

## Engineering Technologist III

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### **DEFINITION**

This is supervisory and complex, highly independent technical work performed in a variety of engineering projects or programs of moderate to considerable size and scope.

Employees coordinate, control and supervise a major program. Assignments require the application of precise engineering knowledge gained through extensive experience enabling incumbents to represent the department on technical matters in the area of the program.

Employees of this class use initiative and analytical ability for decision making including investigating changes and resolving problem areas or system differences. Incumbents propose innovative solutions for non-standard problems and provide significant and complex technical expertise and advice to professional engineers, technologists, consultants, developers and others. Incumbents use independent judgment in the evaluating and proposing solutions to problems, particularly when there are differences and/or modifications to existing design criteria, standard practices, or applicable Provincial Legislative Acts and Statutes. Employees of this resource, develop, and maintain System and Engineering Standards manuals encompassing all phases in the program area.

Supervision is exercised over a minimum of three (3) permanent subordinate Engineering Technologists; technical advice and support may also be provided to field operation crews. The work is performed under the broad guidance and direction of a professional or technical supervisor who generally reviews work on completion of projects. The work is not usually subject to detailed technical review, however, projects involving complex non-standard criteria or with a large financial impact may be reviewed periodically and may be subject to greater scrutiny.

Work of this class is distinguished from the Engineering Technologist II class by: responsibility for moderate to considerable sized projects that involve supervision; the degree of independence of operation in the daily functions of the position; and the degree of innovative, non-standard and comprehensive technical involvement. Positions in this class also exercise more responsibility to represent the department in inter-department committee meetings, review major works done by consultants and the related administrative duties.

The work of this class is differentiated from that of professional engineers in that assignments involve practical application rather than theoretical design and formulation of engineering practices and principles. The engineering related work of this class is such that a senior engineer must approve and take overall responsibility for the project or program.

### **TYPICAL DUTIES\***

*Note: The following duties are only representative of this classification and do not include all functions performed. Individual positions may not perform all duties listed. Positions that may perform some of the duties listed do not necessarily qualify for placement into this classification.*

Researching, preparing and verifying engineering designs (under the guidance of an Engineer or Technical Supervisor) and providing information for major utility and public works projects including but not restricted to: engineering criteria, project performance, project cost analysis, project schedule reports, material and construction standards, field tests and inspection evaluations and detailed budget preparation.

Evaluating tasks to be accomplished and applying engineering design criteria for each project type,

outlining design requirements, documentation, material and construction standards.

Organizing and/or chairing section meetings for review of project development, coordination and implementation of engineering and administrative requirements.

Supervising; coordinating, training and directing the efforts of technical staff, consultants and contractors in accordance with accepted departmental policy and proper engineering practices; providing technical advice and support to field personnel.

Recommending and assisting in establishing proper engineering practices and procedures for system modifications resulting from differences and changes to existing engineering design, construction and material standards.

Assigning segments or total projects to subordinate technical staff, checking work in progress and at completion; providing technical guidance, acting as a member of selection committees during employment interviews; conducting performance appraisals and recommending appropriate remuneration; applying discipline if required.

Ensuring that the performance of all technical work and materials specified are in accordance with the engineering requirements of the project.

Reviewing the competence of personnel assigned to projects to ensure that high quality levels are maintained. This also includes personnel outside the assigned engineering division, e.g. Contractors, Consultants, etc.

Applying specialized knowledge of computer applications used in the development and enhancement of engineering models.

Performs related duties as required.

### **KNOWLEDGE, ABILITIES AND SKILLS**

Thorough and demonstrated knowledge of the engineering principles and practices related to work assignments.

Extensive knowledge of mathematics and trigonometry, as applied to the area of specialization.

Extensive knowledge of engineering terminology and techniques.

Ability to instruct, supervise and evaluate the work of subordinate staff.

Ability to coordinate and prioritize projects so that maximum efficiency is maintained.

Ability to effectively communicate orally and in writing.

Ability to interpret, read and design total project plans, specifications, diagrams and charts of a considerably complex nature.

Ability to establish and maintain effective work relationships with contractors, developers, civic employees, and others necessitated by work assignments.

Ability to apply specialized computer software as necessitated by work assignments.

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**TRAINING AND EXPERIENCE REQUIREMENTS****Job Level**

Completion of a two (2) year diploma in an appropriate Engineering Technology program and a minimum of eight (8) years of experience related to the work assigned. In addition, applicants must be eligible to be recognized as a Certified Engineering Technologist (C.E.T.) with A.S.E.T. and must possess a valid Alberta Driver's License.

*\* This is a class specification and not an individualized job description. A class specification represents and defines the general character, scope of duties and responsibilities of all positions within a specific job classification. It is not intended to describe nor does it necessarily list the essential job functions for a specific position in a classification. Positions may perform some of the duties listed above but this does not necessarily qualify for placement into this classification.*

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Salary Plan	<u>21M</u>	<u>21A</u>	<u>21B</u>	<u>21C</u>
Job Code	0681		0682	
Last Updated:	1989-01			
Previous Updates:	1982-09, 1982-08, 1981-06, 1972-04 (qualifications revised)			
Originated:	1966-06			