Total Points

604

4

43

Job Class Profile:

Engineering Technician I

5

24

Pay Level:		CG-28			Point Band:			578-621	
						Accountability		Development	Environmental
		Interpersonal				& Decision		and	Working
Factor	Knowledge	Skills	Physical Effort	Concentration	Complexity	Making	Impact	Leadership	Conditions

JOB SUMMARY

4

187

3

50

3

19

Rating

Points

The Engineering Technician I provides sub-professional engineering and technical support services on capital construction and renovation projects which involves the application of precise practical engineering knowledge gained through experience and training.

3

90

3

65

3

62

3

64

Key and Periodic Activities:

- Plans and assigns the work of survey parties and inspects the work performed by contractors for adherence to approved specifications and requirements of government construction projects.
- Provides technical engineering data to the contractor and survey crews regarding alignment and grades; checks materials for quantity and quality; inspects for acceptable work practices.
- Maintains harmonious work relationships with land owners and general public, obtaining cooperation and explaining departmental policies.
- Schedules, assigns and supervises the work of a survey crew engaged in providing field information for highway or bridge construction projects; reviews survey notes for completeness and accuracy; draws sketches illustrating work situations; assists in training survey personnel.
- Co-ordinates work schedules with contractors when assigning crews.
- Drafts plans from field notes; plots cross sections and right of way plans; computes the volume of cuts and fills; calculates cross section excavations, earthwork quantities and project costs.
- Writes up survey information from field notes; runs alignments; lays out intersections; installs slope pegs; dots for centre lines; sets grades and cross sections; records quantities for estimates.
- Prepares information for reports and progress payments; reviews information from crew work and checks calculations for estimates.
- Tests concrete for quality and adherence to specifications.

SKILL

Knowledge

General and Specific Knowledge:

- Knowledge of construction contracts, specifications and standards
- Knowledge of various construction methods and practices

Formal Education and/or Certification(s):

— Minimum: 3-year Diploma in Engineering Technology

Years of Experience:

— Minimum: 1 to 2 years

Competencies:

- Ability to interpret contracts, specifications and standards.
- Ability to communicate with others.
- Computer skills.

Interpersonal Skills

- A range of interpersonal skills are used to listen to information and provide routine information and clear direction to others.
- Communications occur with employees, supervisors/managers, contractors, general public, students and employees in other departments/agencies.
- The most frequent interactions are with supervisor/Manager to inform on project progress and to get direction, schedules and assignments; employees in the immediate work area to get supplies and schedule and delegate layout work; and contractors to coordinate inspection and survey work and maintain good working relations to ensure project proceeds as planned.

EFFORT

Physical Effort

- Work occasionally results in considerable fatigue requiring periods of rest especially during prolonged days on construction sites.
- Work also requires occasional lifting of equipment, tools, and samples of construction materials 25 to 50 lbs.
- Requires regular sitting, standing, walking and driving and travelling to and inspecting construction sites and fine finger work while using the data collector, survey equipment and measurement instruments. Uses range poles, tapes and axes daily. Maintains balance when climbing steep slopes or manoeuvring around construction.

Concentration

- Visual concentration is constantly required while working on construction sites with heavy equipment and traffic flow. As well visual concentration is required during extended driving, reading/writing reports and conducting inspections.
- Auditory concentration may include listening to team and contractors where sites may be very noisy and hearing for awareness to unsafe situations, listening to requests from clients and listening during meetings.
- **Repetition** requiring alertness is required when crossing highways with traffic and heavy equipment as you become accustomed to the noises and safety buzzers.
- Higher than normal levels of attentiveness are required to ensure personal safety and the safety of all on the site, eliminate hazards, ensure proper equipment is worn and safety procedures are followed. Monitoring traffic flow on highway projects is important.
- There are **deadlines to meet and interruptions** can be frequent depending upon activity. With construction work it is critical to meet timelines and budgets; quantities must be checked and

all information submitted monthly.

 Exact results and precision, eye/hand coordination are required when using survey equipment, power tools, calculating quantities, taking field measurements and conducting inspections.

Complexity

- Tasks are varied and range from regularly repetitive/well defined to occasionally different and unrelated. Work includes supervising survey crews engaged in field information for highway or bridge construction.
- Typically, work is performed with defined and standard work processes, have obvious or limited solutions and/or can be addressed by following procedures or guidelines. The most typical issues to solve are: keeping schedules in line with contractors so as not to slow them down to keep work moving and determining if contractor's work meets specifications, standards and code.
- Departmental field manuals, Department Specifications and design standards, National Codes and Regulations, OHS regulations, standards, and policies, precedents and senior technicians, professional Engineering and other expert staff are available as references or resources.

RESPONSIBILITY

Accountability and Decision-Making

- Work tasks are generally prescribed or controlled.
- There are limited decisions that can be made without written or verbal approval. Providing technical guidance and settings priorities and work schedules for survey crews are examples.
- Any addition to the scope of work of the contract or in the unit price of the contract requires supervisory/head office approval.
- Independent discretion, judgement and latitude are exercised within predetermined limits when conducting inspections and approving materials.

Impact

- Results are directly felt within the immediate work area, department, within and outside the
 organization and by contractors.
- Results can impact finances, material and human resources, contractors, the general public, and health and safety.
- Consequences of errors are limited and felt outside the department by clients and the public but are mitigated by the controls and review of the work.

Development and Leadership of Others

 May provide project supervision and leadership to various staff engaged on construction projects during the construction season and serve as team leader on off season survey crew.

WORKING CONDITIONS

Environmental Working Conditions

- Work tasks require Personal Protective Equipment (PPE) to be worn/used and safety

procedures to be followed closely.

- The likelihood of minor injury is moderate; major injury limited.
- Exposed to a variety of undesirable environmental conditions and hazards such as dust, fumes, wet or slippery surfaces, and temperature extremes, isolation, dangerous heights, limited ventilation, physical dangers (i.e. traffic), sharp objects, odours, lack of privacy and heavy machinery when on construction sites, performing inspections and directing a survey crew.