

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

Position Code

1. TRNSTCHEB59R

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 TECHNICIAN-E	10. Division Metro Region
5. Working Title (What the agency calls the position) Transportation Technician - Soils	11. Section Construction & Field Services
6. Name and Position Code Description of Direct Supervisor MUELLER, ERIC; ENGINEER MANAGER LICENSED-4	12. Unit Metro Region Materials and Technology (M&T) Lab
7. Name and Position Code Description of Second Level Supervisor GRAZIOLI, MARK J; STATE ADMINISTRATIVE MANAGER-1	13. Work Location (City and Address)/Hours of Work 35414 Mound Road, Sterling Heights, MI, 48310 / M-F 7:30AM - 4:30PM (hours may vary)

14. General Summary of Function/Purpose of Position

This position assists the Senior Technician in the planning, coordinating, and directing of soils investigations within the Metro Region. This position also works in the Materials and Testing (M&T) lab conducting concrete, Hot Mix Asphalt (HMA), aggregate, and soil testing. Monitors and inspects active construction projects; performing geotechnical quality control and acceptance activities, conducts materials quality control and acceptance sampling.

Operate a vehicle or vehicle/trailer combination with a Gross Vehicle Weight Rating (GVWR) of 26,001 pounds or more (e.g., power auger equipment) when performing soil borings and subsurface investigations.

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: 40

Assist the senior transportation technician or independently conduct soil and pavement investigations as necessary for the design, construction, maintenance, and operation of Michigan Department of Transportation (MDOT) transportation facilities.

This duty requires operating a vehicle or vehicle/trailer combination with a GVWR of 26,001 pounds or more.

Individual tasks related to the duty:

- Conduct soil surveys using the pedagogical classification system when appropriate, noting soil texture, top-soil and ground water depths.
- Make swamp soundings and prepare soils survey reports delineating limits of organic soils and any other usual soil conditions that influence design.
- Assist or perform in making soil borings and subsurface investigations using drilling rig, power auger, cone penetration testing, hand auger, soil sampler and Dynamic Cone Penetrometers (DCP) device, hand -held penetrometer, Global Positioning System (GPS) unit, survey equipment and other soil and materials testing equipment and devices.
- Classify soils according to the unified system and prepare soil borings description logs.
- Assist with utility contacts through Miss Dig to locate underground facilities.
- Review preliminary design plans to verify soil boring requirements and identify boring locations and elevations.
- Prepare bituminous and concrete pavement description core logs to assess existing conditions for rehabilitation and design.
- Assist in performing pavement surveys to identify and record types and levels of distress and cracking for the evaluation of the best rehabilitation treatments.
- Assist or perform pavement coring to access subsurface soils.
- Use gINT or other software to document field work and produce the boring logs.

Duty 2

General Summary:

Percentage: 40

Lab testing of concrete, aggregate, hot mix asphalt (HMA) and soils.

This duty requires operating a vehicle or vehicle/trailer combination with a GVWR of 26,001 pounds or more.

Individual tasks related to the duty:

- Document receiving test specimens or samples delivered to the M&T Lab. Test HMA for Materials Density (MD), air voids, Asphalt Content (AC), Maximum Theoretical Density (GMM) and Bulk Specific Gravity (GMB).
- Wet saw top and bottom surfaces of concrete or HMA pavement cores and cylinders as necessary and prepare the sample for testing.
- Measure core or cylinder to determine diameter and height, calculate area.
- Determine the compressive strength of concrete test specimens by operating a compression machine.
- Reduce stone, gravel, sand and soil samples down to testing size using approved quartering, mini stockpile, or splitter methods.
- Perform drying, weighing, washing, and sieving of stone, gravel, sand and soil test samples, record weights and calculate results.
- Prepare final reports using existing Department computer programs.
- Clean up after all tasks using brooms and dust pans. Recycle tested stone, gravel, sand, soil, concrete and HMA using appropriate dump bins.
- Operate power assisted stand behind forklift.
- Operate and drive a one-ton dump truck to local concrete crushing and asphalt plants.

