

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

|                                         |
|-----------------------------------------|
| <b>Position Code</b><br>1. TRALSPL2C57R |
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## 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.

|                                                                                                                           |                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>2. Employee's Name (Last, First, M.I.)</b>                                                                             | <b>8. Department/Agency</b><br>TRANSPORTATION CENTRAL OFFICE                                                                 |
| <b>3. Employee Identification Number</b>                                                                                  | <b>9. Bureau (Institution, Board, or Commission)</b><br>Bureau of Bridges and Structures                                     |
| <b>4. Civil Service Position Code Description</b><br>TRANSPORTATION ENG LIC SPL 2                                         | <b>10. Division</b><br>Structure Project Division                                                                            |
| <b>5. Working Title (What the agency calls the position)</b><br>Fabrication Technical Specialist                          | <b>11. Section</b><br>Structure Construction Section                                                                         |
| <b>6. Name and Position Code Description of Direct Supervisor</b><br>FILCEK, MATTHEW; ENGINEER MANAGER LICENSED-3         | <b>12. Unit</b><br>Structural Fabrication Unit                                                                               |
| <b>7. Name and Position Code Description of Second Level Supervisor</b><br>LIPTAK, RICHARD E; ENGINEER MANAGER LICENSED-4 | <b>13. Work Location (City and Address)/Hours of Work</b><br>8885 Ricks Road Lansing, MI 48917 / M-F, 7:30a to 4p (may vary) |

**14. General Summary of Function/Purpose of Position**

The Bureau of Bridges and Structures (BOBS) Structural Fabrication Unit serves as the statewide fabrication authority responsible for implementing the Michigan Department of Transportation's (MDOT) quality assurance program for fabricated and manufactured bridge, culvert, and highway structural products supplied to MDOT projects. This position serves as the Department's statewide fabrication technical specialist. Fabricated/manufactured bridge, culvert, and highway structural products consist of steel bridge beam/girders; prestressed concrete bridge girders; bridge bearings (mechanical and high-load multi-rotational); bridge expansion joints (modular bridge expansion and finger joints); bridge railings; steel highway structures (cantilever, truss, dynamic message sign, traffic signal mast arm & pole, and bridge mounted signs); spun concrete poles; culverts; noise walls; mechanically stabilized earth wall panels; and precast concrete bridge element systems.

This position provides guidance, performance measurement of assigned tasks, review of fabricator/manufacturer technical documents (e.g., request for information, nonconformance reports, corrective action request, concrete mix design, and welding procedure specification), and review of advanced level contract documents (e.g., prestressed concrete, bridge steel plate girders, bridge bearings, bridge modular expansion joints, and transverse post-tensioned bridge concrete components) to verify compliance with statewide and national industry standards related to fabrication and manufacturing. This position is responsible for creating statewide alignment with the processing and technical reviews for the above-mentioned fabricator/manufacturer technical documents, and MDOT contract documents. This position also acts as a statewide technical reviewer and author for various (unique, previously approved, frequently used, etc.) fabrication related special provisions used for MDOT projects. Additionally, this position is responsible for troubleshooting advanced fabrication issues related to materials, fabrication process, or design.

This position requires possession of a valid driver's license to perform fabrication facility visits and project site reviews.

**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: 55**

Serves as the statewide fabrication technical expert ensuring statewide alignment of bridge and structural products.

This duty requires possession of a valid driver's license to perform fabrication facility visits and project site reviews.

