

**State of Michigan
Civil Service Commission**
Capitol Commons Center, P.O. Box 30002
Lansing, MI 48909

Position Code

1.

POSITION DESCRIPTION

This position description serves as the official classification document of record for this position. Please complete the information as accurately as you can as the position description is used to determine the proper classification of the position.

2. Employee's Name (Last, First, M.I.)	8. Department/Agency TRANSPORTATION CENTRAL OFFICE
3. Employee Identification Number	9. Bureau (Institution, Board, or Commission) Highways
4. Civil Service Position Code Description TRANSPORTATION ENGINEER-A	10. Division North Region
5. Working Title (What the agency calls the position) Transportation Engineer 12	11. Section Development
6. Name and Position Code Description of Direct Supervisor MONROE, KATHERINE L; ENGINEER MANAGER LICENSED-3	12. Unit Region Design
7. Name and Position Code Description of Second Level Supervisor MCCAW, DAVID W; ENGINEER MANAGER LICENSED-4	13. Work Location (City and Address)/Hours of Work Traverse City or North Region Gaylord Office / 7:00a - 4:30p M-F (may vary at mgmt discretion)

14. General Summary of Function/Purpose of Position

This position functions as a senior worker responsible for the daily coordination of work for assigned projects within the North Region Design Squad and works closely with the Region Design Unit Leader to prepare the design of the most complex and unusual design projects in the Region. The position prepares proposal material, final plan packages for letting, authors special provisions, reviews project related documents, and performs quality assurance on plans designed in the region. This position is also responsible for calculating and reviewing quantities, providing drafting quality assurance to the Region and Transportation Service Centers (TSC's), and supporting compliance with established methods and procedures. This position requires possession of a valid driver's license to perform field visits.

15. Please describe the assigned duties, percent of time spent performing each duty, and what is done to complete each duty.

List the duties from most important to least important. The total percentage of all duties performed must equal 100 percent.

Duty 1

General Summary:

Percentage: 60

Working at the advanced level in the Region Design Unit, prepares complex engineering construction plan and proposal packages for highway projects (e.g. all portions of a reconstruct project such as storm sewers, major earthwork, alignment relocation, or road construction as well as resurfacing projects) for the North Region. Coordinate with other work groups in the Region TSC's, and Lansing Central Office to complete project tasks to meet milestones. This duty requires possession of a valid driver's license to perform field visits.

Individual tasks related to the duty:

- Assists the Region Design Unit Leader by scheduling assignments and overseeing the work of other engineers and technicians in the Region Design Squad.
- Designs and prepares plans and analyzes contract documents in order to develop contract proposals, including special provisions.
- Performs the most complex and unusual designs.
- Provides designs and analysis to incorporate into plan documents. Uses technical resources (e.g., American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets, geometric design guide, standard plans, road design manual) to design and coordinate changes. Problem solves requests from the Project Engineer when the plans do not fit the existing environment. Coordinates changes to the project design with the project manager and design team and implement necessary changes to the plans.
- Prepares preliminary and final Right-of-Way (ROW) plans.
- Participates in real estate meetings and makes adjustments to fit site conditions and property owner needs.
- Prepares detailed cost estimates and review design alternatives to maintain project budgets.
- Conducts design and scoping field visits and attends project meetings.
- Attends scoping, plan review, and final plan completion meetings and incorporates findings into plans.
- Works with local agencies to address community and stakeholder needs and make recommendations for how to incorporate them into projects.
- Reviews partially completed plans and work assignments of other department staff, local agencies, and consultants for completeness and adherence to current standards, specifications, and methods.
- Assists in keeping records, estimating man hour requirements, setting dates for milestones, and preparing status of plans.
- Advises Region Design Unit Leader on progress to assure compliance with production schedules and keeps them informed of project statuses and issues as they arrive.
- Prepares and oversee production of proposal materials for letting.
- Checks plan submittals at each stage for completeness.
- Checks final plans for accuracy and quality assurance.
- Assists construction personnel with questions related to design plans, answers contractor inquiries, and prepare addenda if necessary.
- Participates in post construction reviews.
- Coordinates project duties and internal reviews with TSC, Region, and Lansing staff to complete projects on schedule.
- Reviews information provided by other work groups for completeness before incorporating into project plans, minimizing project delays.

Duty 2

General Summary:

Percentage: 20

Assists Region Design Unit Leader with attending scoping, base plan, preliminary plan, and final plan completion meetings. Reviews packages for completeness and prepare cost comparisons of alternate road designs. Provides guidance on items not meeting Michigan Department of Transportation (MDOT) standards or policies as a member of the North Region Design Squad.

Individual tasks related to the duty:

- Evaluates the cost comparisons of alternate designs for discussion at scope verifications.
- Verifies scoping estimates for programming.
- Checks for completeness of all plan and proposal packages submitted to the Region for review.
- Documents comments and dialog from all meetings attended and check for follow through.

Duty 3

General Summary:

Percentage: 15

Provide alignment between Region and TSC designs by assisting Region Design Unit Leader with the development of quality assurance methods and procedures to be followed for all projects designed in the North Region.

Performs quality control and quality assurance reviews on engineering products such as design and construction plans and packages.

Individual tasks related to the duty:

- Assists Region Design Unit Leader with the development and implementation of quality control methods and procedures.
- Assists Region Design Unit Leader with quality assurance reviews on all projects designed for the North Region for compliance with Region quality assurance procedures and MDOT drafting standards.
- Maintains communication with other engineers in the department and keep the Region staff informed of changes to policies or procedures.

