



CLASSIFICATION: EU TECHNOLOGIST II (ENGINEERING)

JOB TITLE: EU TECHNOLOGIST II (ENGINEERING)

REFERENCE NO: 100095

DIVISION: DEVELOPMENT AND INFRASTRUCTURE

DEPARTMENT: ENVIRONMENTAL UTILITIES

APPROVAL DATES: BY: *Donna Nelson* **DATE:** *23 Aug 2010*
COMMISSIONER OF DEVELOPMENT AND INFRASTRUCTURE

BY: *Paul A. Schmidt* **DATE:** *August 13, 2010*
GENERAL MANAGER OF HUMAN RESOURCES

GENERAL DESCRIPTION:

This is a junior position that provides support to the Technologist and Engineering teams relating to various components of development engineering and municipal water, wastewater, and solid waste projects. This position is considered a specialist, fully proficient in the required engineering principles. Position typically adheres to established procedures and involves a choice of methods to complete a task.

ORGANIZATIONAL RELATIONSHIPS:

- Reports to and works with general direction from Manager of Environmental Utilities Engineering
- May provide technical guidance and supervision to Technologist I and /or temporary staff assigned to a common project.
- Includes internal relationships with other department and City employees.

PRIMARY FUNCTIONS/ACCOUNTABILITIES:

- Under the guidance of the Manager of Environmental Utilities Engineering and senior technologists, designs, analyzes, conducts network simulations and evaluates various aspects of municipal water and wastewater infrastructure with minimum guidance.
- Under the guidance of the Manager of Environmental Utilities Engineering and senior technologists, prepares technical drawings and develops specifications.
- Performs elements of project management including document preparation and final records completion.
- Conducts field studies and trains others in the use of engineering equipment including Global Positioning Systems/electronic survey equipment, personal computers, programmable dataloggers, flow measuring devices and similar types of technology.
- Uses specialized engineering and corporate software for data gathering, data compilation and records management in the areas of water, wastewater and landfill operations.
- Creates, revises and maintains infrastructure records by CAD drafting, scanning, spatial referencing, reproducing, retrieving and filing.
- Reviews and prepares documents relating to property rights for existing infrastructure requirements.
- Technical liaison and engineering data exchange with consultants, clients and other departments.
- Performs municipal Cross Connection Control Officer duties including facility compliance inspections, reporting and records management to help safeguard the municipal water system.

- Remains up to date in knowledge and skills in water, wastewater and solid waste systems and the supporting engineering equipment and software
- Performs other duties as required.

REQUIRED COMPETENCIES:

- Ability to make arithmetical and field calculations as required.
- Knowledge of applicable Environmental and Occupational Health and Safety Regulations.
- Knowledge of technical and engineering principles and practices related to the work assigned.
- Knowledge of applicable terminology and techniques related to the work assigned.
- Ability to operate precision equipment and instruments and to adhere to approved practices related to work assignments.
- Ability to read and interpret plans, specifications, diagrams, charts and technical reports related to the work assigned.
- Knowledge in civil engineering principles and practices related to municipal development, water distribution and sanitary sewer collection, and drafting.
- Knowledge in current surveying principles, practices and procedures.
- Knowledge in operation of total stations, Global Positioning Systems and levels.
- Proficiency in PC application including standard office, database, spreadsheet, geomatic and drafting software.

REQUIRED QUALIFICATIONS:

- Civil Engineering or Drafting Technology Diploma from a recognized post-secondary institution.
- Membership (or eligibility) Alberta Society of Engineering Technologists – C.E.T.
- Professional Development as per the Environmental Utilities Engineering Technologist Training Plan.
- Two (2) years of directly related experience in a municipal environment or two (2) years of related experience as City of Medicine Hat Technologist 1.

SALARY RANGE:

- As per the Collective Agreement for CUPE Local 46 (Inside and Outside Workers).

