



## City of Brandon Job Description

<b>Job Title:</b>	Engineering Design and Inspection Technician		
<b>Division:</b>	Development Services Division		
<b>Department:</b>	Engineering		
<b>Section:</b>	Engineering Services	<b>Affiliation:</b>	CUPE
<b>Reports To:</b>	Chargehand - Engineering	<b>Status:</b>	Permanent
<b>Job Class:</b>	Engineering Technician	<b>Level Cap:</b>	3

### **PURPOSE OF POSITION**

To participate as part of a working team that performs a variety of technical functions related to municipal maintenance, construction and planning projects.

### **TYPICAL DUTIES AND RESPONSIBILITIES**

#### **Data Management & Drawing**

- Operates computer-assisted drafting equipment or a conventional drafting station;
- Prepares engineering drawings, plans, sections, details, profiles, diagrams, thematic maps, charts and/or standards, with a range of size and complexity;
- Imports field collected data and/or as-built data for plan preparation;
- Interprets drawing mark-ups and edit drawings based on review by senior engineering staff;
- Understands survey plan content, layers and line types;
- Communicates with engineering and field staff regarding site-specific drawing information and project requirements;
- Identifies physical interferences in proposed designs and notifies design staff;
- Develops and implements procedures for the collection and maintenance of infrastructure asset information;
- Manages time, plans work and deliverables for multiple projects;
- Maintains files, records both in digital and hardcopy formats.

#### **Inspection**

- Ensures daily presence on construction site for the duration of a project;
- Conducts field engineering tests to ensure compliance with Contract Documents, including but not limited to conductivity testing, hydrostatic pressure testing and pipe disinfection;
- Inspects new and existing underground utilities, road building, and building construction sites, to ensure workmanship is in compliance with the Contract Documents, City of Brandon By-Laws, Building Codes and Development Services policy and procedures;
- Assists public and private construction personnel in the interpretation of engineering drawings;
- Collects data for As-Constructed drawings on site for City records;
- Recommends progress estimate payments based on collected quantities and knowledge of

- what has been installed;
- Communicates effectively with survey crew(s), project manager, and senior engineering staff regarding project progress, problems, change requests and job completion;
- Communicates effectively and builds relationships with Contractor personnel;
- Liaises with and assists personnel from other City of Brandon departments with inspection services and coordination of projects;
- Creates reports for review by senior engineering staff;
- Performs routine maintenance and recommends when major repair or replacement is required for all testing, surveying and inspection equipment;
- Assists in the development of specifications and Contract Documents;
- Supervises or conducts field surveys, inspections or technical investigations of topography, soils, drainage and water supply systems, road and highway systems, buildings and structures to provide data for engineering projects, as required.
- Other duties as assigned.

NOTE: This description is not intended to limit the assignment of work or be construed as a complete list of the many duties to be performed by the incumbent.

## **POSITION QUALIFICATIONS**

### **SKILLS**

- Proficient team building, interpersonal, communication, and problem solving skills;
- Demonstrated proficiency in drafting, survey and/or construction management practices and procedures;
- Demonstrated initiative to independently plan, organize, and prioritize workload;
- Demonstrated leadership including establishing focus, providing motivational support, fostering teamwork, and empowering others;
- Information gathering skills used in knowing how to find and identify essential information and be able to make timely decisions based upon operating procedures;
- Proficient use of computer equipment, operating systems, word processing, spreadsheet, database, and automated drafting/design software.

### **KNOWLEDGE**

- Knowledge of municipal engineering practices, principles, concepts, techniques and standards;
- Working knowledge of legislation, regulations, policy, etc. relevant to area of expertise;
- Working knowledge of City protocol used to manage situations effectively in all areas of the organization and in the community;
- Working knowledge of occupational hazards and safety precautions associated with a variety of work activities;
- Mathematical aptitude, some knowledge of trigonometry and its application to surveying and civil engineering.

### **ABILITIES**

- Ability to apply a high level of drafting, surveying, and/or construction management technical ability and understanding;

- Ability to read, interpret and apply engineering drawing and specification information as shown in technical documents;
- Ability to understand and follow oral and written instruction, manuals and procedures and convey the information to the general public, other Division employees, contractors, etc.;
- Ability to maintain patience and accuracy under pressure to meet deadlines;
- Willingness to participate in training and self-development programs;
- Willingness to adapt to new technological changes and improvements.

### **MANDATORY QUALIFICATIONS & EXPERIENCE**

- Grade 12, G.E.D., C.A.E.C., or Mature High School Diploma;
- Diploma in Civil Engineering Technology;
- Hold, or obtain within three (3) years of appointment a Certified Technician (C.Tech.) Designation;
- Proficient use of CADD equipment and software (AutoCad; Civil3D);
- Must possess a valid and subsisting Class 5 Province of Manitoba driver's license;
- Any additional certification required under Provincial guidelines and legislation.

### **PREFERRED QUALIFICATIONS & EXPERIENCE**

- Hold, or obtain within three (3) years of appointment a Certified Engineering Technologist (C.E.T.) Designation;
- Membership in or ability to acquire membership of the Engineers and Geoscientist of Manitoba (EGM) as an Engineer in Training (EIT) or membership of the Certified Technicians & Technologists
- Minimum five (5) years' experience working in an engineering environment;
- Experience in use of survey data collector apparatus, including Total Stations, GPS and data collectors;
- Experience in use of ESRI suite of software (ArcView/ArcMap);
- Experience in use of desktop computer applications (Excel, Word);
- Eligible for additional certification as duties require.

NOTE: The qualifications are not intended to limit the opportunities for interested candidates but to provide the candidates with an understanding of the level of expertise required in this position.

### **WORK CONDITIONS**

#### **PHYSICAL CONDITIONS**

The duties of the Engineering Design and Inspection Technician are carried out in an office environment requiring frequent, seasonal travel to other facilities or work sites outdoors.

- Sits at a desk using keyboard and office equipment (daily);
- Uses hands, arms, shoulders at various heights (frequently);
- Stands, walks, climbs, or other movements necessary to attend and demonstrate skills in the work environments of the Division (frequently);
- Adaptable to working while exposed to severe weather conditions, considerable equipment noise, and obnoxious odours (frequently);
- Capable of performing heavy physical work, including shovelling and lifting (as required).

## **PSYCHOLOGICAL/STRESS CONDITIONS**

The Engineering Design and Inspection Technician's work load and environment may affect employee emotional or stress levels.

- Interruptions and requests in multiple areas (daily);
- Upset customers on the telephone and in person (daily);
- Participate in group decision making and projects (frequently);
- Contract coordination and deadlines leading to long work days (seasonally).

## **WORK CONDITIONS**

The Engineering Design and Inspection Technician works independently and as part of the team providing support to a variety of people.

- Self-motivated and quality driven to perform independent projects (daily);
- Wide variety of tasks requiring ability to manage multiple projects and make independent decisions (daily);
- Work in a shared and consultative manner with other employees (daily);
- May be necessary to travel throughout the City and visit various facilities or work sites in all types of weather conditions (daily);
- Long hours of work during construction season, including evenings and weekends (occasionally).

NOTE: The conditions described are representative of those that must be met by an employee to successfully perform the essential functions of the job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

**Department Head:** \_\_\_\_\_

**Human Resources:** \_\_\_\_\_

**Date:** \_\_\_\_\_