Duty 3

General Summary:

Percentage: 10

Monitor and inspect active construction projects; perform geotechnical quality control and acceptance activities, conduct materials quality control and acceptance sampling.

Individual tasks related to the duty:

- Perform pavement subgrade inspections on projects to identify frost heave materials, unstable soil conditions and high ground water levels, and prepare recommendations for corrective treatment of the project engineer or construction senior inspector.

- Perform foundation inspections to determine allowable bearing capacity of soils supporting bridges, retaining walls and other structures.
- Inspect embankments and cut and fill slopes to determine stability, drainage and erosion problems and make recommendations if necessary for their treatment with bank drains and granular blankets.
- Perform inspection of swamps to be excavated or displaced to assure its proper treatment.
- Inspect pavement bases and subgrade to determine that the material, density and moisture content meets specification requirements.
- Conduct environmental inspection of construction projects for conformance with erosion and sedimentation control practices and make recommendations for corrections or improvements, as necessary.
- Report findings via the appropriate MDOT report forms.

Duty 4

General Summary:

Percentage: 5

Conduct inspections and materials sampling on job sites and at materials suppliers/producers.

Individual tasks related to the duty:

- Perform Independent Assurance Tests (IAT) on construction testers of HMA, concrete and aggregate.
- Review materials documentation for compliance with the specifications.
- Measure wire diameters and thickness on dowel basket assemblies, drainage pipe and structures using a micrometer.
- Measure spacing, lengths and distance on drainage structures dowel baskets and lane ties using a tap measure.
- Lift and position various hand-held hydraulic rams, pumps, and associated fabricated devices in the process of conducting lane tie, temporary barrier cable loop, and expansion and adhesive installed structural anchor pull-out tests.
- Sample aggregate from grade or stockpiles using sampling related tools such as scoops, shovels, and pickaxes to.
- Sample pavement mesh, pipe reinforcement, and small diameter reinforcement steel bars using bolt cutters.
- Sample geotextile fabrics, water proofing fabric, and plastic corrugated edge drainpipe using scissors or a utility knife.
- Sample larger diameter steel reinforcement bar, Polyvinyl Chloride (PVC) pipe, and electrical conduit using hack saws.
- Clean, care for, and properly store tools and equipment after each use.
- Drive vehicle from lab to inspection or job site and back safely.

Duty 5

General Summary:

Percentage: 5

Other duties as assigned.

Individual tasks related to the duty:

- Other duties as assigned.

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

Scheduling of time within the standard work hours of the day to complete assignments based on priority. Decisions on where soil surveys and borings should be conducted. Recommendations for environmental and erosion control. Effected by these decisions are the design, maintenance and construction staff and contractors.

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

Daily work assignments are made by the supervisor to include work priorities and project completion time. The supervisor also coordinates work and resolves conflicts as they occur and provides clarification and direction when an assignment is unclear or involves a policy decision.

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.

Position requires ability to transport heavy objects up to 100lbs. Ability to work in dangerous traffic or construction areas, walk long distances, traverse slopes and rough terrain, climb stairs, ramps, or aggregate stockpiles, traverse a watercourse in waders or from a boat and operate power auger equipment in all weather conditions. Exposure to dust and noise and must be able to stand for extended periods of time. Position may require availability outside normal working hours based on operational needs.

This position is required to operate a vehicle or vehicle/trailer combination with a GVWR of 26,001 pounds or more.

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):**

- | | | | |
|---|------------------------------------|---|-----------------------------------|
| N | Complete and sign service ratings. | N | Assign work. |
| N | Provide formal written counseling. | N | Approve work. |
| N | Approve leave requests. | N | Review work. |
| N | Approve time and attendance. | N | Provide guidance on work methods. |
| N | Orally reprimand. | 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 assists the Senior Technician in the planning, coordinating, and directing of soils investigations within the Metro Region. This position also works in the M&T lab conducting concrete, HMA, aggregate, and soil testing. Monitors and inspects active construction projects; performing geotechnical quality control and acceptance activities, conducts materials quality control and acceptance sampling.