EU Engineering Technologist Progression Training Requirements

Level 1

A total of 50 hours of approved training must be successfully completed as a Level 1 Technologist.

Level 2

A total of 75 hours of approved training must be successfully completed as a Level 2 Technologist.

Level 3

A total of 100 hours of approved training must be successfully completed as a Level 3 Technologist.

Level 4

Training and continued professional development must be undertaken in accordance with the requirements to maintain CET designation.

<u>Course Description</u>	<u>Credit (hours)</u>
<u>Sacramento Univerity Courses</u>	
Wastewater Collection Vol. 1	15
Wastewater Collection Vol. 2	15
Water Distribution	15
Effective Utility Leadership Practices	15
Operation of Wastewater Treatment Plants Vol. 1	30
Operation of Wastewater Treatment Plants Vol. 2	30
Collection Systems: Methods for Evaluating and Improving Performance	10
Water Treatment Plant Operation Vol. 1	30
Water Treatment Plant Operation Vol. 2	30
<u>City of Medicine Hat Courses</u>	
Project Management (3 days) (CMH Dare to DREAM or equivalent)	21
Conflict Resolution for Teams (CMH 2-day or equivalent)	14

<u>ESRI</u>	
ArcGIS Desktop I: Getting Started with GIS (previously Learning GIS Using ArcGIS Desktop)	16
ArcGIS Desktop II: Tools & Functionality (previously Intro to ArcGIS I)	24
ArcGIS Desktop III: GIS Workflows & Analysis (previously Intro to ArcGIS II)	16
Cartography with ArcGIS	24
Geodatabase Design Concepts	16
Advanced Analysis with ArcGIS	24
Building Geodatabases	24
Introduction to Geoprocessing Scripts Using Python	16
Introduction to Programming ArcObjects with VBA	24
Extending ArcGIS Desktop Applications	24
Developing Applications with ArcGIS Engine	16
Working with ArcGIS Network Analyst	16
Introduction to the Multiuser Geodatabase	16
Data management in the Multiuser Database	24
Managing Editing Workflows in the Multiuser Database	24
Managing a GIS	16

<u>NASSCO</u>
Pipeline Inspection Certification Program
<u>Bentley Systems</u>
WaterGEMS – Introductory

SewerGEMS – Introductory
WaterGEMS – Intermediate
SewerGEMS – Intermediate
WaterGEMS – Advanced
SewerGEMS – Advanced
HAMMER
<u>SAIT</u>
Contracts
Technical Communications I
Construction Scheduling
Cost Control
<u>NAIT</u>
Blueprint Reading – Introduction
Blueprint Reading – Piping Trades
Effective Communications I
Effective Communications II
Surveying Principles
Technology Management
Surveying Applications
Estimating I
Fluid Mechanics
Introduction to Land Titles
<u>EPIC Learning Centre</u>
Infrastructure Asset Management
Maintaining and Rehabilitating Water Mains
Subdivision Development – In Times of Regulatory Incentives and Smart Growth Initiatives
Interpretation and Enforcement of Construction Contracts
Bidding, Evaluation, Negotiation and Contract Award – for Construction Projects
<u>AWWOA</u>
Pumps – Theory, Operation and Maintenance
<u>Approved External Courses in the Following Subjects</u>
Surveying procedures
Use of surveying software for EU-utilized survey equipment.
Sewage lift station design
Water system booster station design
Slope stability and erosion control design
Design of sanitary and stormwater drainage systems
Subdivision development/sustainable development
Contract Administration and Construction Management
Technical Communication

Notes:

- Courses taken must be approved by the Manager of Environmental Utilities Engineering
- Credits for approved external courses will be assigned by the Manager of Engineering based on the length of the course (for classroom training).
- On-line courses will be assessed for eligibility by the Manager of Engineering. Credits for on-line courses will be assigned by the Manager of Engineering based on the approximate length of the course.
- Management-approved methods (exams, special projects, etc.) may be applied to assess proficiency in subject matter.