

MANISTEE COUNTY ROAD COMMISSION JOB DESCRIPTION

TITLE: Engineering Technician

POSITION SUMMARY:

Under the general direction and supervision of the Manager, the Engineering Technician is responsible for a variety of technical engineering and construction inspection tasks and duties for the Road Commission. Acts as a project inspector for locally-funded projects and assists Consultants with the inspection of federal, state, and other funded projects. Performs basic design engineering and plan preparation for locally-funded projects and other projects as directed by the Manager.

EXAMPLES OF DUTIES:

Typical duties performed by the Engineering Technician are as follows:

1. Have the knowledge and skills to perform basic survey tasks using a transit, level, vehicle mounted distance measuring instrument (DMI), and tape measures. Also perform construction stakeout for locally-funded projects.
2. Perform field survey work to obtain necessary data to prepare cost estimates for locally-funded projects such as road resurfacing, road preservation (wedging and paving and chip sealing and fog sealing, and other treatments), road re-graveling, culvert replacements and installations, and miscellaneous projects.
3. Compute quantities and prepare cost estimates for locally-funded projects.
4. Perform Preliminary Engineering (PE) work consisting of the preparation of plans and specifications, estimates, bid documents, and bid tabulations for locally-funded projects.
Note: Consultants are also used for some of this work depending on the number of projects and Road Commission staff workload
5. Prepare bid documents and bid tabulations for other various items such as gravel production, annual materials and services, and other materials and services.
6. Perform Construction Engineering (CE) work consisting of construction inspection and documentation of locally-funded projects and work performed by Contractors or the Road Commission forces as determined by the Manager. Required to oversee and assure quality of the work in accordance with the plans, proposals, and specifications by making appropriate field inspections, measurements, and close observations; and recording and reporting the information obtained in a timely manner. Maintains documentation, including the preparation of inspector daily reports, documentation of measurements and quantities and other engineering related reports.

Note: Consultants are also used for some of this work depending on the number of projects, Road Commission staff workload, project funding, and certification requirements.

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7. Prepare preliminary cost estimates and Road Data Sheets that are required for future road projects administered thru the Rural Task Force (RTF) and Small Urban Programs (SUP).
8. Coordinate with Consultants that are hired by the Road Commission to perform PE and CE work on locally-funded and/or state and/or federally funded projects.
9. Perform Quality Assurance/Quality Control (QA/QC) reviews of PE work performed by Consultant's for various road and bridge and other projects at various stages and coordinate with the Consultants.
10. Attend various meetings such as project meetings during the PE phases and construction phases, preconstruction meetings, RTF Meetings including associated Local Meetings, SUP Meetings, and other meetings as needed.
11. Reviews permit applications and process permits for utilities, commercial driveways, special permits, and other permits as required.
12. Perform Pavement Surface Evaluation and Rating (PASER) condition rating of paved roads and to receive training as needed to maintain the PASER certifications and to have the ability to generate the required reports, maps, and other documents.
13. Be trained and utilize RoadSoft software and other computer software for road condition ratings, culvert inventories, traffic signing inventories and other inventories beneficial to the County Road and Bridge system.
14. Prepare recommended long range plans including recommended road treatments and approximate construction cost estimates.
15. Prepare and maintain Transportation Asset Management Plans (TAMP) for the County Road and Bridge System.
16. Coordinate annual and biennial bridge inspections and other bridge related work with Consultant's and review and implement the Consultant's recommendations for bridge maintenance and repair work with Road Commission supervisory staff and/or Contractors.
17. Prepare and/or assist with the preparation of state and/or federal grant and funding applications such as Safety Grants, Economic Development Category F Grants, and other grants that are available and pertinent to the County Road and Bridge System.
18. Assist Sign Person by providing guidance for placement of temporary construction signing and traffic control devices, preparation and layout of traffic detour plans, and permanent traffic signing replacements and new installations.

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19. Prepare and/or assist in the preparation and submittal of state and/or federal Bridge Funding Applications for structures 20' long or greater on an annual basis. This will include site reviews with minor survey work as needed, preparation of preliminary quantities and estimates, filling out funding applications, and coordination with Consultant's when they are needed to assist with the estimates, scope of work, and applications.
20. Prepare and submit Annual Act-51 Road Mileage Certification documents to the Michigan Department of Transportation (MDOT) after the documents are approved by the Board of County Road Commissioners. This task also typically includes minor updates to the Act-51 Certification Maps in CAD and preparation of other documents and letters for the submittal.
21. Prepare and submit maps and other documents to the Pavement Marking Contractors for the annual County-wide permanent pavement markings for County paved roads and for locally-funded road projects.
22. Completes traffic counts, including field setup, monitoring, and retrieval of traffic counters, data retrieval, recording, and report generation. Also repair and maintain the equipment.
23. Perform physical salt and sand inventories and calculations and assist with the ordering of County salt and State salt.
24. Perform data entry work for proposed and completed road projects on an annual basis for the Transportation Asset Management Council (TAMC) Investment Reporting Tool (IRT). This requires the entry of detailed project information and final costs.
25. Assist the Manager and other staff with various other duties, as directed on an as-needed basis.
26. Assist Manager, Office Manager, and other staff with the annual budget preparation by providing estimated or final costs for completed, on-going, and future projects and for other items as needed.
27. May be required to attend classes, seminars, and conferences for additional education and training and/or maintenance of current certifications.

The above duties are intended to describe the general nature and level of work being performed by employees assigned to this classification. They are not to be construed as an exhaustive list of all duties and responsibilities which might be assigned to personnel so classified.

The Road Commission realizes that a certain level of training will be required for the Engineering Technician to perform some of these duties depending on their prior work experience.

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ESSENTIAL JOB ELEMENTS AND PHYSICAL DEMANDS (ADA):

- Physical Mobility - Ability to walk extended distances and climb stairs or ramps to access Commission and other work related locations and facilities.
- Vision and Sight - Ability to read instructions, directions, and similar written information in letters, memoranda, forms and other documents.
- Hearing/Speaking - Ability to converse orally with standard telephones and radios to receive and communicate information to employees and the public.
- Agility/Movement - Ability to lift, push, pull, and manipulate tools, equipment, supplies, and other objects, often weighing upwards to 80 pounds.

DESIRABLE QUALIFICATIONS:

Possess a high school diploma or GED supplemented with an Associates degree in Civil Engineering Technology or Construction Engineering Technology or have at least three (3) years of related engineering or construction work experience comparable to the duties associated with this Engineering Technician position.

Experience with road commissions or department of public works is preferred.

Must be proficient with using Microsoft Word, Excel, and Adobe Acrobat computer software and have the ability to perform various functions with a computer and the ability to operate a wide variety of office equipment including calculators, copy machines, and FAX machines.

Experience with Computer Aided Drafting (CAD) and/or Computer Aided Drafting and Design (CADD) software is also beneficial.

Must have the ability to prepare and maintain accurate records, correspondence, and reports.

Must have the ability to communicate tactfully and effectively on both written and verbal levels with the public, contractors, other employees, road commissioners, and other officials.

Must have the ability to work extended hours on occasion especially when performing construction inspection work with Contractors.

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SPECIAL REQUIREMENTS:

Must have and maintain a valid Michigan Drivers License.

NOTE:

The above job description has been developed based on the guidelines defined by the Americans with Disabilities Act (1990).

Date: August 3, 2023

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