

**POSITION DESCRIPTION
FOR
BIG STONE COUNTY**

JOB TITLE: Engineering Technician I		DEPARTMENT: County Highway	
REPORTS TO: County Engineer		BARGAINING UNIT: AFSCME	FLSA STATUS: Non-exempt
GRADE: 9	JOB POINTS:	DATE GRADE/POINTS ESTABLISHED: 7/2024	
DESCRIPTION APPROVED BY: County Board		DATE APPROVED: 7/2024	

PART I – JOB SUMMARY

This position is responsible to provide professional field and office civil engineering work. This position will perform inspections, prepare plans and sketches, surveying, operating instruments, approving and testing the work done by contractors, and other tasks as assigned by the County Engineer. Work is performed under the general supervision of a professional engineer.

PART II – JOB SPECIFICATIONS

- A. EDUCATION: Associate Degree in Civil Engineering and 3years of road construction and maintenance experience; or any combination of education and experience that provides equivalent knowledge, skills and abilities required.
- B. CREDENTIALS: Attend and renew technical certification required by the Minnesota Department of Transportation: Aggregate Production, Bituminous Street Level 1 and 2, Bituminous Plant, Concrete Field Level 1 and 2, Concrete Plant, Grading and Base Level 1 and 2, Construction Installer, Construction Site Management, and Design of Construction SWPPP.
- C. LICENSE: Valid driver's license
- D. CONTINUING EDUCATION: Attends education courses as needed to stay abreast of changes and maintain current knowledge in the areas of roadway design, bituminous inspection, construction inspection, and other areas that may be assigned and as required to maintain required certifications.
- E. JOB KNOWLEDGE, SKILLS and ABILITIES:
- Must be detail orientated.
 - Ability to organize and prioritize work.
 - Ability to work with others in a team environment required.
 - Ability to multi-task and remain organized.
 - Ability to process a large volume of work quickly and accurately.
 - Ability to work independently and efficiently.
 - Ability to read and interpret documents such as safety rules, operating and maintenance instructions, and procedure manuals, while able to perform intermediate troubleshooting or analysis of problems;
 - Ability to communicate effectively to work team, with occasional incidental public interaction;
 - Ability to add, subtract, multiply, and divide in all units of measure, using whole numbers, common fractions, and decimals;
 - Ability to respond to emergency events that include severe weather, storms, flooding and blocked roads;
 - Ability to compute rate, ratio, and percent and to draw and interpret bar graphs;
 - Ability to deal with problems involving several concrete variables in standardized situations;
 - Ability to follow instructions;
 - Ability to establish and maintain strong working relationships with others.

- F. EMPLOYMENT VARIABLES: Workweek consists of 5 8-hour days in winter and 4 10-hour days in summer. Requires working overtime as assigned and being on call when needed.
- G. PROFESSIONAL AFFILIATIONS: None required.
- H. JOB RELATIONSHIPS: This position reports to the County Engineer and provides work direction to lower level technicians and seasonal help as needed.
- I. EQUIPMENT, TOOLS or MACHINERY:
- Knowledge of general office equipment including, but not limited to; copier, fax, postage machine, telephones, computers, calculator and printer.
 - Must have a good working knowledge of Microsoft Office Software including Outlook, Excel, Word and Computer aided design & drafting (CADD).
 - Must have the ability to learn how to use new software and technical equipment.
 - Constant: pickup, GPS.
 - Frequently: UTV Ranger, Levels Frequency, Distance meters and testing equipment

PART III – ESSENTIAL FUNCTIONS OF JOB

- Perform surveying duties that include setting control, preliminary surveying, construction staking and to verify accuracy and installation.
- Perform computer-aided designs that shall include laying out proposed horizontal and vertical alignment, existing and proposed cross-section and details required to create a finished plan to State Aid and County standards.
- Perform inspection duties in bituminous and concrete plants, grading, aggregate base, bituminous and concrete.
- Assist in performing bridge inspections on county and township bridges.
- Update and enter new county sign and culvert inventory into GIS programs and maps.
- Perform laboratory testing on samples of materials to ensure compliance with specifications.
- Receive, review, prepare and maintain records and reports: production reports, pay vouchers, lab reports, contractor wage reports, hydraulic reports, bridge plans, daily construction diary, weekly construction reports, daily plant reports and spot check reports.
- Develops plans, profiles, cross-sections, engineer estimates, bid proposals, and engineering specifications.
- Maintains extensive knowledge and skills associated with CADD and civil design software.
- Calculates earthwork volumes and other quantities necessary for bid proposals.
- Calculates drainage structure elevations and other elevations for proper drainage.

In addition to the functions described above, this position may include other responsibilities and duties as assigned on occasion based upon the needs or requirements of Big Stone County.

