

New York State Department of Civil Service
DIVISION OF CLASSIFICATION & COMPENSATION

Classification Standard

Occ. Code 4770300

Senior Engineering Materials Analyst, Grade 18	4770300
Associate Engineering Materials Analyst, Grade 23	4770400
Principal Engineering Materials Analyst, Grade 27	4770500
Director Engineering Materials, M-5	4772900

Brief Description of Class Series

Engineering Materials Analysts determine the suitability of engineering materials for use in construction. At the higher levels of the title series, there is responsibility for developing and modifying the tests used on construction materials, and for suggesting the establishment and revision of specifications for materials.

These positions are classified only at the Department of Transportation.

Distinguishing Characteristics

Senior Engineering Materials Analyst: full performance level; performs chemical and/or physical testing and analysis of construction materials to strict standards.

Associate Engineering Materials Analyst: first supervisory level; directs the activities of multiple units of the materials testing program.

Principal Engineering Materials Analyst: supervises and coordinates all phases of chemical and physical testing of construction materials for a major section of the materials testing program.

Director Engineering Materials: one position class; oversees the Department of Transportation engineering materials program.

Illustrative Tasks

Senior Engineering Materials Analyst

Conducts laboratory testing and analysis of engineering construction materials and submits results of those tests and analyses.

Conducts equipment maintenance, as directed.

Follows all applicable safety procedures.

Conducts research to develop new tests and to standardize test procedures to reduce testing time and increase test production.

Checks test reports against specifications.

Performs occasional field assignments to determine the suitability of construction materials or modification of test procedures or specifications.

Investigates materials that proved satisfactory in laboratory testing but provided unsatisfactory field performance.

Assists in research and development work.

May direct the work of, or train, other personnel.

Associate Engineering Materials Analyst

Coordinates with suppliers of construction materials and users of such materials to determine appropriateness of use and to review composition of materials.

Directs the work of analysts, technicians, and aides in one or more laboratory units.

Follows all applicable safety procedures and contributes to safety plan modifications.

Determines the priority of work and oversees work in progress.

Supervises the receiving and identification of samples and the keeping of proper reports and records of tests.

Suggests and develops new testing procedures and apparatus.

Suggests modification of existing specifications and prepares proposed new specifications.

May perform occasional field assignments to determine the suitability of construction materials and need for development of new tests.

Principal Engineering Materials Analyst

Oversees testing activities and manages personnel in a section of the laboratory.

May accept or reject materials for public works construction.

Maintains the inventory and budget for a section of the laboratory.

Maintains laboratory accreditation documentation for a section of the laboratory.

Supervises the development of new and improved test procedures, the evaluation of new products, and the progression of laboratory research projects.

Prepares and reviews suggested new specifications for construction materials and revises existing specifications.

Provides coordination of liaison with suppliers of construction materials and users of such materials.

May visit construction projects and manufacturing plants to appraise the need for revised materials evaluation or control procedures.

Director Engineering Materials

Oversees physical and chemical testing of construction materials and the analysis of engineering materials problems concerning design, construction control, and maintenance.

Approves or rejects materials based on test results.

Visits construction projects, manufacturing plants, and sources of raw materials to determine the origin of unsatisfactory materials and to advise producers on methods to meet specifications.

Directs research work on problems pertaining to materials.

Testifies at court of claims proceedings in relation to materials specifications and test procedures.

Represents the department on the materials committee of national scope.

Prepares reports on materials testing for professional societies and technical publications.

Minimum Qualifications

Senior Engineering Materials Analyst

Open Competitive: Completion of a two-year traineeship, or a bachelor's degree in a related field including at least 12 semester credit hours in chemistry, materials science or strength of materials and two years of experience performing quality control and/or quality

assurance testing of materials for highway, building, or structural construction and maintenance.

Associate Engineering Materials Analyst

Promotion: One year of service as a Senior Engineering Materials Analyst, Senior Engineering Materials Chemist, Assistant Engineer (Civil/Transportation), or Assistant Geologist.

Open Competitive: Seven years of experience in engineering or applied chemistry of which five years must have included overseeing engineering materials work including laboratory testing, design, field sampling and control, and construction inspection.

Principal Engineering Materials Analyst

Promotion: One year of service as Associate Engineering Materials Analyst.

Director Engineering Materials

Promotion: One year of service as a Principal Engineering Materials Analyst.

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 the work that might be appropriately performed by a class. The minimum qualifications above are those required for appointment at the time the Classification Standard was written. Please contact the Division of Staffing Services for current information on minimum requirements for appointment or examination.

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