

New

Ministry

Transportation

Describe: Basic Job Details

Position

Position ID

Position Name (30 characters)

Construction Engineer

Requested Class

Engineering & Related Level 2

Job Focus

Operations/Program

Supervisory Level

00 - No Supervision

Agency (ministry) code

CA22

Cost Centre

Program Code: (enter if required)

Employee

Employee Name (or Vacant)

Vacant

Organizational Structure

Division, Branch/Unit

Current organizational chart attached?

Supervisor's Position ID

Supervisor's Position Name (30 characters)

Supervisor's Current Class

Design: Identify Job Duties and Value

Job Purpose and Organizational Context

Why the job exists:

Reporting to the Construction Manager, the Construction Engineer takes a lead role through the use of engineering consultants in the co-ordination, administration, design, tendering, and construction of highway projects throughout the Peace Region while ensuring that projects are delivered in accordance with national codes, department guidelines, current standards, policies, technical and functional requirements. Leadership will be provided to ensure the safe, efficient and timely delivery of the projects by consultants and contractors by participating in the selection, assessment and evaluation of consultants, reviewing the engineering work and construction activities throughout all phases of the project. Other duties associated with this position are acting as a liaison with other stakeholders such as the general public, First Nations and other government agencies.

Responsibilities

Job outcomes (4-6 core results), and for each outcome, 4-6 corresponding activities:

- 1) Co-ordinates with consultant engineers the design, development, tendering, and construction phases of highway projects, and assists with the functional planning of those projects, to ensure timely, safe, and efficient delivery of the department's highway construction program.
 - Co-ordinate the design and delivery of a wide range of standard and complex projects to meet the quality and cost effectiveness requirement, in a timely and safe manner
 - Develop and implement strategies for the effective delivery of projects identified in the department's 3 year, 5 year,

and 10 year construction programs

- Monitor and control project costs during all phases to ensure adequate funds are available for completion, and approve or arrange for approval all project related expenditures
- Co-ordinate design development, preparation of tender packages, and in-house review of design by engineering specialists and technical support staff
- Direct the work of external engineering consultants by overseeing project schedules, and ensuring budget and contractual obligations are met
- Plan, oversee, and assess the work of consultants and in-house specialists and technical staff
- Co-ordinate internal and external resources to ensure cost effectiveness and efficient use of resources

2) Oversees the design and construction supervision of projects by consultants, and affirm adequate planning, consistent with departmental policy, to enhance quality.

- Prepare Terms of Reference (TOR) and arrange for Request for Proposals (RFP) to prospective engineering consultants; review proposals; participate in consultant selection meetings
- Administer consultant agreements to ensure quality services are provided and personnel and scope changes are reviewed and appropriately approved
- Review and approve consultant invoices to ensure compliance with the consultant agreement terms
- Monitor and evaluate consultant performance and complete evaluation reports annually upon completion of projects for input into the provincial data base
- Monitor and inspect ongoing construction activities to ensure compliance with standards, accepted procedures, and good engineering methodology, as well as monitor activities for cost and engineering suitability
- Develop and maintain appropriate communications strategies to ensure timely exchange of information with consultants, contractors, public stakeholders, and departmental staff
- Monitor the complete construction phase of projects, approve progress payments, provide expertise and recommendations regarding extra work orders, contract extensions, unit price approvals
- Partner with, and resolve disputes between, consultants and contractors, and recommend solutions to resolve complex issues including the resolution of claims
- Review weekly construction progress reports, quality assurance reports, monthly expenditure reports, and final detail packages submitted by consultants
- Recommend corrective actions as necessary, review details to substantiate contract overruns, and approve final detail estimates for final payments

3) Maintain communication with stakeholders to ensure their needs have been appropriately addressed.

- Liaise with contractors, consultants, landowners, utilities, communities, highway user groups, environmental agencies and interest groups, municipal officials, aboriginal groups, other government agencies, and the public throughout the life cycle of the project
- Participate in public consultation process as a representative for the department
- Liaise with departmental operations and infrastructure staff regarding project identification, scope determination, special design requirements, and final acceptance of construction projects
- Participate in group meetings with local landowners, municipalities, and highway user organizations, to obtain input regarding customer needs and to keep customers informed of current program developments
- Assess engineering proposals by local municipalities for future construction feasibility and the probability of associated problems and risks
- Prepare responses on Action Requests that require technical input from construction

4) Assist to identify and initiate planning studies to address functional, network and roadside development/access management issues in the Peace Region.

- Prepare Terms of Reference's, identifying project scope and issues to be addressed.
- Review consultant proposals and participate in consultant selection.
- Provide technical review of alignments, geometry, configuration, construction cost and suitability of proposed alternatives within the study area.
- Liaise with consultants, local governments and stakeholders.

