

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) Highway Operations
4. Civil Service Position Code Description TRANSPORTATION ENG LIC SPL 2	10. Division Grand Region
5. Working Title (What the agency calls the position) Region Senior Soils Engineer	11. Section Operations
6. Name and Position Code Description of Direct Supervisor VAN NORWICK, CHRISTOPHER A; ENGINEER MANAGER LICENSED-3	12. Unit Operations
7. Name and Position Code Description of Second Level Supervisor TELLIER, THOMAS; ENGINEER MANAGER LICENSED-4	13. Work Location (City and Address)/Hours of Work 1420 Front Ave. NW, Grand Rapids MI 49504 / 7:30 a.m. - 4:30 p.m. M-F Hours may vary

14. General Summary of Function/Purpose of Position

This position functions as the Region Senior Soils Engineer Specialist providing expertise on the most complex geotechnical challenges such as extremely poor soils, slope or global stability issues, deep foundations with poor soils, failing retaining walls, and perched groundwater within the Grand Region. With support from the Lansing Geotechnical Unit, this licensed Professional Engineer position is responsible for the design and review of pavement structures, foundations, Mechanical Stabilized Earth Walls and reinforced soil slopes, cofferdams, sheet piling with and without bracing, global stability, and settlement. It also provides general soils engineer duties for the various Transportation Service Centers (TSCs) in the Grand Region; providing design, construction, operations and permits recommendations related to pavement systems, geotechnical issues, and soil erosion and sedimentation control (SESC). This position develops and manages consultant contracts for soils investigation assistance, and is responsible for critical soils and materials recommendations to support the Life Cycle Cost Analysis (LCCA).

This position requires possession of a valid driver's license to gather information, collect samples, review plans and provide recommendations.

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: 50

Provide geotechnical and pavement engineering service for the scoping and development of projects in area of coverage. Provide review of the most complex geotechnical designs Regionwide (including, but not limited to, extremely poor soils, slope or global stability issues, deep foundations with poor soils, failing retaining walls, perched groundwater, etc.

This duty requires possession of a valid driver's license to gather information and collect samples.

Individual tasks related to the duty:

- Review and provide support in the preparation of detailed plans and specifications. Provide recommendations and calculations relative to site specific soil/pavement conditions and materials which conform to geotechnical and/or pavement engineering principles and practices.
- Provide pavement design cross section recommendations for reconstruction, widening, and rehabilitation of pavements, as well as temporary pavement designs for maintaining traffic.
- Provide recommendations for spread footing, drilled shaft foundation, slope stability, and other geotechnical issues.
- Plan, direct, and analyze data from pavement and geotechnical investigations performed by Michigan Department of Transportation (MDOT) and consultant forces.
- Participate in soil borings, pavement coring, Dynamic Cone Penetrometer testing, Falling Weight Deflectometer, soil and aggregate sampling, pavement management surveys, peat delineation/muck soundings and other geotechnical investigations as required.
- Develop design plan quantities to provide treatment of unsuitable subsurface conditions for roadways, bridge foundations, and other highway features/facilities (e.g. subgrade undercutting, use of geosynthetics/underdrain, swamp treatment, peat excavation, dewatering, etc.).
- Evaluate proposed construction activity for potential soil erosion and runoff; recommend preventative measures, quantities and locations as required.
- Participate in design project meetings to perform in-depth review of proposed plans and/or project site conditions with the design engineer and other region, governmental agency and/or consultant representatives.

Duty 2

General Summary:

Percentage: 30

Investigate construction sites to evaluate adequacy of pavement and geotechnical designs and provide corrective recommendations where needed for area of coverage. Function as Region level resource for geotechnical issues encountered during construction and mobilize appropriate resources if needed to resolve problem.

This duty requires possession of a valid driver's license to gather information and collect samples.

Individual tasks related to the duty:

- Conduct pavement subgrade inspections to identify frost susceptible materials, unstable subgrade conditions and high ground water and seepage areas and recommend corrective treatment.
- Conduct soil foundation inspections to evaluate the adequacy of design.
- Conduct investigations for spread footings, drilled shafts for bridges, culverts, freeway signs, strain poles, tower lighting, and other foundations.
- Investigate and prepare recommendations on global stability, erosion, and density issues during the construction of highway embankments or excavations.
- Field review construction sites to evaluate safe angle of repose for slopes or necessary sheeting and shoring on excavations for safety in accordance with Michigan Occupational Safety and Health Administration (MIOSHA) regulations. Review contractor submitted temporary sheeting designs for adequacy.
- Conduct site inspections to review and recommend adequate soil and erosion measures on construction projects.
- Attend project meetings on an as needed basis to evaluate and recommend geotechnical solutions for soil-related construction issues.
- Perform project level and Regionwide review of proposed geotechnical components such as temporary earth retention for part-width construction, bridge cofferdams, foundation interactions, etc.

Duty 3

General Summary:

Percentage: 10

Provide geotechnical and construction recommendations related to Operations/Maintenance and Permits as requested for area of coverage.

Individual tasks related to the duty:

- Review permit applications regarding utilities, pavements, drainage structures and other facilities for acceptable geotechnical engineering, construction practices, and conformance to MDOT standards. Make recommendations for modification to permits to meet acceptable practices and standards.
- Respond to requests by maintenance engineers and make recommendations for the treatment of pavement distress areas, frost heaves, settlements, drainage issues, erosion and sedimentation issues, slope failures, or any miscellaneous maintenance issues. When necessary, organize investigations into the cause and extent of the issues listed above. Make recommendations for the use of special materials incorporated in maintenance improvement projects.
- Provide Region level resource duties as requested by Unit leader or other engineers within area. Provide recommendations for permit reviews or maintenance/operations requests which deal with complex geotechnical issues.
- Monitor retaining walls as needed and report areas of concern to the Geotechnical Supervisor.
- Work with Lansing Bridge Field Services as the Grand Region contact for the inspection of existing earth retaining structures.

