DISTINGUISHING FEATURES OF THE CLASS

Under the general supervision of a Water Systems Engineer I, an employee in this class is responsible for the visual examination of construction sites of water mains, valves, air vents, blow-offs, hydrants, motor pits, storage tanks, pumping stations, and appurtenances. The purpose of such examination is to ensure that the installation is being performed in accordance with specifications provided by OCWA and in accordance with time limits set by contract between OCWA and the contractors. Inspection includes the installation of new facilities as well as the replacement, rebuilding and repairs made to existing facilities.

An employee in this class receives assignments orally from the Water Systems Engineer I, who, at the time of assignment, gives specifications and maps to allow the employees to become familiar with construction work required. The specifications and maps are created by the Water Systems Construction Designer or by a consulting engineering firm. Assignments are reviewed by the Water Systems Engineer I who resolves any problems encountered or answers any questions an employee may ask. The Water Systems Engineer I examines for accuracy payment certificates filled out by the employee. These certificates authorize payment to the contractor for satisfactory work completed and enumerate what construction work was completed. The acceptability of the work to the employee, and the amount of payment due to the contractor. The Water Systems Construction Designer also reviews these payment certificates and is also available to answer questions about the design of the water construction work. An employee in this class may occasionally exercise direct supervision over temporary summer employees or
drafting technicians in field work situations where the latter are required to
make rough sketches, make measurements, take simple numeric notes or drive stakes;
does related work as required.

TYPICAL WORK ACTIVITIES

Examines visually at construction sites the installations, replacement,
rebuilding, or repair of water systems and component facilities, such as water
mains, hydrants, services, air vents, blow−outs, meter pits, storage tanks,
pumping stations and appurtenances for the purpose of detecting errors made by
contractors in failing to install, replace, rebuild or repair water facilities
according to pre−designed specifications written by the Water Systems Construction
Designer or by a consulting engineering firm.

Stakes out the location of proposed water systems from specifications, maps
or other information which entails driving wooden stakes into the ground to
indicate the route of a water system as plotted on a map, specification or
narrative or graphic piece of information that has been established by the Water
Systems Construction Designer or by a consulting engineering firm.

Examines visually tests of pressure of water lines and of chlorination of
water lines to detect flaws in making these tests and certifies to contractor that
test has been performed satisfactorily.

Locates at field sites valves, curb boxes, and other appurtenances by
reference to maps, specifications, narrative or graphic information or by visual
search and uses a wrench or similar tool to turn on or off, or open or close all
or part of a water system.

Measures with a tape measure length of water mains and appurtenances
installed; draws rough free hand sketches of facilities; and reduces to writing on
simple forms the progress of work which is expressed in length of material
installed, amount of material used and plots on the construction map changes in
the specifications or route of the system which the employee authorized to accommodate difficulties in conforming to the original water system design.

Checks visually elevations and grades of pipe and appurtenances installed or checks same by using a level or transit.

Fills out payment certificates authorizing payment to contractors for work performed by identifying the exact nature of the work performed, the kind, quantity, and cost of materials used and approval of work performed.

Assists in or performs alone fire flow or hydrostatic tests by reading meters and gauges to determine amounts of water available at given pressures.

Answers orally questions homeowners pose regarding the effect of water system construction upon property.

Inventories OCWA material, such as pipes, valves and fittings on a regular basis.

May estimate costs of material to be used in proposed construction projects by figuring quantities, kinds, costs of materials.

May assist in the design of short extensions (up to 1000') of water systems by making measurements with a tape measure, locating physical obstructions above ground or under ground facilities and by sketching location of facilities on paper for final drawing by drafting technician.

FULL PERFORMANCE KNOWLEDGES, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS

Some knowledge of the techniques of installation of water mains, valves and appurtenances.

Some knowledge of pipeline curve geometry.

Some knowledge of water systems safety and construction practices, such as trench shoring and compaction.

Some knowledge of engineering properties of materials used in water systems construction, such as concrete and bituminous concrete.

Skill in drawing sketches showing the location of water mains, valves and appurtenances.

Skill in using tools and devices associated with this activity, to include, but not limited to, levels, transits, measuring tapes and dip needles.
Ability to read and understand chlorination tables, leakage charts and pressure gauges.

Ability to add, subtract, multiply and divide.

Ability to express oneself orally, in terms of answering questions concerning water system construction; and, ability to express oneself in writing, in terms of filling out forms.

MINIMUM QUALIFICATIONS

A. Graduation from a regionally accredited or New York State registered college or university with an Associate's Degree in Civil Engineering Technology, Construction Technology or Engineering Science; or,

B. Completion of sixty (60) semester credit hours from a regionally accredited or New York State registered college or university in a Civil Engineering curriculum supplemented by any combination of courses in two (2) of the following areas: mathematical science, physical science and engineering science.

C. Two (2) years of full time work experience in water systems work, in either inspection, or construction or maintenance or drafting; or,

D. A satisfactory equivalent combination of the above education and work experience. Substitution of experience for education may be made on a year for year basis. Work experience of less than one (1) year or less than full time may be made on a pro-rata basis. In all cases candidates must have a minimum of two (2) years of the appropriate post secondary education and/or work experience.

NOTE: Supplementary course work as mentioned in B above must relate to the required engineering curriculum. Therefore, mathematical sciences, such as probability and statistics, are unacceptable; sciences other than physical sciences, such as biology, are unacceptable, engineering sciences, in areas other than Civil Engineering are unacceptable.

SPECIAL NECESSARY REQUIREMENT

Possession of a valid New York State operator's license.

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