

Update

Ministry

Describe: Basic Job Details**Position**

Position ID

Position Name (30 characters)

Current Class

Job Focus

Supervisory Level

Agency (ministry) code

Cost Centre

Program Code: (enter if required)

Employee

Employee Name (or 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**Changes Since Last Reviewed**

Date yyyy-mm-dd

Responsibilities Added:

Responsibilities Removed:

Job Purpose and Organizational Context

Why the job exists:

contractual agreements, departmental standards, guidelines and specifications. It is a full working level technologist, encompasses both the materials and surveying disciplines. Collects and maintains inventory and condition rating information for the asset management and pavement preservation programs within the department. Provides technical information to Planning and Development roadside development issues such as utility crossings, subdivisions and private signage. Provides technical expertise in the administration of the highway maintenance program, acting in the capacity of the MCI in his absence.

Responsibilities

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

1. Provide technical expertise for the MI in the delivery of the Highway Maintenance Contract to support the preservation of the provincial highway network and ensure the safety and convenience of the motoring public
 - Patrol area roads and bridges to observe conditions, identify and correct any dangerous situations access future needs and take or recommend corrective actions
 - Audit / monitor work done by consultants and maintenance contractors, ensuring it is carried out in accordance with contractual agreements and adhering to departmental standards, guidelines and specifications
 - Monitor contractors performance on work in progress to ensure that adequate consideration and attention is given to the safety and convenience of the motoring public (lane closures, barricades and signage)
 - Complete field surveys and design solutions for a variety of highway maintenance projects
 - Monitor development adjacent to Provincial highways to ensure it confirms to Alberta Transportation Utility Guidelines
 - Provide technical assistance in the implementation of new technologies, such as Intelligent Transportation Systems (ITS), Road Weather Information Systems (RWIS), Global Positioning System (GPS), Changeable Message Signs
2. Inventory collection and computer data management of highway appurtenances within the highway right of way for the Department's asset management program (TIMS)
 - Use Global Positioning System (GPS) technology to record the CPS locations, condition, digital photographs and related information of all appurtenances with GPS dataloggers to inventory an accurate quantity and determine replacement needs of department owned property.
 - Computer database management of collected appurtenances including editing and updating the data when it has been replaced in the field. Use of various software programs (GPS Pathfinder Office, Geomedia, MS Access, MS Excel) to update databases and generate required reports and spreadsheets for budget forecasting.
 - Ensure the proper maintenance of hardware used for data collection (GPS datalogger, GPS receiver / antennae, various cables, power sources, satellite licenses, firmware updates, distance measuring instrument, digital camera)
 - Asset control of Department retained material by establishing and maintaining up to date lists of retained material at contractors premises or otherwise. Ensure accurate reporting and accountability of the usage of these materials
3. Preparation of quantity estimates for issuing work orders and monitoring work in progress for Provincial highways, Provincial parks and Water Resource Infrastructure areas, under the direction of the MCI
 - Identify work activities and quantities for generating work orders
 - Advise of deficient work, work practices and non compliance with terms and conditions of the contract by recommending corrective action including stopping work in progress when standards are not being met.
 - Monitor and report maintenance costs, prepare progress estimates for maintenance and contract work
 - Prepare detailed and technical inspection and deficiency reports, forms, records and related documents
 - Provide project management for special major maintenance work projects
 - Collect or arrange to collect sample materials for quality assurance and quality control testing as required, according to Alberta Transportation Manual of Test Procedures.
4. Provide application support for Highway Maintenance Contract
 - Data management of MCMS-OM database, providing revisions/updates of bid items, segments, job

numbers, adjustments, and edits to the Operations Manager's database.

- Import/export database extracts from/to the MCI database from/to the OM database and perform regular backups
- Generate accurate monthly progress estimate payments to the maintenance contractor for the Operations Manager
- Generate Impromptu reports for the Operations staff and the maintenance contractor (Timeliness, salt/sand usage, overdue work orders, snowplow hours, specific bid item quantity reports, etc.) for auditing and budget purposes

5. Collection of annual Surface Condition Rating (SCR) of highway surfaces in support of the Departments pavement preservation program - Road Maintenance and Rehabilitation Application (RoMarA)

- Assist MCI to identify, measure and record surface deficiencies within various segments of each highway control section utilizing GPS datalogger or printed forms. Must be certified by the Department as a SCR recorder and/or rater
- Computer database management and data entry into other software programs Road Register for Windows (RRWIN), GPS Pathfinder Office, MS Excel, MS access and export into the Department's Road Maintenance and Rehabilitation Application (RoMaRa) for analysis
- Practice safe operating procedures to ensure employee safety while collecting data and maintaining safe traffic flow

6. Liaise with department staff, contractors, consultants, cities, towns, municipalities, emergency services, RCMP and landowners, on issues relating to the highway corridor

