



JOB DESCRIPTION

TITLE: CIVIL DESIGN TECHNOLOGIST

DEPARTMENT: Engineering

LEVEL: 9 (Subject to JE)

Position Last Evaluated: Dec 2014

Job Desc. Last Updated: Jun 2023

JOB SUMMARY

Under the general direction of the Project Engineer, the incumbent is responsible for engineering tasks including survey, construction layout, preparation of engineering drawings for capital projects, and the completion of engineering calculations.

TYPICAL DUTIES AND RESPONSIBILITIES

1. Creates preliminary and detailed design drawings for capital infrastructure projects using Autodesk Civil 3D software. This work includes importing survey and GIS data, creating pipe networks, digital terrain models, alignments, profiles, sections, and road corridors, and all other drafting related work required to prepare engineering drawings.
2. Completes other engineering design work and calculations, prepares preliminary and detailed designs of engineering projects, and reviews conceptual designs and survey information to ensure sufficient information is documented for design work.
3. Completes topographic surveys for engineering projects.
4. Completes layout of construction works for the City's internal Construction Section.
5. Completes record drawings based on post construction survey information and red-line markup drawings.
6. Communicates with design staff to ensure that specific projects are coordinated.
7. Calculates quantity take-offs and generates cost estimates for engineering projects.

TYPICAL DUTIES AND RESPONSIBILITIES cont.

8. Performs other drafting related tasks as required such as land acquisition plans, drawings for other City departments, and plotting. Creates drawings and renderings for public communications.
9. Maintains hardware and software related to CAD and Engineering work and CAD User Guidelines Manual.
8. Trains and assists other staff in the operation of AutoCAD and Civil 3D computer software and procedures. Assists with the upgrade of AutoCAD and Civil 3D software. Researches and solves AutoCAD and Civil 3D related problems.
9. Provides support to CAD related processes and procedures to staff and engineering consultants, including conversion of data between CAD and GIS.
10. Provides direction to temporary staff (e.g. co-op, summer students) when required.
12. Performs other duties as required.

REQUIRED KNOWLEDGE, SKILLS, AND ABILITIES

Advanced knowledge of AutoCAD and Civil 3D.

Advanced knowledge of principles and practices of land surveying.

Proficient computer skills in word processing programs (such as Word), spreadsheet programs (such as Excel), and email programs (such as Outlook).

Knowledge of civil engineering design, survey, municipal utilities, and construction practices.

Ability to read, interpret, and prepare municipal engineering plans and related material.

Ability to perform complex drafting skills and maintain related equipment.

Ability to create planning and engineering drawings that effectively communicate the intent of the design in an easy to read and understand manner.

Ability to analyse engineering data.

Ability to make calculations rapidly and accurately.

REQUIRED KNOWLEDGE, SKILLS, AND ABILITIES cont.

Ability to work independently with minimal supervision.

Ability to interact effectively with supervisors, consultants, other municipal staff and the general public.

Ability to communicate with courtesy and tact in order to obtain and/or distribute routine data or information to internal and external customers. This may involve the ability to probe for information and clarification.

MINIMUM TRAINING AND EXPERIENCE REQUIRED

Diploma in Survey, Engineering Design and Drafting Technology or Civil Design Technology from a recognized technical institute.

A minimum of 6 months' experience in municipal engineering using Civil 3D.

Or an equivalent combination of education and experience.

Possession of a valid Class 5 BC Driver's Licence.

GENERAL STANDARDS

All employees shall take reasonable care to protect their health and safety, and the health and safety of other persons by becoming familiar with the Occupational Health & Safety (OH&S) Program, following established safe work procedures, using protective equipment, and asking for training if unfamiliar with work requested to perform.

Contributes in maintaining a respectful, safe, and supportive work environment that embraces diversity and where everyone is treated with courtesy, dignity, and fairness.

Adheres to City policies and objectives.