**Individual tasks related to the duty:**

- Provides guidance, performance measurements of assigned tasks, quality control review and direction to MDOT employees, suppliers, and contractors related to bridge and structural products related to fabricator/manufacturer technical documents.
- Reviews fabricator/manufacturer technical documents (e.g., request for information, nonconformance reports, corrective action request). These reviews often include determining if nonconformances can be accepted as is, if the product must be reworked or scrapped and request for information approving contract deviations which requires possession of a professional engineer (PE) license.
- Reviews concrete mix design submittals to verify qualification is compliant with contract requirements. Approves mix designs that meet the contract.
- Reviews welding procedure specification (WPS) submittals to verify compliance with contract requirements. Approves WPSs that meet the contract.
- Reviews standard fabricator/manufacturer repair procedures to verify compliance with MDOT and industry standards. These reviews include determining whether repairs can be performed, which requires possession of a professional engineer (PE) license.
- Reviews, measures, analyzes, interprets, and prepares metrics/reports from the above technical document reviews and takes appropriate actions. Maintains a database for tracking reviews. Ensure decisions made are consistent and aligned with statewide policies and procedures. Metrics are shared throughout the year and used to show trends, potential issues, demonstrate effectiveness of changes, and support continuous improvements.
- Ensure statewide alignment by maintaining expert knowledge base to function as the statewide resource on state and national fabrication best practices for bridge and structural products.
- Utilizes SFU's consultant contracts to provide fabrication technical document reviews as needed to maintain operational services as approved by supervisor.
- Maintains a database for tracking technical document reviews. Logs data from all technical reviews to create metrics for fabrication technical document reviews and document historical records. Metrics is shared throughout the year and used to show trends, potential issues, demonstrate effectiveness of changes, and support continuous improvements.
- Coordinates with other technical review groups, if applicable, when input from outside the Structural Fabrication Unit's fabrication and material expertise is required.

**Duty 2**

**General Summary:**

**Percentage: 35**

Manages and audits contract documents to ensure bridge, culvert, and highway structure design plans and specifications technical content meets MDOT and industry standards. Reviews and ensures contract documents meet MDOT and industry best fabrication practices to improve project quality and minimize project risks. Develops and acts as a technical reviewer of special provisions.

This duty requires possession of a valid driver's license to perform fabrication facility visits and project site reviews.

**Individual tasks related to the duty:**

- Review contract documents at key milestones to ensure the quality of the documents related to fabrication (e.g., materials, constructability, welding, non-destructive testing, coating, concrete placement, etc.) conform to MDOT and industry standards and policies.
- Provide technical assistance, training, and oversight to consultants performing technical document reviews and serve as a liaison between MDOT Consultants and MDOT.
- Monitors, coordinates, performs, and assigns work regarding technical document reviews to be completed in house and by consultant staff based on operational needs and direction provided by the supervisor.
- Provide statewide feedback to Bridge Design, Ancillary Structures, Bridge Standards, and Regions/Transportation Service Centers (TSC) by sharing findings, trends, and other captured data of importance.
- Develop special provisions related to fabrication to promote statewide consistency and ensure quality.
- Perform technical reviews of special provisions.

- Develop and maintain a review log that categorizes findings to provide management with trends and other valuable metrics that support continuous improvements.
- Provide training on an as needed basis to support continuous improvement.
- Communicate project status to MDOT management through project data.

### Duty 3

#### General Summary:

Percentage: 10

Other duties as assigned by the Unit Manager.

#### Individual tasks related to the duty:

- Supports troubleshooting of basic/intermediate and advanced level fabrication issues as needed.
- Participates and presents at annual fabrication quality assurance and fabrication industry workshops and other impromptu meetings.
- Coordinates and hosts annual statewide shop drawing calls to foster statewide shop drawing review alignment.
- Troubleshoot complex fabrication issues that require a PE license by researching MDOT specifications and industry standards. Recommend solutions to the project team.
- Develop and maintain logs and other management metrics that can be reviewed and shared at intervals throughout the year.
- Attend fabrication facility visits and project site visits as required.
- 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.

- Application of statewide fabrication policy, program, standard operating procedures, and guidance documents.
- Scheduling and prioritizing supplier technical document and contract document reviews based on date received, expedited review requests, and other work priorities.
- Respond to supplier technical document questions using project logs, spreadsheets, and industry standards.
- Cases of engineering judgement for acceptance of nonconforming material and/or fabrication procedures that have been previously discussed with supervisor. The individual is expected to interpret, evaluate, and apply acceptance criteria and boundary conditions defined by supervisor.
- Determining overtime required to meet operational needs of the Department.