- Receive and investigate inquiries and complaints and taking or recommending corrective actions
- Contact person to display safety related messages, requested by RCMP for Changeable Message Sign in Airdrie
- Ensure safe conditions on the highways by investigating fatal accident sites, completing a detailed report with diagram and photographs to determine if any deficiencies exist or if improvements are required
- Personal interaction by attending meetings, video conference sessions and on-site visits
- Verbal contact by telephone, addressing public complaints and requests for information
- Communication by Internet, email and fax for exchanging important correspondence
- Continual partnering with all department stakeholders to build strong relationships

7. Support the Planning and Development Control staff to protect the integrity of the highway infrastructure and the safety of the motoring public

- Monitor development adjacent to Provincial highways to ensure it conforms to Alberta Transportation Utility Guideline
- Investigate road plan cancellations/closures of government owned land to recommend disposal or future use
- Inspect utility work within the highway right-of-way
- Provide technical recommendations for roadside development issues

8. Assist in the preparation of contracts, Request for Proposals (RFP), service agreements, consultant agreements and provide contract administration

- Provide data, quality and costs estimates and assist in the preparation of various contract documents
- Assessing needs for extra work that may require special funding on a quotation
- Identify maintenance requirements and provide recommendations for future plans / programs
- Provide input to construction and bridge staff by undertaking field inspection of other contracts as required
- Perform and/or interpret surveys to put together information for tender packages

9. Participates as a team member in developing guidelines, long term plans and procedures for maintenance programs and participates on special committees, task forces, events and assignments

- provide technical expertise in establishing uniform provincial procedures and standards for new concepts
- Communicate effectively between peers and team members to achieve common goals and desired results
- Provide input into developing policies, long term plans and procedures for maintenance programs by

assessing problems and deficiencies in standards, specifications, methods and techniques and recommending changes
- Implement innovative ideas and participates in pilot projects to support the Departments goal of being a center of excellence

Problem Solving

Typical problems solved:

A call from a landowner regarding a drainage concern. As FST's we need to decide if this is Alberta Transportation's responsibility and if so how can we remedy the situations. Factors to consider are: Where can we drain the water? Are there environmental issues? Is there historical factors or agreements that need to be considered? Will the remedy impact the design and safety of the highway and ditch? (i.e. alter the slope). Will this affect the landowners? Are there right of way that can be affected i.e. gas lines, power lines, canal works, CPR and municipalities? Will the remedy fit within budgetary constraints? The resolution must address these concerns and at the same time placate the constituent.

Types of guidance available for problem solving:

Reference to highway maintenance contract specifications, department level of service and best practice documents and general guidance from the Maintenance Contract Inspector (MCI), the FST is expected to access and resolve problems in the field as the come up.

Direct or indirect impacts of decisions:

Decisions made by the FST will impact the final outcome of the annual provincial highway maintenance program and subsequent satisfaction of the general motorists, local land owners and residents and municipalities in the service area.

Key Relationships

Major stakeholders and purpose of interactions:

- This position requires ability to work in a highly technical environment and understands engineering principals and complex technical processes. Creativity is required in determining solutions to a multitude of tasks relating to the maintenance of approximately 150 kilometers of Provincial highways within a 3,000 square kilometer geographic area encompassing 6 individual municipalities
- The position works jointly with the maintenance contract inspector in the delivery of a 5 to 9 million-dollar maintenance contract and provides project management for additional projects of up to \$100,000. the work done by this position has a high impact on highway operations and programming of future maintenance activities
- Work encompasses high volume freeways to gravel roads and irrigation/flood control canals. It requires tremendous flexibility due to the varied nature of assignments plus the ability to learn new skills and adapt to new situations
- Position has regular contact with contractors, consultants, cities, towns, municipality, RCMP and other government departments and other levels of government to address concerns relating to Department interests
- Requires the complex assimilation and integration of diverse information from many sources. A broad base of highway construction experience enhances the creativity that is required to determine innovative solutions to a variety of complex maintenance problems.

Required Education, Experience and Technical Competencies

Education Level	Focus/Major	2nd Major/Minor if applicable	Designation
Certificate (1 year)	Engineering		

If other, specify:

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

- Certified with a technical diploma in Survey technology, Provincial survey school, Provincial materials testing school, supplemented by related courses
- 4 additional years of survey related experience in the legal surveying and agricultural drainage design

fields

- In depth knowledge of all aspects of highway construction and project management relating to preliminary surveying, construction layout final earthwork and pavement quantities, and materials testing experience obtained by attending Provincial Survey School and numerous in house training courses. Use of various survey instruments (Total Station, transit level) to solve drainage problems and measure accurate stockpile quantities

- Sound practical knowledge of road design, highway construction / maintenance and contract administration, environmental regulations/guidelines, the ability to provide accurate and concise survey and materials testing information for quality control and quality assurance as outlined in the following documents:

