



**ENGINEERING OPERATIONS COMMITTEE  
MEETING MINUTES  
OCTOBER 23, 2024, 9 A.M. TO 11 A.M.  
MDOT LOBBY CONFERENCE ROOM  
WITH TEAMS OPTION**

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Present:	Rebecca Curtis Garrett Dawe Mark Dionise Jason Gutting	Greg Losch Ryan Mitchell Kristin Schuster Lindsey Renner	Michael Townley Brad Wagner Hal Zweng
Absent:	Gregg Brunner	Dee Parker	Kim Zimmer
Guests:	Art Green Jon Harden Kyle Kopper	Ben Krom James Ranger Dina Tarazi	Carlos Torres Adam Wayne

#### OLD BUSINESS

1. Approval of the August 21, 2024, meeting minutes – Jason Gutting

*ACTION: Approved*

2. Michigan Department of Transportation (MDOT) new materials and products – Lindsey Renner

New Material Monthly Report of Data:

- Number of Submittals Received
- Number of Submittals Accepted
- Number of Submittals Not Accepted
- Qualified Product List Revisions
- New Materials Status Report

*ACTION: For information only*

#### NEW BUSINESS

1. Safety Topic: Safety during an active shooter event – Rebecca Curtis

*ACTION: For information only*

2. Assignment of new Engineering Operations Committee (EOC) region representative – Jason Gutting

The Region Bureau Management Team has approved Bob Ranck as the new region engineer representative to EOC starting in January 2025.

*ACTION: For information only*

3. 2025 EOC meeting schedule and deadlines/proper document formatting for submittals/EOC website – Michael Townley

*ACTION: For information only*

4. EOC membership/charter update to reflect recent organizational changes – Michael Townley

Issue Statement: The membership of the EOC can be updated to reflect recent organizational changes.

Major Issue(s): The current charter lists that Innovative Contracting Committee (ICC) chair as a member of the EOC. A recent reorganization within the office warrants discussion of a change in membership. To maintain a membership in line with the new organization, it is appropriate and consistent with the charter for the Office of Major Projects (OMP) administrator to replace the ICC chair as a voting member of the EOC.

Background/History: Prior to the creation of the OMP, Ryan Mitchell served as a voting member of the EOC in the role of ICC chair, per the EOC charter. The OMP administrator is not referenced in the EOC charter since this position did not previously exist. Since taking the Innovative Contracting Unit (ICU) manager position, James Ranger has served as chair of the ICC and has been briefing Ryan Mitchell on their decisions and pending EOC requests. The ICC chair often presents and coordinates requests to the EOC.

Recommendation(s): Update the EOC charter to replace the ICC chair with the OMP administrator as a voting member of the EOC.

Status: New Submittal

*ACTION: Approved*

5. Guidance for the I-475 design/detail of noise walls project – Kyle Kopper

Issue Statement: There are three bridges included in the middle segment of the I-475 reconstruction project that are currently under design that require the installation of noise walls attached to the bridges. Guidance needs to be provided to the design team for the I-475 project about how MDOT would like these noise walls to be designed and detailed to minimize risk to MDOT.

Major Issue(s): MDOT does not currently have a policy or guidance on the design of noise walls attached to bridges. As a result, the following items are unclear:

- If the noise wall needs to be crash worthy if located within the zone of intrusion
- What test level the noise wall would need to be designed/tested to meet
- What materials can noise walls attached to bridges be constructed using
- What loads need to be considered when designing noise walls attached to bridges
- What types of connections should be used to attach noise walls to bridge railings.
- If noise walls can be attached to existing bridge railings
- If proprietary noise walls would be acceptable

Background/History: Noise walls have been attached to a number of bridges across the state, going as far back as 2000. It is not clear what standards these noise walls were designed to, and it is likely that any standards that these noise walls were designed to have since been updated or replaced. The connection of these noise walls to the bridge railings also varies from site to site.

Earlier this year MDOT published the Michigan Noise Barrier Wall Design Guidelines, which cover the planning and design of noise walls constructed at ground level but does not discuss the attachment of noise walls to bridges.

Recommendation(s): We have a group starting to work through the list of major issues listed above. This includes HNTB, who has been engaged through their ancillary structure contract with Michelle O'Neill. We have also reached out to the members of the North Central States Consortium to understand what other states' standards include. HNTB will also pull together information from other states that they know have existing standards. Once this information is compiled, we will identify areas where additional information or analyses are needed and engage HNTB to help generate the information. All this information will be used to develop a policy and guidelines from when noise walls need to be attached to bridges moving forward.

The timeline for completing this effort, however, will extend beyond the schedule that the I-475 project is currently on. While we will incorporate any findings into the I-475 project, we wanted to have a plan that the design team for the I-475 could move forward with.

