

**DISTINGUISHING FEATURES OF THE CLASS:** This position has responsibility for the performance of complex technical engineering duties and applies principles of civil engineering to a variety of engineering problems. The incumbent performs engineering work in the office or field in connection with the design, inspection, maintenance or construction of highways, bridges and other public works. The incumbent has responsibility for major programs or projects of the Division of Public Works. Supervision may be exercised over a small number of sub-professional employees. Work is performed under the general direction of the Commissioner of the Division or his/her designee.

**TYPICAL WORK ACTIVITIES:** *The typical work activities listed below, while providing representative examples of the variety of work assignments in the title, do not describe any individual position. Incumbents in this title may perform some or all of the following, as well as other related activities not described.*

Recommends multi-year construction and maintenance programs for highways and other Public

Work projects, including highway safety improvements;

Supervises and directs work assigned including but not limited to: highway inspection programs,

computerized road maintenance programs, topographic and utility surveys, the design of

highways and other Public Works projects, the inspection and supervision of construction

for highways and other Public Works projects;

Responsible for manual and computer aided drafting, and designing plans and profiles for the

construction of civil engineering projects;

Supervises and assists in the use of equipment used in making observations, gathering and recording

engineering data;

Conducts surveys to establish or re-establish property lines, to map developed areas and to run location lines for roads;

Supervises the activities of field parties engaged in road, property or other topographic surveys, collection of data for computation of quantities and payment to contractors, and traffic control surveys;

Supervises and assists in the: planning, design, inspection and construction supervision for all Public Works projects including but not limited to highways, bridges, building, water supply, wastewater handling, storm water handling, flood mitigation, airports, park development, traffic controls, drainage systems, utilities, etc.;

Assists in the inspecting of bridges, building and other Public Works structures for structural integrity;

May test and inspect construction materials to ensure conformance to specifications;

Prepares progress reports and retains records of completed projects and all changes to plans and specifications;

Supervises and assists in reviewing plans, and maintains permit files and records, for development or special uses which require permits or approvals from the Division which authorize work/use;

May maintain County route mileage and road status book;

May oversee the work and assist in the training of laborers and sub-professional engineers;

Utilizes computer aided design for highways, bridges, structures, surveying, hydraulics and other

civil engineering applications needed for the analysis of civil engineering problems;

Provides technical assistance to in-house construction forces;

Supervises and performs preparation of plans, specifications and bid documents for in-house and contract projects;

May evaluate bids, including reference checks for contract projects;

Obtains all permits and approvals required from regulatory agencies including but not limited to the NYSDEC, Army Corps of Engineers, NYS Department of Health, FAA, NYSDOT, and other agencies and utilities;

Prepares reports, studies, grant applications and planning documents;

Investigates complaints and recommends action;

May act as an expert witness;

Reviews qualifications and proposals, recommends selection and oversees consultants and contractors;

Signs and affixes his/her seal to appropriate documents.

**FULL PERFORMANCE KNOWLEDGES, SKILLS, ABILITIES, AND PERSONAL CHARAC-**

**TERISTICS:** Good knowledge of advanced technical engineering physics and advanced engineering mathematics as related to civil engineering; good knowledge of design and construction engineering practices; skill in the use of engineering field and office instruments; ability to learn and be proficient in computer aided design and drafting; ability to make difficult and technical computations and to compile engineering data; ability to prepare, read and interpret engineering drawings, specifications and bid documents; ability to express oneself clearly and concisely, both

orally and in writing; ability to exercise personal discretion; and sound judgment.

MINIMUM QUALIFICATIONS: Either:

- (A) Possession of a Professional Engineering License issued by the New York State Education Department with current certified registration and four (4) years of civil engineering experience, inclusive of development of design documents and construction management, one year of which shall involve supervisory duties; or
- (B) Possession of a Professional Land Surveyor License issued by the New York State Education Department with current certified registration and eight (8) years of civil engineering/surveying experience, inclusive of development of property and topographic maps, development of site plans, construction lay-outs and similar plans, three (3) years of which experience shall involve supervisory duties.

*Appropriate experience shall be in engineering dealing with design and construction of buildings, highways, bridges, waterworks, harbor. or other infrastructure projects.*