- Highway Geometric Design Guide
- Highway Maintenance Specifications Manual
- Highway Maintenance Guidelines and Level of Service Manual
- Maintenance Reference Guide
- Failures Definition Handbook
- Contract Administration Manual - Highway and Bridge Maintenance
- Surface Condition Rating Manual
- Segregation of Asphalt Mixes
- Manual of Test Procedures (Technical Standards)
- Highway Traffic Act
- Public Highway Development Act
- Occupational Health and Safety Regulations
- Transportation of Dangerous Goods
- Traffic Accommodations in Work Zones Manual (Alberta Transportation)
- Manual of Uniform Traffic Devices for Canada (Transportation Association of Canada)
- Alberta Highway Signing Manual
- Pavement Marking Guide
- Environmental Best Practices (Alberta Transportation)
- Conservation and Reclamation Guidelines for Borrow Operations
- Water Act (Alberta Environment)
- Salt Management Guidelines - Transportation Association of Canada
- Fisheries Act - Government of Canada
- Introduction to Bridges

- In depth knowledge of all aspects of highway construction and project management relating to preliminary surveying, construction layout, final earthwork and pavement quantities, and materials testing experience obtained by attending Provincial Survey School and numerous in house training courses. Use of various survey instruments (Total Station, transit, level) to solve drainage problems and measure accurate stockpile quantities

- Superior ability to problem solve in unique situations with creative and innovative solutions for all aspects of highway, park areas and environment facility maintenance activities

- Advance knowledge of all current applicable computer software applications pertinent to Highway Operations, including but not limited to the following:

- Maintenance Contract Management System (MCMS-MCI)
- Road Register for Windows(RRWIN)
- Impromptu
- GPS Pathfinder Office
- GeoMedia (GIS program)
- pcAnywhere
- Earthwork Quantity Management System (EMXS)
- Transportation Infrastructure Management System (TIMS)
- Road Maintenance and Rehabilitation Application (RoMaRA)
- Microsoft Office Suite (Word, Excel, Access, PowerPoint, Outlook, Photo Editor)

- Advance knowledge of MCMS-OM (Maintenance Contract Management System) software to provide

revisions/updates of bid items, unit prices, CMA segments, job numbers, lump sum adjustments to the databases and to generate prompt and accurate monthly progress estimate payments to the maintenance contractor

- Advance knowledge of GPS (Global Positioning System) satellite hardware and procedures for collecting all highway appurtenance and SCR (surface condition rating) information within a contract maintenance area (CMA) for the asset management and pavement preservation programs within the Department (TIMS, RoMaRA)
- Thorough knowledge of advanced technologies, the flexibility to learn new skills and be adaptable to new situations (Intelligent Transportation System (ITS), Road Weather Information System (RWIS), Global Positioning system (GPS), Electronic Changeable Message Signs, Prewetting). As a software power user, the ability to troubleshoot computer problems and provide software support in accordance with the mandate of the Operations Support Group (OSG). Founding member of the OSG. TIMS working group member (TWG)
- Strong verbal, conflict resolution and written skills to exchange information and communicate effectively with internal and external stakeholders groups and team members
- Ability to work independently and to provide input for planning and scheduling work within allocated budgets

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		
Creative Problem Solving	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<p>Focuses on continuous improvement and increasing breadth of insight:</p> <ul style="list-style-type: none"> • Asks questions to understand a problem • Looks for new ways to improve results and activities • Explores different work methods and what made projects successful; shares learning • Collects breadth of data and perspectives to make choices 	Highway operations and maintenance issues can be very complex, requiring unique or unconventional solutions. The FST may have to seek clarity to the problems, try to see problems from the perspectives of different stakeholders and look for alternative solutions.
Build Collaborative Environments	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<p>Facilitates open communication and leverages team skill:</p> <ul style="list-style-type: none"> • Leverages skills and knowledge of others • Genuinely values and learns from others • Facilitates open and respectful conflict resolution • Recognizes and appreciates others 	The FST needs to identify priority work activities, develop plans and implement the plan through service providers and others. A sense of teamwork and co-operations while working with contractors and other stakeholders will lead to more buy in and commitment to achieve common goals.
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>	Highway safety and long term sustainability and afford-ability are top

		<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 	<p>priorities for the department. The FST needs to plan for the results and focus on the outcomes that will lead to achievement of performance measures.</p>
Develop Networks	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<p>Works on maintaining close relations with all stakeholders:</p> <ul style="list-style-type: none"> • Identifies key stakeholder relationships • Has contact with range of interested parties • Actively incorporates needs of a broader group • Influences others through communication techniques 	<p>The successful FST will regularly identify and interact with internal and external stakeholders (such as contractors, municipal and other government officials, landowners and area residents) to develop positive working relationships to address the needs of all parties.</p>

Benchmarks

List 1-2 potential comparable Government of Alberta: [Benchmark](#)

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.