

PROJECT ENGINEER

SUMMARY/PURPOSE:

To perform, and to supervise others who perform engineering work in the design, construction, and maintenance of street improvements, utility installations, buildings and other structures, and water, gas, storm, and sanitary utility systems.

DISTINGUISHING FEATURES OF THE CLASS

Employees at the Project Engineer level are distinguished from the Senior Project Engineer level by the amount of guidance and instruction needed to perform duties as assigned, and are not expected to function with the same amount of program knowledge, proficiency, or skill level. Positions at this level exercise less independent discretion and judgment in matters related to work procedures and methods.

ESSENTIAL DUTIES AND RESPONSIBILITIES (other duties may be assigned)FUNCTIONAL AREAS:

1. Perform responsible, professional engineering work in the design, construction, and maintenance for a wide range of engineering projects.
2. Write project specifications per City, State, and Federal guidelines and industry standards for various street and utility jobs.
1. ~~of street improvements, utility installations, buildings and other structures, and water, gas, storm and sanitary utility systems.~~
- * ~~A. Write specifications for various street and utility jobs.~~
3. * ~~B. Estimate costs using previous bids and regional trends, for projects up to twenty million in value.~~
4. Perform complicated design work through the use of data collection and analysis, engineering calculations and methodologies to develop solutions for construction that meet local, state, and federal standards.
5. Operate computers to prepare, review, and edit engineering drawings, data analysis and cost estimations through spreadsheet software, prepare project memorandums and reports, and use modeling software to setup, run and analyze utility system model simulations for existing utility system networks and proposed expansion or retrofit projects.
- ~~prepare drawings, plan estimates and preliminary reports for difficult projects.~~
- 2.6. E. Coordinate projects within the engineering division, other City departments, public and private utility owners, and state and federal regulatory agencies keeping parties informed and developing solutions to issues that arise. with other utilities and agencies on projects.
7. * F. Ensure that projects are completed timely and cost effectively constructed following engineering standards and city specifications.
- 3.8. Negotiate, manage, and prepare compensation for contractors engaged in City contracts properly and on time.
- 4.9. * G. Prepare and review plans and check construction for conformance with standards and specifications.
- 5.10. * H. Investigate, prepare, and present technical reports and presentations both within the City and at public meetings.
- 6.11. * I. Prepares petitions and council resolutions on street and sewer projects.
12. J. Investigates and respond to citizen complaints.
13. K. Represents the City Public Works & Utilities Department/Engineering Division at various meetings and activities.
14. Inform, educate, and exchange ideas with other professionals, agencies, and the public regarding engineering projects and standards, and City policies and programs.
15. In collaboration with supervisor, determine work priorities both for staffing and financial resource allocation.
16. Assign work and coordinate work schedules.

17. Provide input into decisions regarding the hire and transfer of personnel.
18. Train and mentor staff in safe and proper work methods and procedures that meet engineering standards.
19. Monitor work for compliance with established methods, guidelines, standards and procedures.
20. Review work of team members for completeness and quality of work prepared, and provide mentoring through feedback and instructions as needed.
21. Provide input to management to aid in decisions related to discipline and grievance resolution.
22. Provide information and instruction to assigned team verbally and in writing as needed.
1. _____.
2. _____ Organize and direct the work activities of assigned team.
- * _____ A. _____ In collaboration with supervisor, determine work priorities.
- * _____ B. _____ Assign work and coordinate work schedules.
- * _____ C. _____ Provide input into decisions regarding the hire and transfer of personnel.
- * _____ D. _____ Train team in safe and proper work methods and procedures.
- * _____ E. _____ Monitor work for compliance with established methods, guidelines, standards and procedures.
- * _____ F. _____ Review work of team members for completeness and quality, and provide feedback as needed.
- * _____ G. _____ Provide input to management to aid in decisions related to discipline and grievance resolution.
- * _____ H. _____ Provide information and instruction to assigned team verbally and in writing as needed.

JOB REQUIREMENTS:

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skills, and/or abilities required.

1. Education & Experience Requirements

- A. Bachelor's Degree in Civil Engineering from an accredited college or university followed by four (4) years of work experience in the field of engineering as an Engineer in Training (EIT) working under the supervision of a licensed Professional Engineer.
- A-B. Two (2) years of professional level engineering experience as a licensed Professional Engineer.

2. 1. _____ License Requirements

- A. Licensure as a professional engineer with the ability to become licensed in the state of Minnesota within six (6) months from the date of appointment.
- A-B. Driver's license valid in Minnesota.

LICENSE REQUIREMENTS:

- ❖ _____ A. _____ Registration as a professional engineer with the ability to become registered in the State of Minnesota within six (6) months from the date of appointment.
- ❖ _____ B. _____ A driver's license valid in Minnesota.

