

<b>ENGINEERING TECHNICIAN III</b>  <b>ENGINEERING DEPARTMENT</b> <b>CITY OF WINONA, MINNESOTA</b>	<b>JOB DESCRIPTION</b>	
	<b>REPORTS TO: CITY ENGINEER</b>	
	<b>DIRECTLY SUPERVISES: None</b>	
	<b>9/17/99</b>	<b>APPROVED:</b>

**SUMMARY:**

The primary objectives of this job are to: supervise the survey crew and is called upon to represent the City Engineer on his behalf in his absence. Assist the public in interpreting maps and improvement plans, explains assessment plats and schedules, filing of all engineering plans and maps, updating all city maps and plans and the conducting of all necessary surveys. Responsibilities included in the supervising of the survey crew are laying out and staking all public improvement projects such as a street reconstruction project or an underground utility project, design or assist in the design and draft plans and specifications of public works improvement projects – primarily Minnesota State funded projects which are the largest and most complex to design.

**ESSENTIAL FUNCTIONS OF THE JOB:**

- Draws plans for all public works projects such as sewer, water, parking, street improvements, airports and surveys
- Files all improvement plans and maps for permanent record keeping, keeps all city maps updated
- Assist the public in interpreting maps and improvement plans , explains assessment plats and schedules
- Prepares assessment plats and schedules
- Maintains flood records and reports flood stages at various points in the city which are necessary for flood fighting operations
- Supervises the survey crew
- Conducts preliminary surveys, land surveys, layout, and staking of construction work and as-built construction surveys
- Construction layout consists of staking construction work as specified in the plans and specifications
- Performs office work connected with keeping survey field notes up-to-date. Supervises the maintenance of survey equipment in a workable condition
- Provide Civil Engineering technical advice and assistance to professionals, contractors, city departments and the general public
- Can be assigned to a wide variety of tasks and duties in Public Works

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#### **QUALIFICATION 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, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

#### **EDUCATION AND EXPERIENCE:**

- High School Graduate or hold GED Certificate
- Vocational or Junior College Degree in Civil Engineering
- Three years experience as an Engineering Tech. II
- Two years of experience in computer aided drafting

#### **LANGUAGE SKILLS:**

- Ability to verbally communicate
- Ability to prepare design plans and specifications for state aid projects
- Ability to prepare property and easement legal descriptions
- Possess a working knowledge of state technical design manuals and utility design manuals and their application
- Ability to prepare assessment plats and schedules
- Knowledge of codes, laws, rules and regulations pertaining to the construction and maintenance of public works projects

#### **MATHEMATICAL SKILLS:**

- Ability to calculate grades for underground utilities
- Ability to use geometry for horizontal curve design and construction; vertical curves used to provide a smooth transition from grades
- Knowledge of trigonometry and application of trigonometry in surveying
- Ability to compute equations

#### **OTHER SKILLS AND ABILITIES:**

- General knowledge of computer operations and programs
- Knowledge of CADD system
- Ability to prepare design plans and specifications of proposed streets, Bituminous Milling and overlays, bike paths, tennis courts, water distribution, sanitary sewer and storm sewer construction projects
- Ability to project how the project is going and how it is going to look when completed
- Ability to concentrate on complex problems until resolved

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- Ability to provide Civil Engineering Technical advice and assistance to professionals, contractors, city departments and the general public
- Ability to operate various surveying instruments including the transit, self leveling level and all other equipment
- Must be able to anticipate and resolve problems immediately
- Must have the personal discretion to make changes in the field so projects are not delayed

### ***CERTIFICATES, LICENSES, REGISTRATIONS:***

- Valid Driver's License
- Valid Commercial Driver's license desired

### **MINIMUM QUALIFICATIONS:**

- High School Graduate or hold GED Certificate
- Vocational or Junior College Degree in Civil Engineering
- Valid Driver's License
- A minimum of 3 years experience as an Engineering Tech. II
- A minimum of 2 years experience in computer aided drafting

### **PHYSICAL DEMANDS:**

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions of this job which include, but are not limited to; measure distances with tape at ground level; dig with shovel; communicate in person and on telephone; operate computer and climb steep grades and rough ground during surveying.

While performing the duties of this job, the employee regularly stands, walks, talks or hears, uses hands to finger, handle or feel, stoops, kneels, crouches or crawls and reaches with hands and arm; occasionally sits and climbs or balances.

While performing the duties of this job, the employee regularly lifts up to 10 pounds and occasionally lifts up to 100 pounds. Specific vision abilities required to perform this job are close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

### **WORK ENVIRONMENT:**

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable

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accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee may regularly be required to work near fumes or airborne particles and work in outdoor weather conditions; and frequently works near moving mechanical parts.

The noise level in the work environment is moderate to very loud noise.