

Job Class Profile: **Engineering Aide I**

Pay Level: **CG-22** **Point Band:** **364-387**

Factor	Knowledge	Interpersonal Skills	Physical Effort	Concentration	Complexity	Accountability & Decision Making	Impact	Development and Leadership	Environmental Working Conditions	Total Points
Rating	1	2	4	4	2	2	2	2	5	
Points	47	33	25	19	60	43	41	43	54	365

JOB SUMMARY

The Engineering Aide I performs work of a training nature, developing and applying knowledge and skills to a variety of technical engineering functions. Employees perform duties which follow definitely prescribed methods and procedures and which provide an opportunity to acquire fundamental practical engineering knowledge, skills, and techniques.

Key and Periodic Activities:

- Serves as instrument person in a survey crew assisting in the layout of alignment profiles and cross sections for structures/projects such as highways, culverts, catch-basins.
- Supervises brush cutting personnel; lays out cutting limits.
- Assists in chain and/or rod activities and uses survey instruments to do cross sections, profiles, set grades and offset for road centre line.
- Applies temporary highway striping and re-applies line codes for painting crew.
- Measures materials and calculates amounts to perform work and conducts pre-engineering surveys to collect survey data regarding conditions.
- Communicates with supervisors and contractors.
- Takes inventory on job-site at the beginning of the project.
- Supervises culvert, catch-basin and storm sewer installation.
- Takes notes and maintains records.
- Conducts post construction surveys.

SKILL

Knowledge

General and Specific Knowledge:

- Knowledge of:
 - Mathematical calculations and technologies used in survey practices

Formal Education and/or Certification(s):

- Minimum: High School

Years of Experience:

- Minimum: No related experience required except what is acquired through orientation.

Competencies:

- Ability to apply established techniques to completion of tasks.
- Ability to use survey instruments.
- Ability to communicate with others.

Interpersonal Skills

- A range of interpersonal skills are used to listen to information, ask questions, provide routine information, and gain the cooperation of others and deal with upset or angry people.
- Communications occur with employees, supervisors/managers and suppliers/contractors and may occur seasonally with students/trainees and customers/clients/general public.
- The most significant contacts are with work crews, supervisor and contractors to listen and receive instructions, and communicate with others to ensure tasks are completed.

EFFORT

Physical Effort

- Work demands occasionally result in considerable fatigue requiring periods of rest.
- Occasionally lifting or moving objects up to 50 lbs. Uses axe, chain saw, sledge hammer, levels, and total station and carries signs, stands and equipment.
- Physical effort includes regularly standing and walking, occasionally driving, using hand tools, climbing, working in awkward (on slopes) positions, and sitting.
- Occasionally walks on muddy, boggy terrain, uneven ground, cliffs and ditches.

Concentration

- **Visual** concentration is required when using instruments needed to complete tasks, watching for traffic on road-side sites, using hand signals on noisy sites, and when working with total station and prism pole, power tools and around equipment and in poor weather conditions.
- **Auditory** concentration may include listening to hear team, contractors and supervisors/managers, where sites may be noisy, and awareness of heavy equipment/listening for back up beepers.
- Concentration effort and accuracy are required in conducting highway alignment and grades, measuring material quantities, and using instruments and must be performed with **accuracy/precision** and with some **time pressures**. Must be constantly alert for the **health and safety of others** on the job site.

Complexity

- Work tasks are similar/related in terms of skills and knowledge used and where tasks are well defined.
- Complexities can typically be solved by following guidelines, have obvious solutions, finding practical solutions and/or working within defined and standard processes.
- Can reference advice from team members, supervisor, managers and consultants. Regulations, standards/codes (i.e. Departmental Engineering Field Manual) and policies are available for reference.

RESPONSIBILITY

Accountability and Decision-Making
<ul style="list-style-type: none"> — Work tasks are generally monitored and controlled. — Generally require approval for deviation from assigned tasks. — Requires approval for changes to process, changes to equipment and decisions regarding contractors. — Accountable to complete assigned tasks and duties within required timeframes and ensure work is carried out in a safe manner. Can decide to bust out rock or remove boggy material if encountered in digging.
Impact
<ul style="list-style-type: none"> — Work activities have impact on work area, department, outside the organization, and on customer/clients/general public. — Work activities also impact equipment, information, finances, material resources and health and safety. The most significant impacts are on the projects being undertaken and related schedules (i.e. financial impacts of being over schedule). — When work is completed results are reviewed by field office and headquarters staff. The work tends to be very structured which mitigates the impacts.
Development and Leadership of Others
<ul style="list-style-type: none"> — There is no direct supervision of staff. However, may be responsible to provide on-the-job advice, guidance, orientation and direction especially to crews, new employees and students.

WORKING CONDITIONS

Environmental Working Conditions
<ul style="list-style-type: none"> — Required to use safety equipment such as safety boots, vests, and hard hats and may be required to wear safety glasses. — Moderate likelihood of minor injury; limited likelihood of major injury or illness as long as safety precautions are followed. — May be exposed to undesirable working conditions on the job-site, which include unusual/distracting noise, dirt, dust, glare, adverse weather conditions, heavy equipment, wet or slippery conditions and temperature extremes, dangerous heights/depths, odours, awkward or confining spaces and sharp objects. Additionally is required to travel to sites and may have to work close to vehicle traffic.