2. _____ EDUCATION AND EXPERIENCE REQUIREMENTS:

- ❖ _____ Two (2) years of professional level engineering experience.

1. _____ Knowledge RequirementsKNOWLEDGE AND SKILL REQUIREMENTS:

3. _____

- A. Knowledge of general engineering principles.

- B. _____ ❖ _____ B. _____ Knowledge of drafting and mapping principles, and techniques, and

- standards.
- C. Knowledge of surveying methods, equipment capabilities and liabilities associated with survey data collection and interpretation.
- A. ~~_____~~
- ~~_____~~ ❖ ~~C. Knowledge of surveying methods, equipment capabilities and liabilities associated with~~
- A. ~~_____ survey data collection and interpretation, and instruments.~~
- B. ~~D. _____~~ ❖ ~~D. Knowledge of design and layout methods and techniques.~~
- C. ~~E. _____~~ ❖ ~~E. Knowledge of the principles, methods, equipment, and materials used in construction.~~
- D. ~~F. _____~~ ❖ ~~F. Knowledge of regulatory agencies (local, state, federal, and industry) and their rules affecting design and construction.~~
- G. ~~G. _____~~ ❖ ~~G. Knowledge of safety principles and practices.~~
- E. ~~H. _____~~ ❖ ~~H. Knowledge of contractual law, contract writing, and contract procurement.~~

1. ~~_____~~ Ability Requirements ABILITY REQUIREMENTS:

1.4. ~~_____~~

- A. ~~_____~~ ❖ ~~A. Ability to apply engineering principles and practices.~~
- B. ~~_____~~ ❖ ~~B. Ability to estimate construction costs and establish project budgets. ✓~~
- C. ~~_____~~ ❖ ~~C. Ability to prepare specifications, technical reports, contracts, resolutions, and petitions.~~
- D. ~~_____~~ ❖ ~~D. Ability to perform engineering design and layout work.~~
- E. ~~_____~~ ❖ ~~E. Ability to operate computers, associated software for communications, and design and data analysis modeling programs. ✓~~
- F. ~~_____~~ ❖ ~~F. Ability to communicate effectively using various means.~~
- G. ~~_____~~ ❖ ~~G. Ability to supervise the work activities of designers, surveyors, and inspectors assigned to the project team.~~
- H. ~~_____~~ ❖ ~~H. Ability to establish and maintain effective working relationships with co-workers, outside agencies, contractors, consultants, and the general public.~~
- I. ~~_____~~ ❖ ~~I. Ability to interpret safety rules and apply them to work situations.~~
- J. ~~_____~~ ❖ ~~J. Ability to formulate policies in regard to engineering standards and operational procedures.~~
- I-K. ~~_____~~ ❖ ~~K. Ability to work independently from peers and supervisors to accomplish a broad range of engineering directives to identify problems and provide resolution using sound engineering practices.~~
- J-L. ~~_____~~ ❖ ~~L. Ability to create and maintain a positive working environment that welcomes diversity, ensures cooperation, and promotes respect by sharing expertise with team members, fostering safe work practices, and developing trusting work relationships.~~

2. ~~_____~~

3.5. ~~_____~~ Physical Ability Requirements PHYSICAL REQUIREMENTS:

- A. ~~_____~~ Ability to sit or stand for extended periods of time.
- A. ~~_____~~
- B. ~~_____~~ Fine dexterity of hands and fingers to operate a computer keyboard, calculator and other office equipment.
- C. ~~_____~~ Ability to occasionally climb, balance, stoop, lift, push, pull, and carry.
- D. ~~_____~~ ❖ ~~A. Ability to transport (usually by lifting and carrying) lift and carry materials and equipment weighing up to 25 pounds.~~
- E. ~~_____~~ Ability to hear and speak sufficiently to exchange information in person and by telephone.
- B-F. ~~_____~~ Ability to see to read, prepare, and proofread documents for accuracy, occasionally without assistance. Examples of materials lifted and carried include presentation

~~materials, plans and drawings, etc.~~

- G. ~~❖~~ B. Ability to transport oneself to, from, and around various locations throughout the City including construction sites and over difficult and demanding terrain.
- ~~G.H.~~ E. Ability to attend work on a regular basis.

~~* Essential functions of the classification.~~

~~❖ Minimum requirements necessary on the first day of employment.~~

HR: GT	Union: Basic	EEOC: Professionals	CSB: 20110301	Class No: 3112
WC: 9410	Pay: 36	EEOF: Utilities/Transportation	CC: 20110314	Resolution: 11-0133R