

CLASS TITLE: ENGINEERING TECHNICIAN I

Class Code: 02770600

Pay Grade: 13A

EO Code: E

CLASS DEFINITION

GENERAL STATEMENT OF DUTIES: To perform routine technical and skilled work in connection with engineering projects in the field, office or laboratory; to perform limited instrument, inspectional or drafting work; and to do related work as required.

SUPERVISION RECEIVED: Works under the close supervision of superior who gives instructions concerning specific assignments, or work follows well established methods and procedures; work is usually reviewed upon completion for adherence to prescribed standards.

SUPERVISION EXERCISED: Usually none.

ILLUSTRATIVE EXAMPLES OF WORK PERFORMED:

To serve as instrument man in a survey crew: to operate a transit or level on routine work such as taking cross sections, running drainage areas and traverses, and to assist in more complex work.

To perform sub-professional tests and analyses of bituminous and other highway materials according to well-defined techniques and methods; to conduct routine tests such as: penetrate tests; ductility tests; flash and fire point tests; distillation tests; specific gravity determinations and viscosity tests; and to clean and properly maintain laboratory equipment.

To be responsible for the inspection of sand, gravel and crushed stone and to accept or reject same, for use on state road construction and other projects; to make samples of construction materials and perform standardized laboratory tests on same, such as consistency and soundness examinations of cement, abrasion and toughness tests on aggregate or stone and absorption of brick or pipe.

To assist a superior in ensuring compliance with plans and specifications during a highway or other construction project; as instructed to establish working lines and grades from plans for use by a construction contractor, and to inspect workmanship and conformity of work to established lines, grades and specifications; to take periodic samples of materials and perform simplified field tests to them; to inspect concrete pavements and structures and bituminous pavements as to handling, placing and finishing according to plans and specifications.

To make detailed estimates and other reports pertaining to the progress of work on a project.

To inspect the installation and maintenance of roadside development features to ascertain that prescribed plans, designs, specifications and instructions have been complied with; and to inspect shrubs and trees in roadside development areas and furnish reports as to their condition and possible need for replacement and/or care.

To make, revise and ink maps, graphs and diagrams from field notes, aerial photographs, basic maps and rough sketches; to draw cultural details on maps, checking and incorporating data obtained from straight line diagrams or other field data; to examine and interpret aerial photographs; to increase and decrease map scales; and to perform freehand and stencil lettering.

To perform routine drafting work, to reduce survey notes, plot cross sections, detail plans and right-of-way notes; and to compute areas and quantities and use of a planimeter.

To operate a radar speed meter to check the speeds of motor vehicles; to supervise and participate in traffic studies; and to keep records and prepare reports on findings and to assist in the analysis of information.

To do related work as required.

REQUIRED QUALIFICATIONS FOR APPOINTMENT:

KNOWLEDGES, SKILLS, AND CAPACITIES A working knowledge of the techniques and practices of field surveying; a working knowledge of general construction specifications and blueprints; a familiarity with the procedures and practices applied in inspecting and testing materials used in roads and other structures; the ability to use an engineering transit and level; the ability to perform simple drafting work; the ability to make moderately complex engineering computations accurately; the ability to submit recurring and specific reports and forms; the ability to utilize an on-line data terminal to post and retrieve engineering documentation; the ability to operate a radar speed meter; the ability to engage in continuous active field work requiring physical stamina; and related capacities and abilities.

EDUCATION AND EXPERIENCE:

Education: Such as may have been gained through: completion of a twelve school grades, including or supplemented by courses in mathematics, science and mechanical drawing; and

Experience: Such as may have been gained through: employment involving the performance of routine non professional civil engineering tasks in the construction of highways and/or bridges, surveying, drafting, roadside development or in related work.

Or, any combination of education and experience that shall be substantially equivalent to the above education and experience.

Class Revised: June 7, 1998

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