineer's license and current registration, and one year of service as Professional Engineer 1 (Industrial).

Professional Engineer 2 (Mechanical)

Promotion: New York State Professional Engineer's license and current registration, and one year of service as a Professional Engineer 1 (Mechanical).

Professional Engineer 2 (Mechanical/HVAC)

Promotion: New York State Professional Engineer's license and current registration, and one year of service as a Professional Engineer 1 (Mechanical/HVAC).

Note: Classification Standards illustrate the nature, extent and scope of duties and responsibilities of the classes they describe. Standards cannot and do not include all of the work that might be appropriately performed by a class. The minimum qualifications above are those which were required for appointment at the time the Classification Standard was written. Please contact the Division of Staffing Services for current information on minimum qualification requirements for appointment or examination.

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