



CITY OF FAIRBANKS

JOB DESCRIPTION

JOB TITLE: Engineer
CLASSIFICATION NO: 1551, 1541, 1531, 1501
DEPARTMENT: City of Fairbanks Engineering Department
STATUS: Non-Exempt
POSITION REPORTS TO: City Engineer
UNION: IBEW

JOB SUMMARY

Engineers in this Department are responsible for planning, design, bid document preparation, and construction administration for capital improvement projects, including improvements to existing streets, sidewalks, utilities, drainage, traffic signals, signage, and streetlights. Duties include both field and office work and require the independent application and knowledge of engineering principles and practices.

ESSENTIAL JOB FUNCTIONS

- 1) Visit project sites to assess the nature and scope of projects in the planning and design phase.
- 2) Inspect contractor progress, conformance to design plans and quality of work during construction.
- 3) Prepare for site visits and field inspection reports.
- 4) Perform complex engineering computations.
- 5) Complete drafting design plans, and write project specifications.
- 6) Coordinate and communicate with outside agencies, utility companies, business owners, and the general public in the course of planning and administering projects.

The preceding examples are representative of assignments performed by this class and are not intended to be inclusive.

KNOWLEDGE, SKILLS AND ABILITIES

These factors will be the basis for selecting those qualified candidates to be interviewed. Candidates hired must satisfactorily demonstrate these factors during a prescribed probationary period for continued employment:

- 1) Knowledge of the theories, principles, and practices of engineering and surveying involved in the engineering specialization.
- 2) Knowledge of modern engineering methods and techniques as applied to the design and construction of public works, utility, or traffic projects.
- 3) Ability to establish and maintain effective working relations with engineering staff, contractors, public and private officials, and the general public.
- 4) Ability to apply engineering principles to assigned projects.
- 5) Ability to make engineering computations and to assist with preparation of engineering plans and specifications.
- 6) Ability to understand and execute oral and written instructions and to interpret and implement engineering plans and specifications.
- 7) Consistent data management skills. Ability to maintain survey data, as-built data, proper drawing layer management, and other project data.

MINIMUM REQUIREMENTS

Engineer positions in the Department are organized in a series (i.e. Engineering Intern, Engineer I, II, III, and IV) and operate under the direction of the City Engineer. Factors that affect position assignment in the engineering series include: level of education and years of work experience, independence of action and decision-making responsibility, complexity and size of project assignment, level of supervisory responsibility, and professional licensing requirements. The requirements listed below are cumulative.

Persons applying should have the following experience and/or training:

Engineering Intern:

- 1) Enrolled in good standing in a Bachelor of Science degree program in Civil Engineering or a closely related field.
- 2) Knowledge of basic engineering principles and practices applied to the construction of urban transportation projects.
- 3) Possess a State of Alaska driver's license throughout the duration of employment.

Engineer I:

- 1) Entry level position with no professional work experience required; however, completion of an Engineering Internship is preferred.
- 2) Possess a Bachelor of Science degree in Civil Engineering or a closely related field; or, if the education requirement is not met, may substitute four (4) years of related experience that required the utilization of engineering principles and practices.
- 3) Experience using AutoCAD required; Civil3D 2013 or later version is preferred.
- 4) Certification as an Engineer-In-Training by the State of Alaska is preferred.

Engineer II:

- 1) Three (3) years of professional work experience with the planning, design, and construction of urban transportation projects.
- 2) Proficiency in AutoCAD Civil3D 2013 or later version.
- 3) Demonstrate familiarity with the City's Design & Construction Standards, Alaska DOT&PF Pre-construction Manual, Flexible Pavement Design Manual, Manual on Uniform Traffic Control Devices, AASHTO Geometric Design Standards, Americans with Disabilities Act Standards, and local Utility Design Standards.
- 4) Ability to manage small, less complex projects (e.g. sidewalk replacement, road resurfacing, and drainage improvement projects) with minimal oversight and within established schedules and budgets.

Engineer III:

- 1) Eight (8) years of professional work experience with the planning, design, and construction of urban transportation projects.
- 2) Licensed as a Professional Engineer (P.E.) by the State of Alaska.
- 3) Demonstrated familiarity with all federal, state, and local regulations and codes pertaining to the design of urban transportation projects.
- 4) Demonstrated competency in public utility system design; at a minimum, piped storm drain systems and water and sewer facilities.
- 5) Ability to manage an engineering team to effectively fulfill project design objectives.

- 6) Ability to manage large, complex projects (e.g., road reconstruction projects that alter the horizontal/vertical alignment, affect traffic patterns/signalization, and result in relocation/replacement of various utilities) within established schedules and budgets.

Engineer IV:

- 1) Twelve (12) years of professional work experience with the planning, design, and construction of urban transportation projects.
- 2) Licensed as a P.E. by the State of Alaska with the responsibility for reviewing, stamping, and signing design plans and reports produced by the Department.
- 3) Ability to effectively supervise personnel, assign work, and track all of the Department's project expenditures and budgets.
- 4) Ability to effectively negotiate contracts with contractors, consultants, utility companies, and governing agencies.
- 5) Demonstrated success in pursuing and securing federal, state, and local funding for capital improvement projects to meet short- and long-term maintenance, growth and development needs.

I, _____, have received, reviewed and completely understand the entire contents of this job description.

Signature of Employee

Date

Signature of Supervisor

Date

The City of Fairbanks is an Equal Opportunity Employer.

Jim Matherly
City Mayor
11/2017