Duty 4

General Summary:

Percentage: 10

Other duties as assigned.

Individual tasks related to the duty:

- As assigned by the supervisor, perform the duties described in this position description in other areas outside the assigned geographical area.
- Provide Quality Assurance/Quality Control (QA/QC) for work products of others within the unit.
- Assist local governmental units in evaluating and solving soil engineering related issues when requested.
- Provide technical assistance to others in the unit on the usage of geotechnical software including but not limited to LPILE, SupportIT, Stable, and RESSA.
- Develop and manage consultant contract for soils investigation assistance. Outline and review conformance with MDOT policy and procedures with private consultants under contract to perform geotechnical investigations.
- Assist Lansing Construction & Technology personnel in compiling Regionwide geotechnical or material performance data.
- Serve on MDOT research panels or work groups as required.
- Make presentations, draft reports, or lead teams and meetings related to ongoing work.
- Whenever possible, identify, recommend and implement improvements in the work methods and materials utilized in the position.
- Assist with staff development and coordinate work tasks with the Grand Region's assistant soils engineer.
- Complete special assignment as directed by the supervisor.

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

Provide geotechnical design recommendations and review of design recommendations by others consulting to MDOT. Recommend various work items and quantities for preliminary plan reviews, directly affecting project costs and construction activities. Provide QA/QC review of draft recommendations by other engineers in the unit, making revisions as necessary to maintain Unit and Statewide consistency. Make on-site geotechnical recommendations to Construction Engineers which may affect construction costs and contractor activities. Approve or recommend modifications to permit requests, which may affect an applicant's project costs or work procedures. All decisions are critical components of the successful construction of a wide variety of permanent highway infrastructure.

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

Any decision that may have a serious impact on project cost, department liability or public safety.

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.

Outdoor work in extreme temperatures and a variety of weather conditions. Ability to work with and around mechanized equipment such as soil boring and pavement coring equipment. Duties performed require remaining in a stationary position for long periods of time; operating computer equipment; telephone usage; ability to transport heavy objects up to 100 pounds. This position is required to traverse various types of terrain and working near heavy traffic. Extended travel with occasional overnight stays may be necessary. This position requires possession of a valid driver's license. 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"/> N | Complete and sign service ratings. | <input type="checkbox"/> N | Assign work. |
| <input type="checkbox"/> N | Provide formal written counseling. | <input type="checkbox"/> N | Approve work. |
| <input type="checkbox"/> N | Approve leave requests. | <input type="checkbox"/> N | Review work. |
| <input type="checkbox"/> N | Approve time and attendance. | <input type="checkbox"/> N | Provide guidance on work methods. |
| <input type="checkbox"/> N | Orally reprimand. | <input type="checkbox"/> N | 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 the Region Senior Soils Engineer providing expertise on the most complex geotechnical challenges such as extremely poor soils, slope or global stability issues, deep foundations with poor soils, failing retaining walls, and perched groundwater within the Grand Region. With support from the Lansing Geotechnical Unit, this licensed Professional Engineer position is responsible for the design and review of pavement structures, foundations, Mechanical Stabilized Earth Walls and reinforced soil slopes, cofferdams, sheet piling with and without bracing, global stability, and settlement. It also provides general soils engineer duties for the various Transportation Service Centers (TSCs) in the Grand Region; providing design, construction, operations and permits recommendations related to pavement systems, geotechnical issues, and soil erosion and sedimentation control (SESC). This position develops and manages consultant contracts for soils investigation assistance, and is responsible for critical soils and materials recommendations to support the Life Cycle Cost Analysis (LCCA).

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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?

The Grand Region Construction unit is a service-oriented unit providing information and direction to Design, Construction, Maintenance and Permits Divisions. The Region Senior Soils Engineer is directly responsible for acquiring and analyzing geotechnical data using engineering principles and specialized software. In addition, they function are responsible for regionwide QA/QC review of complex soils engineering recommendations, peer reviewer and trainer for the Assistant Soils Engineer, and lead worker for implementation of the specialty software required for geotechnical engineering design.

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.

Bachelor of Civil Engineering or Geotechnical Engineering, preferred.

EXPERIENCE:

Transportation Engineering Licensed Specialist 13

Four years of professional experience equivalent to a Transportation Engineer, including two years equivalent to a Transportation Engineer P11 or one year equivalent to a Transportation Engineer 12 or Transportation Engineer Licensed

12.

KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of:

- construction methods, standards, and specifications for transportation infrastructure projects
- properties of soils, borings, and sampling methods
- soils engineering principles
- experience using applicable geotechnical software

Skill in:

- communicating effectively utilizing various formats
- scheduling field work operations

Ability to:

- meet established deadlines
- function as a lead worker
- work effectively with others
- display tact and diplomacy in difficult situations

CERTIFICATES, LICENSES, REGISTRATIONS:

- Possession of a registered professional engineering license as required by the State of Michigan and must maintain throughout employment in the position.
- Possession of a valid driver's license is required and must maintain throughout employment in the position.

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.

N/A

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

JENNIFER HADDON

3/30/2026

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