



NOTICE: Effective January 15th the OPS will be posting new job advertisements on the eCareers website daily. New job advertisements will be posted throughout the week, Monday through Friday. Please check the site regularly to see new opportunities available within the OPS.

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Job Specification

Position Title: ENGINEERING DEVELOPMENT PROGRAM
Job Code: PEGO - Bargaining-Engineering 06, 06PBE
Job ID: 14406

Purpose of Position:

To carry out a variety of assignments in all engineering areas of the region and head office related to the design, construction, operations and maintenance of provincial highway system.

Duties/Responsibilities:

In this position, incumbents will gain progressive project experience through a series of rotational assignments in the various engineering areas of the regions and head office including design, construction, traffic, environmental, engineering materials and operations (including the district organization). In this capacity and under the supervision of more senior engineering staff, the incumbents will:

1. Conduct on-site investigations and data collection and prepare traffic operations reports on specific highway areas, prioritizing improvements and carrying out capacity and accident analysis to identify problem locations. Evaluate proposed changes to traffic control practices and policies and participate in the development of innovative solutions to traffic management issues and the design and implementation of new control devices.
2. Research technical data and conduct site inspections for the development of preliminary engineering and detailed designs, contract drawings, estimates and tender documents for highway, structural, electrical and maintenance projects. Undertake highway geometrics/operations studies and assist in assessing environmental impacts, recommending mitigation measures to address potential implications of highway design producing environmental reports.
3. Assess field information, prepare pavement and soils design reports and recommend rehabilitation programming. Provide input to the regional preventative maintenance program by assisting with pavement condition assessments and recommending pavement management strategies for distressed sections of the highway system.
4. Support the administration of ministry construction projects by: monitoring the day to day administration of several concurrent construction contracts; organizing staffing and reviewing work progress including monitoring contractors adherence to plans, specifications and sound construction practices. Perform quality assurance acceptance testing and inspection. Review and make recommendations on costs of extra work, damage claims and minor design changes, monitor adherence to OH&S Act and traffic standards and ensure that proper records are established and maintained.
5. Assist in the planning and management of district maintenance and municipal operations by: reviewing and assessing the conduct of summer and winter patrol and service crews; preparing and supervising contractor work plans and ensuring adherence to safety and contract standards; conducting field reviews of municipal/maintenance projects; preparing contracts and tender forms; and preparing preservation management projects and highway inventory reports.
6. Assist with the consultant acquisition and management process by: developing project requirements in accordance with ministry design, construction and maintenance requirements; reviewing consultant RFP and RFQ documents and assessing for adherence to ministry consultant assignment requirements; reviewing contractor progress and advising senior staff of performance issues related to not meeting contract schedules and ministry design and construction standards.
7. Consult with internal regional and head office engineering and technical staff and contract administrators to co-ordinate project activities, ensure adequacy of designs and related documentation and attend pre-contract review and other meetings as liaison to review/resolve design and construction issues. Represent the ministry in dealings with property owners, municipalities, contractors, utility companies, police and other external agencies to resolve work related problems, exchange information and provide advice on ministry technical requirements.
8. Prepare a variety of reports, correspondence and presentations related to projects of an engineering or transportation systems planning nature as analysis and recommendations on specific design, construction or maintenance issues and as input to briefing notes and Ministers correspondence. Develop an awareness of head office, regional and district roles and responsibilities and their inter-relationships.

9. Maintains an awareness of new developments in engineering standards and trends in highway design, construction and maintenance through reading technical journals, attendance at conferences and courses, review of manuals and discussion with senior staff and colleagues.