Duty 4

General Summary:

Percentage: 5

Performs design related work as assigned.

Provide customer service when attending various public meetings and taking customer calls.

Individual tasks related to the duty:

- Receives, resolves, and responds to customer concerns by making decisions as to the resolution of customer claims, complaints, and applications. Oversees, guides, and instructs others in the resolution of customer concerns.
- Creates reports or presentation materials as requested.
- Completes field visits, attends project meetings, and attends public meetings.
- Participate in MDOT programs such as mentoring interns or serving on Statewide or Regional Committees.

16. Describe the types of decisions made independently in this position and tell who or what is affected by those decisions.

Complex technical decisions based on personal judgment and past experiences. Whenever possible, identify, recommend, and implement improvements in the work methods and materials utilized in the position.

17. Describe the types of decisions that require the supervisor's review.

When there is a deviation from an established procedure or when new situations arise which have not been dealt with before. When there is a need for interpretation of Department guidelines, policies, or procedures. When existing policy is unclear. When a decision may be required from the executive level, personnel matters, assistance in mitigating controversies, or revision of a program schedule.

18. What kind of physical effort is used to perform this job? What environmental conditions in this position physically exposed to on the job? Indicate the amount of time and intensity of each activity and condition. Refer to instructions.

Ability to travel statewide. Traversing uneven terrain including moving up and down roadway slopes. Moving up to 25 pounds. Moving in and out of heavy traffic. Climbing under bridges, over water, wading in water, and continually working near heavy traffic. Moving in and around an office setting including remaining in a stationary position at a computer for long periods of time. Occasional overnight travel to training classes and meetings. Attendance at public meetings may be after hours. Position may require availability outside normal working hours based on operational needs.

19. List the names and position code descriptions of each classified employee whom this position immediately supervises or oversees on a full-time, on-going basis.

Additional Subordinates

20. This position's responsibilities for the above-listed employees includes the following (check as many as apply):

- | | |
|---|--|
| <input type="checkbox"/> Complete and sign service ratings. | <input type="checkbox"/> Assign work. |
| <input type="checkbox"/> Provide formal written counseling. | <input type="checkbox"/> Approve work. |
| <input type="checkbox"/> Approve leave requests. | <input type="checkbox"/> Review work. |
| <input type="checkbox"/> Approve time and attendance. | <input type="checkbox"/> Provide guidance on work methods. |
| <input type="checkbox"/> Orally reprimand. | <input type="checkbox"/> Train employees in the work. |

22. Do you agree with the responses for items 1 through 20? If not, which items do you disagree with and why?

Yes.

23. What are the essential functions of this position?

This position functions as a senior worker responsible for the daily coordination of work for assigned projects within the North Region Design Squad and works closely with the Region Design Unit Leader to prepare the design of the most complex and unusual design projects in the Region. This position requires advanced working knowledge of Bentley OpenRoads Designer, Bentley ProjectWise, AASHTOWare Project Preconstruction, along with MDOT engineering design practices, drafting standards, policies and procedures. The position prepares proposal material, final plan packages for letting, authors special provisions, reviews project related documents, and performs quality assurance on plans designed in the region. This position is also responsible for calculating and reviewing quantities, providing drafting quality assurance to the Region and Transportation Service Centers (TSC's), and supporting compliance with established methods and procedures. This position requires possession of a valid driver's license to conduct field visits and perform scoping.

24. Indicate specifically how the position's duties and responsibilities have changed since the position was last reviewed.

25. What is the function of the work area and how does this position fit into that function?

Development of complex road design plans, proposals, and specifications. This includes providing alignment and quality assurance within the Region and to the TSC's as it relates to quality plan production. This position performs advanced level technical work in the areas of engineering plan development, quality assurance, and office work on complex highway projects and associated transportation functions.

26. What are the minimum education and experience qualifications needed to perform the essential functions of this position.

EDUCATION:

Possession of a Bachelor of Science Degree in Engineering.
Possession of a Bachelor of Science Degree in Civil Engineering, preferred.

EXPERIENCE:

Transportation Engineer 12

Three years of professional engineering experience involved in transportation systems and programs equivalent to a Transportation Engineer, including one year equivalent to a Transportation Engineer 11.

KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of:

- Engineering practices and principles
- MDOT design practices, drafting standards, policies and procedures
- Computer-aided drafting and design (CADD) software (e.g. Bentley OpenRoads Designer, Bentley ProjectWise, AASHTOWare Project Preconstruction, etc.)
- The development process for projects
- Surveying procedures
- Computers and programs used in engineering functions

Ability to:

- Make mathematical computations
- Apply engineering principles to construction and design problems
- Utilize CADD to prepare plans
- Communicate effectively
- Work as a team member
- Make presentations before groups
- Meet with and work effectively with others
- Assign to and oversee the work of others
- Be resourceful and use initiative to carry out assignments while working independently
- Maintain records

- Prepare reports and correspondence related to ongoing work

**CERTIFICATES, LICENSES,
REGISTRATIONS:**

Possession of a valid driver's license is required.

NOTE: Civil Service approval does not constitute agreement with or acceptance of the desired qualifications of this position.

I certify that the information presented in this position description provides a complete and accurate depiction of the duties and responsibilities assigned to this position.

Supervisor

Date

TO BE FILLED OUT BY APPOINTING AUTHORITY

Indicate any exceptions or additions to the statements of employee or supervisors.

I certify that the entries on these pages are accurate and complete.

Appointing Authority

Date

I certify that the information presented in this position description provides a complete and accurate depiction of the duties and responsibilities assigned to this position.

Employee

Date