



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.

Please note that the **job alert** function is temporarily unavailable. We are working on correcting the issue, but in the meantime, please check the website regularly for updated job posting details. We will post an updated message on the site when the job alert function is functional again.

Job Specification

Position Title: SENIOR STRUCTURAL ENGINEER
Job Code: PEGO - Bargaining-Engineering 08, 08PBE
Job ID: 18516

Purpose of Position:

To provide technical direction to structural engineers, technicians and drafters. To provide structural engineering expertise in the safety assurance and infrastructure management activities of existing transportation structures. To provide expertise and guidance; either in-house or through service providers in project management, detailed structural designs of bridges and other transportation structures and production of contracts. To provide project management, expertise and guidance during all phases of project.

Duties/Responsibilities:

Under general direction of the Head, Structural Section, the incumbent is responsible for the following activities:

1. Provides direction to assigned Section staff including assigning / verifying work and audit inspections.
2. Oversees consultants work, authorizes acceptance/rejection/amending of submitted work. Administers consultant assignments; reviews professional engineering consultant submissions on specific projects; reviews submitted designs; identifies areas where improvements can be made, uneconomical designs and non-compliance with ministry standards and specifications; resolves problems and reviews final drawings/submissions; evaluates consultants performance.
3. Conducts routine and emergency bridge inspections, co-ordinates inspections to be done by consultants, recommends repairs, prepares estimates and priority listings for structural maintenance and capital/preservation management programs; prepares and/or co-ordinates designs, estimates, sketches and contract documents for specific repairs; supervises consultants retained for structural projects.
4. Prepares preliminary and final designs for routine or complex new structures, rehabilitation of existing structures and co-ordinates the preparation of all related contract documents and drawings, ensuring appropriate technical codes, procedures, policies, standards, engineering data and legal requirements are reflected. Work may be carried out by services providers and/or in-house. Acts as overall project manager for structural engineering projects. Acts as team member for projects led by Planning and Design by providing technical support on structural content.
6. Carries out/coordinates through consultants the planning phase of structural projects through the Preparation of feasibility studies, Structural Design Reports, Hydrology Reports and other required studies and reports for all types of transportation structures, recommends most feasible structure and methods of construction ensuring safety, adequacy and cost-effectiveness of designs with regard to future maintenance and environmental considerations.
7. Negotiates with Federal, Provincial and other agencies and authorities for approvals required for designs, e.g. Navigable Waters Protection Act.
8. Responds to operational policy/procedural issues and provides input to Bridge Office.
9. Provides engineering and administrative advice and direction to coworkers, consultants and construction staff as required on assigned projects; Lead and/or participate in project teams (functional offices) in scoping out work and evaluating submissions for Expressions of Interest (EOI), Requests for Quotation (RFQ) and Requests for Proposal (RFP), review and acceptance of Quality Control Plans; Supervise and direct the activities of assigned staff.
10. Provides information and advice as requested by the Ministers Office, MPPs and other political officials, members of the public and media, by way of presentation, Briefing Notes and Ministers letters.
11. Participates in the negotiations of partnership/cost sharing agreements with municipalities and/or developers for highway structures.

12. Carries out construction liaison activities on assigned projects or as required; reviews contractors' submissions, provides advice and resolves problems on-site which may be complex or unusual, inspects progress and quality of work for conformance to design and Ministry policy, standards and specifications.

13. Provides expertise and guidance to staff on a project basis, including consultants, contractors, fabricators, manufacturers, students, Operational Services and Contracts Office staff, municipalities, agencies, other governments/jurisdictions on structural matters.

14. Acts as Head as required and attends conferences as Regional representative and participates on a variety of inter/intra ministerial committees, professional, international and inter-provincial committees.

Knowledge:

Position requires a degree in civil engineering from a recognized university and full Professional Engineer Organization (PEO) registration as a professional engineer. Work requires extensive knowledge in standard structural design concepts and practices for bridges and other transportation structures, thorough knowledge of the Canadian Highway Bridge Design Code (CHBDC), structural maintenance inspections and designs, hydrology designs, structural long-range planning and detail planning, skills and knowledge in project management and consultant acquisition and management.

Knowledge in highway design, soils, foundations, engineering materials, construction practices. Skill and thorough knowledge is required in identifying and assessing possible hazardous conditions and/or deficiency of existing structures and to provide sound recommendations to the Head, Structural Section and Contracts Office. Knowledge of MTO standards, specifications governing planning, design, construction and maintenance. Knowledge of structural design software, hydrology, AutoCAD. Excellent managerial, organizational and interpersonal skills to manage a number of concurrent projects.

Judgement:

Work is performed independently under the general direction of the Head, Structural Section within assigned section's objectives and priorities and limitations imposed by ministry's specifications, methods, procedures, criteria and provincial and federal legislation. Departures from normal procedures, ambiguous and marginal application of limitations require own initiative and professional judgment. Judgment is used in the effective application of Ministry processes, standards, practices and policies related to structures and hydrology planning and designs, and to the provision of structures consistent with the funds available, safety requirements and needs of interested parties. Sound judgment is required for the application of Ministry policies, standards and engineering principles/knowledge/experience to varying structural maintenance problems, in particular to general public safety and inconvenience. Judgment is used in assessing work completed by professional engineering consultants and in tactfully suggesting corrections or modifications and in accepting and assuming responsibility for final submissions for assigned projects. Judgment is used in dealing with construction problems and resolving urgent issues quickly and knowledgeably.

Accountability - Programs:

The position is accountable for effective and efficient structural planning, maintenance inspections and designs, hydrology reports and structural designs. The position is accountable for ensuring that optimum structural repairs and planning methods are utilized and for the accuracy and soundness of reports and designs issued, and for the recommendations made regarding repair and renovations to existing structures and the technical advice given to Region, Operational Services Office, Contracts Office, municipalities, consultants and outside agencies. The position is required to affix Professional Engineers stamp on engineering work carried out in-house. Commitments are made in scheduling own time, estimating resources required and completion dates to achieve objectives. Position requires infrastructure management and construction liaison.

Accountability - Personnel:

Position provides direction to assigned project staff, drafters and/or students.

Accountability - Finance & Material:

Position provides cost estimates and financial analysis on a project basis.

Accountability - Impact of Errors:

Errors in judgement, inferior reports and recommendations could result in uneconomical and/or unsafe structures, inappropriate use of funds, costly maintenance, loss of credibility of the Structural Section and embarrassment to the ministry.

Contact - Internal:

Frequent contacts with colleagues, regional engineering staff, Head Office, Contracts Office, Operational Services Office and officials to exchange information and to discuss mutual problems, to provide and obtain advice.

Contact - External:

Frequent contacts with consultants, contractors, officials from outside agencies and authorities, Provincial and Federal ministries, municipalities and the general public to co-ordinate ministry and other agencies, provide advice and information on regional structural matters.