Knowledge:

Work requires a degree in a civil engineering discipline from a recognized university and registration with the Professional Engineers of Ontario. Thorough knowledge of the theory, principles and practices of civil engineering disciplines related to highway design, construction and maintenance (e.g. surveys, drainage, geotechnical, structural, environmental, traffic, materials engineering and soils and aggregates) to assess project requirements, prepare preliminary and detailed designs and apply appropriate techniques and practices. Good knowledge of contract administration processes to apply construction administration practices and procedures, monitor construction contracts and review work in progress for adherence to engineering standards. Well-developed analytical and problem-solving skills to interpret and apply design, survey and construction specifications to resolve design and on-site problems, participate in the development of innovative design and traffic management solutions and recommend environmental impacts of designs. Sound communication skills to prepare a variety of reports, presentations and correspondence with ability to establish effective working relationships with ministry counterparts and external contacts. Ability to work with other project members in a team environment and adapt and apply standards and procedures across different functional areas (design, construction, maintenance) within defined scope. Willingness and ability to travel to areas that are not accessible by public transit. Ability to relocate based on assignment requirements. This knowledge and skill is acquired through university training in civil engineering and progressively responsible experience, through developmental assignments, in the broad field of highway engineering.

Judgement:

Judgement is used in assessing and analyzing engineering design and construction problems, determining information sources, interpreting engineering data and information gathered for specific projects, assessing data integrity and proposing solutions that meet ministry and accepted engineering standards and techniques. Judgement is used in resolving day to day construction problems, monitoring staff and contractors progress to advise senior staff where performance does not conform to contract drawings or specifications and ensuring proper control of contract records for calculating and approving contractor payments. Judgement is used in assessing environmental impacts and recommending mitigation measures to address highway design issues, assess soils and pavements conditions and recommend rehabilitation measures. Judgement is used in adjusting project schedules and methods of investigation, depending on available information, and recommending solutions. Judgement is used in dealing effectively with municipal representatives, utility companies, property owners, police and other external agencies to resolve issues and provide advice on ministry standards and design/construction requirements.

Work is assigned in terms of project objectives and priorities and in accordance with established specifications, standards, policies and procedures. Work is accepted as complete and is reviewed for technical accuracy and conformance to established standards, practices and procedures.

Accountability - Programs:

The position is accountable for accurate data collection and engineering analysis. The position also prepares or contributes to the preparation/development of traffic operations reports and develops engineering designs, contract documents and other engineering products that are operationally effective and conform to accepted ministry technical standards, practices and procedures. Commitments are made in setting work priorities and allocating own time and that of other resources to achieve project objectives, in monitoring contractors adherence to work schedules/plans, in reviewing contractors work/resolving problems and ensuring completion to contract requirements, and in establishing survey controls, networks and layouts. Decisions are made in determining methods of investigation and analysis, assessing the accuracy of field information, controlling engineering costs and records and ensuring plans submitted by consultants meet accepted standards. Recommendations are made in the development of innovative traffic management and design issues, in recommending mitigation measures regarding environmental impacts on designs, recommending pavement management strategies and determining minor design changes.

The position reports to more senior engineering staff in each of the assigned areas and is responsible for the co-ordination, management and engineering accuracy and soundness of assigned projects and the technical direction provided to assigned project staff. Failure to provide accurate and timely engineering products and draw appropriate conclusions could result in inappropriate designs, inefficient project administration, additional costs and embarrassment to ministry management.

Contact - Internal:

Regular contact with regional and head office technical and administrative staff to gather information, resolve problems, provide information on and co-ordinate various aspects of specific projects. May occasionally participate on joint committees and specific assignments. Frequent external contact with technical staff of municipalities, contractors, other government agencies (e.g. Environment) and consultants to gather and/or verify information related to engineering pre-engineering, construction and maintenance projects.



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More Information

It is our goal to provide a balanced overview of the position, including the unique aspects of the job. This supplementary information complements the job ad and job spec. We believe this will better equip you to be able to make an informed decision to apply, and in turn helps us to hire the person who understands, accepts and is motivated to perform all aspects of the job.

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Details:

Applicants will be considered at an underfill basis at the following levels (based on experience)

04PBE \$49,686 – \$62,037

05PBE \$55,648 – \$68,930 (New graduates will typically begin at the 04PBE level)