



IDENTIFICATION

Department	Position Title	
Infrastructure	Maintenance Engineering Technologist	
Position Number	Community	Division/Region
33-0158	Hay River	Transportation/HQ

PURPOSE OF THE POSITION

The Maintenance Engineering Technologist is responsible to assist in developing, planning, managing, supervising and delivery of a variety of Operations and Maintenance (O&M) programs and capital projects, and assist in the administration of Highway Maintenance Standards and regulation of the *Public Highways Act* for the Highways and Marine Services Division. This is done to ensure that all programs and projects are efficiently planned, constructed and completed in accordance with Departmental policies, guidelines and specifications.

SCOPE

Located in Hay River, this position is part of the maintenance engineering team. The team provides engineering and technical services for Capital and O&M Programs in the North Slave, South Slave, Fort Simpson and Inuvik regions.

The incumbent will provide technical support for the Maintenance Management System (MMS) and Equipment Management System (EMS), delivery of Capital and O&M projects, and administration of the *Public Highways Act* and assist in periodic review and assessment of the NWT Highway System and assist with updates of the Highway Maintenance Standards.

Many of the projects and programs are multi regional and must be delivered in consultation with other Department staff to ensure that standards and program goals and objectives are met. As well, projects and programs will vary in scope and schedule. The position works as part of a team in the delivery of a range of projects with budgets from \$10,000 to \$100,000; programs with budgets from \$100,000 to \$1,000,000 and larger capital projects with budgets exceeding \$1,000,000.

All programs and projects supervised by the incumbent have a direct effect on the Highways capital and O&M budgets and expenditures for the various client regions (North Slave, South Slave, Fort Simpson & Inuvik). Programs and projects must be effectively and efficiently run to ensure that the budgeted amounts are sufficient for delivery.

RESPONSIBILITIES

1. Provides technical assistance for the purpose of analyzing highway operation and maintenance expenditures by:

- Operating and maintaining the Maintenance Management System (MMS) and the Equipment Management System (EMS).
- Assisting in the preparation of O&M budgets for highways programs and projects.
- Assisting in the development and evaluation of program and project options derived from analyzing past expenditure data.
- Assisting with assessments and evaluations from site reports and field visits.
- Developing and presenting options for improvements in collecting expenditure data.
- Compiling and summarizing expenditure data provided by regional operations staff.
- Training or assisting in the training of staff for expenditure data input.

2. Provides technical expertise in the preparation of highway maintenance project plans, designs, specifications and cost estimates by:

- Summarizing and analyzing data from previous projects and investigations.
- Gathering information using survey instruments and other tools to produce site plans and establishing all controls and surveys necessary for work layout and quantity control.
- Researching and gathering operational information from other divisions, departments and outside sources such as technical journals, engineering reports and case studies.
- Preparing alternate designs and making recommendations for final design.
- Preparing and submitting information to assist with obtaining land use permits, quarry permits, water permits and land reserves.
- Preparing special provisions and other requested specifications for projects, programs and recommend changes for contract documents and operational guidelines.
- Identifying resources required to complete the goals of assigned projects and programs.
- Arranging the tender process by preparing tender forms, attending tender opening, reviewing bids and recommending contract award.
- Recording on site information and documenting day-to-day conditions during field work, construction projects, operational activities and maintenance programs.

3. Provides technical support and supervises various contracted services in the delivery of highway maintenance projects and programs by:

- Supervising contractors in the completion of assigned project work.
- Responding to enquiries on project design and specifications from bidders during the tendering process.
- Assisting in the review of bids or proposals submitted by contractors.
- Assisting with presenting and explaining contract terms and conditions and all applicable Department regulations and procedures at pre-construction meetings, project update meetings and program progress meetings.
- Assisting in the preparation of specifications and tender documents.
- Assisting with the negotiating and making recommendations in the approval process for projects, programs and contracts.
- Performing inspections of capital and O&M contracts to ensure work is of acceptable quality and in accordance with the plans and specifications.
- Conducting interim and final inspections to identify and report on deficiencies prior to acceptance of completed projects.
- Checking progress payment claims submitted by contractors certifying work has been properly completed and recommending payment.

4. Identifies and assists in the determination of additional staff resources required for project and program delivery during peak work season condition or as the workload increases beyond permanent staff capabilities by preparing the work plans for casual or summer student staff.

WORKING CONDITIONS

Physical Demands

Office and field work are required. Fieldwork will involve periods of 6 hours or more of driving. Some field work will be moderately demanding, physically.

Environmental Conditions

Incumbent will be required to work outdoors and will be exposed to highway traffic, weather, and insects.

Sensory Demands

No unusual demands.

Mental Demands

The position requires significant travel during construction season.

KNOWLEDGE, SKILLS AND ABILITIES

- Knowledge of computers particularly spreadsheets, word processing, project management software, asset management software and AutoCAD drafting.
- Knowledge of northern soil conditions, environment and construction practices.
- Knowledge in developing and maintaining Access database systems.
- Ability to survey using standard survey equipment.
- Ability to operate light vehicles such as pickup trucks
- Ability to work as a team member and contribute to the delivery of maintenance engineering projects and programs.
- Ability to produce contract specifications, technical reports and other correspondence.
- Ability to present reports and numerical data in a clear and concise manner.
- Ability to supervise and manage projects.

Typically, the above qualifications would be attained by:

- Diploma in Civil Engineering Technology with 2 years' experience in highway construction and highway maintenance or related work.
- Completion of AutoCAD and other engineering related computer courses.
- Equivalent field experience of a junior capacity will be considered on a case-by-case basis - emphasis on highways, transportation and infrastructure related knowledge.
- Valid Class 5 NWT Driver's Licence or eligible to obtain an NWT driver's licence.

ADDITIONAL REQUIREMENTS

Position Security (check one)

- No criminal records check required
- Position of Trust – criminal records check required
- Highly sensitive position – requires verification of identity and a criminal records check

French language (check one if applies)

- French required (must identify required level below)
Level required for this Designated Position is:
ORAL EXPRESSION AND COMPREHENSION
Basic (B) Intermediate (I) Advanced (A)
READING COMPREHENSION:
Basic (B) Intermediate (I) Advanced (A)
WRITING SKILLS:
Basic (B) Intermediate (I) Advanced (A)
- French preferred

Aboriginal language: Choose a language

- Required
- Preferred