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

- Deviation from statewide fabrication policy, program, standard operating procedures, and guidance documents.
- Engineering judgement for acceptance of nonconforming material and/or fabrication procedures for cases not previously discussed with supervisor.
- Verifying if a potential conflict of interest exists with the utilization of the Structural Fabrication Unit's consultant contracts.
- Approval of purchases and training.
- Employee leave requests.

### 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.

- Requires some in-state and out-of-state travel. Work schedules and priorities can change, must be able to prioritize the work and keep supervisor informed when commitments are not met.
- Work occurs year around and in all weather conditions.
- Shop work is required in fabrication plants where potentially hazardous conditions are present and in high traffic volumes. Field work can consist of traversing various structures and/or terrain.
- Ability to inspect or investigate various structures and/or sites.
- Ability to move equipment weighing up to 100 pounds.
- Fabricator and contractor work schedules vary.
- Position may require availability outside normal working hours based on operational needs.
- The position is required to visit fabrication facilities (in-state and out-of-state) and project sites which requires travel and office duties performed while at the remote work site using laptop computer and mobile devices.
- This position requires possession of a valid driver's license.

### 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?**

The Bureau of Bridges and Structures (BOBS) Structural Fabrication Unit serves as the statewide fabrication authority responsible for implementing the Michigan Department of Transportation's (MDOT) quality assurance program for fabricated and manufactured bridge, culvert, and highway structural products supplied to MDOT projects. This position serves as the Department's statewide fabrication technical specialist. Fabricated and manufactured bridge, culvert, and highway structural products consist of steel bridge beam/girders; prestressed concrete bridge girders; bridge bearings (mechanical and high-load multi-rotational); bridge expansion joints (modular bridge expansion and finger joints); bridge railings; steel highway structures (cantilever, truss, dynamic message sign, traffic signal mast arm & pole, and bridge mounted signs); spun concrete poles; culverts; noise walls; mechanically stabilized earth wall panels; and precast concrete bridge element systems.

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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 work area is responsible for implementing MDOT's quality assurance program for fabricated/manufactured products that are required to be accepted based on "Fabrication Inspection" per the MDOT Materials Quality Assurance Program manual. This position is responsible for reviewing fabricator and manufacturer technical documents, reviewing contract documents (plans and specifications), and being a technical reviewer of special provisions. The position needs to engage Structural Fabrication Unit team members and consultants that are on contract to the work area while reviewing fabricator technical documents. Additionally, the position will be required to develop metrics related to their duties and share continuous improvement strategies with the supervisor.

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

Possession of a bachelor's degree in a field of engineering.

**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:

- American Society for Testing and Materials (ASTM), American Association of State Highway and Transportation Officials (AASHTO), American Welding Society (AWS), Precast/Prestressed Concrete Institute (PCI), and other industry standards.
- Mathematics for testing calculations.
- Tools and basic maintenance.
- Computers to work extensively with a database for testing and reporting as well as managing sampling and texting logs.
- Structural analysis, design, and contract plan presentation.
- Fabrication inspection and engineering.
- Quality management systems.
- Material specifications and testing.

Ability to:

- Communicate effectively utilizing various communication devices.
- Operate testing equipment.
- Work closely with others in a team environment.

**CERTIFICATES, LICENSES,  
REGISTRATIONS:**

- Possession of the following are required at the time of hire and must maintain throughout employment in the position:
  - Valid driver's license
  - Registered professional engineering license as required by the State of Michigan
- Possession of the following are required within 12 months of the date of hire into the position and must maintain throughout employment:
  - Michigan Concrete Association (MCA) Field Testing Technician Certification
  - American Concrete Institute (ACI) Field Testing Technician-Grade I Certification
  - American Welding Society Destructive Testing training course
  - Precast/Prestressed Concrete Institute (PCI) Level I & II 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.***

KELSEA COLE

\_\_\_\_\_  
Appointing Authority

9/3/2026

\_\_\_\_\_  
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