NOTE: Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions of this position.

PART IV – WORKING ENVIRONMENT

Requires ability to utilize a wide variety of advisory and descriptive data or information, such as regulations, safety policies, personnel policies, SDS sheets, equipment maintenance records, maps, blueprints, plans, and technical operating manuals. Ability to work under uncomfortable conditions where there is occasional exposure to environmental factors such as wind, heat and cold; limited visibility, exposure to moving traffic; or high noise levels.

Travel Requirements: Travel to various county locations is required. Day and Overnight out of town is required for training. Must be able to drive county vehicles for daily work.

Hazardous Exposure Category: Place an “X” in the appropriate category for the role:

_____ Category 1: Involves an inherent potential for contact with blood, body fluids or tissues. Appropriate protective measures are required for every employee engaged in Category 1 tasks.

___X___ Category 2: Involves no exposure to blood, body fluids or tissues in usual work but potential for exposure exists in work environment. Employees performing Category 2 tasks don’t need to wear protective equipment but they should be prepared to put on protective equipment on short notice.

_____ Category 3: Involves no exposure to blood, body fluids or tissues although situations can be hypothesized under which anyone, anywhere, might encounter potential exposure to body fluids.

PART V – PHYSICAL / MENTAL REQUIREMENTS

Lifting Requirements: Place an “X” in the appropriate level for the job.

1. ___ Sedentary Work: Exerting up to 10 pounds of force occasionally and/or a negligible amount of force frequently to lift, carry, push, pull or otherwise move objects, including the human body. Sedentary work involves sitting most of the time, but may involve walking or standing for brief periods of time. Roles are sedentary if walking and standing are required only occasionally and all other sedentary criteria are met.
2. ___ Light Work: Exerting up to 20 pounds of force occasionally, and/or to 10 pounds of force frequently, and/or a negligible amount of force constantly to move objects. Physical demand requirements are in excess of those for sedentary work.
3. ___X___ Medium Work: Exerting 20 to 50 pounds of force occasionally, and/or 10 to 25 pounds of force frequently, and/or greater than negligible up to 10 pounds of force constantly to move objects. Physical demand requirements are in excess of those for light work.
4. ___ Heavy Work: Exerting 50 to 100 pounds of force occasionally, and/or 25 to 50 pounds of force constantly to move objects. Physical demand requirements are in excess of those for medium work.
5. ___ Very Heavy Work: Exerting in excess of 100 pounds of force occasionally, and/or in excess of 50 pounds of force frequently, and/or in excess of 20 pounds of force constantly to move objects. Physical demand requirements are in excess of those for heavy work.

Frequency: Place an “X” in each box that is appropriate to the job. Follow other instructions as written.

NEVER (N)		OCCASIONALLY (O)				FREQUENTLY (F)		CONSTANTLY (C)			
0% or Never on Shift		1-33% of Shift				34-66% of Shift		67 -100% of Shift			
Physical		N	O	F	C	Physical		N	O	F	C
What is moved: +20- 50 lbs. weight and distance			X			Grasping				X	
Shop equipment, tools, tool boxes, fence posts, road signs, sand bags, surveying and testing equipment, etc.			X			Twisting				X	
Describe movement: lift, push, pull						Repeat Motion				X	
lower, carry, reach above				X		Driving Automotive Equipment				X	
Standing				X		Fingering/Handling					X
Walking				X		Feeling					X
Sitting				X		Visual Acuity: near					X
Bending/Stooping				X		Visual Acuity: far					X
Kneeling/Duration			X			Depth Perception					X
Squatting			X			Color Discrimination				X	
Climbing/Height			X			Peripheral Vision					X
Balancing			X			Talking					X

Crawling/Distance		X			Hearing				X
Reaching above shoulder			X		Running		X		
Reaching at or below shoulder			X		Other				
Physical Surroundings	N	O	F	C	Environmental Conditions	N	O	F	C
Cold (50 degrees F or less)		X			Chemicals		X		
Heat (90 degrees F or more)		X			Gases and Fumes		X		
Dampness		X			Dust		X		
Inside Work			X		Radiation	X			
Outside Work			X		Other:				
Unprotected Heights	X				Vibration		X		
Around Moving Machinery		X			Extreme Noise		X		

Mental Requirements: Place an “X” by all descriptions that apply to this job.

1. X Exposed to stressful situations. Explanation: Demanding customers, visitors, constituents and timelines.
2. X Must be able to concentrate on work tasks amidst distraction. Explanation: Distractions from telephone, customers and co-workers.
3. X Must exert self-control. Explanation: Customers and co-workers may be difficult to deal with. There is an expectation of providing good customer service in difficult situations.

I have read the job description and its attachments and understand the responsibilities.

Employee Signature

Date