Operate a vehicle or vehicle/trailer combination with a GVWR of 26,001 pounds or more (e.g., power auger equipment) when performing soil borings and subsurface investigations.

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?**

Primarily, this unit is responsible for providing geotechnical and pavement recommendations to Design, Construction, Operations/Maintenance, Project Development, Utilities and Permits, and Traffic and Safety. This position assists, performs, and participates in the field work necessary to gather geotechnical data on which to base these recommendations. The work areas primarily perform civil engineering, civil technician, and surveying functions. This position assists in those functions by performing entry level to journeyman level technical work related to inspection, testing, surveying, design of plans and project administration. This position also assists engineers and technicians in traffic, soils, materials and data analysis.

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

Possession of an Associate's degree in concrete technology, civil technology, construction technology, surveying technology, construction management, mathematics, or computer science.

EXPERIENCE:**Transportation Technician 8**

No specific type or amount is required.

Transportation Technician 9

One year of experience equivalent to a Transportation Technician 8.

Transportation Technician E10

Two years of experience equivalent to a Transportation Technician, including one year equivalent to a Transportation Technician 9.

Alternate Education and Experience**Transportation Technician 8 - 12**

Possession of a Bachelor's degree or higher in an Applied Science or Science with 16 semester hours (24 term) credits in job specific or related course work qualifies for the Transportation Technician E10 level.

OR

Completion of 60 semester (90 term) credits including 24 semester (36 term) credits in any combination of course work in the following areas: structures, materials, soils, hydrology, surveying, design, drafting, bituminous, concrete, aggregate, chemistry, physics, geology, environmental science, computer science, highway or traffic technology, construction management, engineering, or mathematics may be substituted for the associate's degree.

OR

Four years of technician level experience consisting of quality control inspections, drafting, materials and testing, surveying, or traffic may be substituted for the Associate's degree.

OR

Current certification in bituminous (hot mix), concrete, density testing, or aggregate gradation and one year of technician level field experience may be substituted for the associate's degree.

OR

Current certification in bituminous (hot mix), concrete, density testing, or aggregate gradation and three years experience equivalent to a Transportation Maintenance Worker 9 may be substituted for the associate's degree.

OR

Current certification in bituminous (hot mix), concrete, density testing, or aggregate gradation and two years experience equivalent to an Engineering Assistant may be substituted for the associate's degree.

OR

Current certification in bituminous (hot mix), concrete, density testing, or aggregate gradation and completion of 16 semester (24 term) credits in any combination of course work in the following areas: structures, materials, soils, hydrology, surveying, design, drafting, bituminous, concrete, aggregate, chemistry, physics, geology, environmental science, computer science, highway or traffic technology, construction management, engineering, or mathematics may be substituted for the Associate's degree.

KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of:

- Soils classifications.
- Material sampling.

Ability to:

- Work independently without direct supervision.
- Communicate effectively.
- Maintain records.
- Direct and work with people.
- Manage multiple assignments and constantly changing priorities.

CERTIFICATES, LICENSES, REGISTRATIONS:

- Possession of a Commercial Learner's Permit (CLP) permit upon appointment to the position. Continuing employment requires possession of a Commercial Driver's License (CDL) Group A with either an N or X endorsement and no air brake restrictions which must be obtained within six months from the date of hire into the position and must maintain throughout employment in the position.
- This position is a Test-Designated Position. The employee is subject to random drug and alcohol testing while employed in this position.
- Possession of the following within 12 months of the date of hire into the position and must maintain throughout employment in the position:
 - Michigan Concrete Technician Level 1 certification.

- Bituminous QC/QA Technician certification.
- Michigan Certified Aggregate Technician certification.
- Nuclear Density Safety Certification.
- Density Technology certification.
- Comprehensive Soil Erosion Sedimentation Control (SESC) certification.

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.

None

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

ASHLEY PARSONS

7/28/2026

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