

## **GRADUATE ENGINEER / ENGINEERING TECHNICIAN IV**

### **NATURE OF WORK**

This is intermediate to advanced paraprofessional field and office civil engineering work. Work involves performing technical and complex work in design, plan preparation, and inspection of construction and maintenance projects.

Work is performed under the general supervision of the Assistant City Engineer who makes general assignments and reviews work to see that it is performed in accordance with instructions and accepted engineering principles.

### **ESSENTIAL JOB FUNCTIONS**

The following descriptions are intended only as illustrations of various types of work performed, and are not all-inclusive. Engineering Department staff potentially work more than 8 hours per day during construction, when certain projects are due, or meetings are conducted. Ability to have flexible work hours is essential. The job description is subject to change as the needs of the employer and requirements of the job change.

1. Research/field observation of existing City and private facilities to determine the viability of proposed construction and maintenance projects.
2. Perform preliminary and final design work and preparation of plans with AutoCAD, including:
  - quantities required for construction,
  - cost estimates of proposed construction projects, and
  - specifications for projects.
3. Conduct inspections of construction projects to ensure compliance with specifications, along with providing:
  - accurate written records of construction activity,
  - project status reports as needed, and
  - estimate of quantities for payments to contractors,
  - preparation of punch list and warranty items.
4. Assist Surveyor or conduct survey for preliminary, construction, and as-built survey work, including construction staking.
5. Assist Storm Water Specialist with site inspection and enforcement of erosion and sediment control.
6. Perform a variety of drafting duties in addition to proposed construction plans, including record (as-built) drawings, and miscellaneous plans. Maintain infrastructure records for the City.
7. Prepare displays for public meetings and attend meetings as needed.
8. Respond to property owner and resident concerns and complaints in a courteous and professional manner.
9. Respond to information requests from co-workers, developers, contractors and the public.
10. Perform other duties related to the position as assigned.

## **REQUIRED QUALIFICATIONS**

- Four year degree in Civil or Construction Engineering OR two year civil engineering degree (vocational) and three years municipal design, drafting and inspection experience.
- Experience in use of CAD and Microsoft Office software.
- Public contact work experience.
- Possession of MnDOT certification for Grading and Base, Bituminous Street, and Concrete Field as well as Erosion and Sediment Control or the ability to obtain certifications within one year of employment.
- Possession of a valid driver's license.

## **DESIRED QUALIFICATIONS**

One to three years of municipal design, drafting and inspection experience in addition to required qualifications. Experience in use of AutoCad Civil 3D, ArcMAP, Cartegraph, Trimble total station surveying equipment, GPS, and surveying levels.

## **KNOWLEDGES, SKILLS, AND ABILITIES**

- Considerable knowledge and experience with the principles and practices of municipal public works design, drafting and plan preparation.
- Considerable knowledge of and experience with construction specifications and regulations pertaining to public works construction.
- Considerable knowledge of the methods and standards of construction including sediment and erosion control.
- Considerable knowledge of the methods and standards of surveying and construction staking.
- Considerable knowledge of engineering maps and records, and associated nomenclature and symbols.
- Skill in project management, organization of time and record keeping.
- Skill in the operation of computers/tablets and a variety of engineering and surveying equipment.
- Ability to work independently, displaying appropriate judgement in office and field work.
- Ability to communicate effectively in English, both verbally and in writing.
- Ability to understand and work from oral and written instructions and sketches.
- Ability to perform assigned duties and responsibilities in the office.
- Ability to perform assigned duties and responsibilities in the field. Required to frequently visit project sites in all types of weather conditions. May be exposed to noise, fumes, odors, dirt, dust and gases.
- Ability to maintain appropriate certifications for field inspection. Keeps up to date with current trends in the public works field.
- Ability to establish and maintain effective working relationships with co-workers and contractors and the general public.