- Participate in the public consultation process (i.e. attend open houses) to gain input from stakeholders and update them on departmental policies, procedures, plans and programs within the context of specific planning issues affecting long-term highway plans.
- Participate in meetings with local municipalities to discuss alternatives, recommendations and potential staging of improvements. Identify opportunities for developing mutually beneficial implementation strategies.
- Monitor study progression including deliverables, schedule and milestone dates, project scope and budget.
- Provide information to departmental officials concerning specific planning issues of contentious or politically sensitive nature.

5) Participate and contribute to development of departmental initiatives and goal setting.

- Participate in the Peace Region's planning of missions, goals, and objects to support the overall departmental goals
- Create an environment which fosters teamwork and collaboration with other departments and agencies
- Participate in cross functional departmental teams to develop engineering standards and specifications, as well as participate on various committees to develop and improve processes regarding the delivery of projects
- Participate in the development and formulation of the multi-year construction program at the regional level

Problem Solving

Typical problems solved:

- Provide guidance to engineering consultants during design phase and make decisions on scope of work
- Make direct impact decisions on scope, schedule and cost of projects
- Resolve construction disputes regarding scope, cost and schedule
- Provide guidance on field change orders during construction operations

Types of guidance available for problem solving:

- Cost Benefit Analysis
- Long term planning and asset management
- Engineering guidelines and practices
- Field knowledge and experience

Direct or indirect impacts of decisions:

- Direct impact on financial outcomes of projects
- Direct impact on quality and longevity of projects
- Direct impact on stakeholders including local landowners, municipalities and indigenous communities

Key Relationships

Major stakeholders and purpose of interactions:

- Oversee typically 10 to 15 highway construction projects, ranging in size from contracts worth \$150,000 t \$20 million, including CE agreements ranging from \$50,000 to \$2,000,000, as well as smaller regional service agreements
- Stakeholders include contractors, consultants, landowners, utilities, environmental agencies (provincial and federal), various interest groups, highway users, other government departments, MLA's, and the general public
- Geographic area includes BC border east to Hwy 88 and from the NWT border to S of Grande Cache
- Programs include provincial highway capital and rehabilitation program, as well as provincial highway bridges, and north/south trader corridor program

Required Education, Experience and Technical Competencies

Education Level	Focus/Major	2nd Major/Minor if applicable	Designation
Bachelor's Degree (4 year)	Engineering		

If other, specify:

Job-specific experience, technical competencies, certification and/or training:

- Extensive knowledge of theories, principles, and practices of civil and transportation engineering sciences
- Extensive knowledge of highway planning, design, and construction processes, including the application of project

management techniques

- Thorough knowledge and understanding of construction contract documents, construction specifications, and contract claims
- Detailed knowledge of roles and responsibilities of the department, consultants, and contractors in the delivery of highway construction projects
- Knowledge of roles and responsibilities of the design team in a multi-faceted project setting
- Knowledge and skill to utilize computer aided design applications so as to recognize the weaknesses and limitations inherent in certain design applications to ensure a quality design review to facilitate in recognizing errors
- Demonstrated ability to perform the role of designer and project manager so as to have an effective and knowledgeable role in evaluating consultant performance, quality of contractors work, and credibility of requested work orders, design changes, and claims requests
- Detailed knowledge of departmental and national highway design standards and guidelines
- Ability to use recognized design procedures to estimate quantities and a clear knowledge of road building component costs to facilitate the credible expenditure forecasting of projects
- Knowledge of departmental consultant guidelines, contract administration manual, project administration manual, traffic accommodation manual, geometric design manual, etc.
- Strong oral and written communication skills
- Leadership and interpersonal relationship skills
- Computer software application skills
- Ability to resolve conflicts
- Ability to analyse complex situations and problems and provide innovative solutions
- Ability to negotiate
- Eligible for membership in APEGGA

Behavioral Competencies

Pick 4-5 representative behavioral competencies and their level.

Competency	Level					Level Definition	Examples of how this level best represents the job
	A	B	C	D	E		
Systems Thinking	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<p>Takes a long-term view towards organization’s objectives and how to achieve them:</p> <ul style="list-style-type: none"> • Takes holistic long-term view of challenges and opportunities • Anticipates outcomes and potential impacts, seeks stakeholder perspectives • Works towards actions and plans aligned with APS values • Works with others to identify areas for collaboration 	
Drive for Results	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<p>Works to exceed goals and partner with others to achieve objectives:</p> <ul style="list-style-type: none"> • Plans based on past experience • Holds self and others responsible for results • Partners with groups to 	

		achieve outcomes • Aims to exceed expectations	
Agility	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Works in a changing environment and takes initiative to change: • Takes opportunities to improve work processes • Anticipates and adjusts behaviour to change • Remains optimistic, calm and composed in stressful situations • Seeks advice and support to change appropriately • Works creatively within guidelines	
Develop Networks	<input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>	Leverages relationships to build input and perspective: • Looks broadly to engage stakeholders • Open to perspectives towards long-term goals • Actively seeks input into change initiatives • Maintains stakeholder relationships	

Benchmarks

List 1-2 potential comparable Government of Alberta:

Assign

The signatures below indicate that all parties have read and agree that the job description accurately reflects the work assigned and required in the organization.