We have identified a non-proprietary system from the Texas Department of Transportation (TxDOT) consisting of a single-slope concrete bridge railing (TxDOT's T80SS bridge railing) with a reinforced concrete sound wall attached to the top of the bridge railing. The TxDOT bridge railing-sound wall system was successfully crash tested by the Texas A&M University Transportation Institute using the Manual for Assessing Safety Hardware, TL-5 criteria. However, this system does not have a Federal Highway Administration (FHWA) eligibility letter. TxDOT's T80SS bridge railing has a similar cross-sectional shape and dimensions as MDOT's Type 6 bridge railing. The recommended plan for the I-475 project is to implement a modified version of the TxDOT system utilizing a modified version of MDOT's Type 6 bridge railing in lieu of TxDOT's T80SS bridge railing. The modified bridge railing will have the same cross-sectional dimensions as standard MDOT Type 6 railing, but with a modified steel reinforcement layout in the railing and deck fascia to ensure the railing's structural capacity meets or exceeds the TxDOT design.

Status: New submittal

*ACTION: Approved*

6. Pavement Type Selection: US-2 from County Airport Road to the Michigan/Wisconsin State Line, Iron County – Ben Krom

Issue Statement: Pavement Type Selection

Route/Location: US-2 from County Airport Road to the Michigan/Wisconsin State Line, Iron County

Job Number: 203897

Control Section(s): 36051

Letting Date: 12/5/2025

Total Estimated Construction Cost: \$11.9M

State law and department policy requires that a life cycle cost analysis (LCCA) be used to determine the most cost-effective pavement design.

Major Issue(s): None. The paving industries had no comments on this LCCA.

Background/History: Pavement selection was determined using the procedures outlined in the MDOT Pavement Selection Manual. Department policy requires that the pavement alternate with the lowest Equivalent Uniform Annual Cost (EUAC) be selected. Final pavement selection requires approval by the EOC.

Recommendation(s): Approve the hot mix asphalt (HMA) pavement alternate that has the lowest EUAC.

*ACTION: Approved*

7. Pavement Type Selection: M-37 from 92<sup>nd</sup> Street to 76<sup>th</sup> Street, Kent County – Ben Krom

Issue Statement: Pavement Type Selection

Route/Location: M-37 from 92<sup>nd</sup> Street to 76<sup>th</sup> Street, Kent County

Job Number: 210063

Control Section(s): 41031

Letting Date: 8/1/2025

Total Estimated Construction Cost: \$41.4M

State law and department policy requires that a LCCA be used to determine the most cost-effective pavement design.

Major Issue(s): None. The paving industries had no comments on this LCCA.

Background/History: Pavement selection was determined using the procedures outlined in the MDOT Pavement Selection Manual. Department policy requires that the pavement

alternate with the lowest EUAC be selected. Final pavement selection requires approval by the EOC.

Recommendation(s): Approve the HMA pavement alternate that has the lowest EUAC.

*ACTION: Approved*

8. Alternate Pavement Bidding: I-94 from Burns Street to Barrett Avenue, Wayne County – Ben Krom

Issue Statement: Alternate Pavement Bidding (APB)

Route/Location: I-94 from Burns St to Barrett Ave, Wayne County

Job Number: 202543, 218427

Control Section: 82024, 82025

Letting Date: 12/5/2025

Total Estimated Construction: \$534M

Major Issue(s): Use of Alternate Pavement Bidding (APB) on this I-94 Design-Bid-Build (DBB) project.

Construction Field Services coordinated with the project office and calculated a preliminary life cycle costs analysis on this project and determined that the difference between the pavement options was 12.80%. HMA was the low-cost alternative.

The LCCA was ran following MDOT's user delay cost 'capping' policy, and the transportation service center (TSC) is in support of the current \$91,288/day user delay cost and does not plan to pursue a reduction.

Both pavement alternates are expected to have similar environmental, right of way, drainage, and utility impacts along with similar maintaining traffic concepts. Paving is the controlling operation for the construction schedule.

Background/History: The project appears to meet the criteria for the use of APB.

Recommendation(s): The ICC recommends approval of the use of APB on this DBB project.

*ACTION: Approved*

9. Refinement of updated guidelines for MDOT minimum pavement thickness on non-freeway reconstruction – Justin Schenkel

Issue Statement: Refinement of updated guidelines for MDOT minimum pavement thickness on non-freeway reconstruction.

Major Issue(s): To present, the recommended changes to the MDOT guidance on minimum pavement thickness for new reconstruction on non-freeways, as outlined in the MDOT

Reconstruction Minimum Pavement Thickness Guidelines (9/4/2024) informational document.

Region personnel expressed the need to refine the new minimum thickness guidelines that were previously approved by the EOC on July 21, 2022. As a result, the guidelines have been revised in collaboration with the MDOT Construction Field Services Pavement Management team and region personnel.

The proposed changes were provided to paving industry representatives and given an opportunity to review and provide feedback. None were provided for MDOT consideration.

Background/History: To improve project cost effectiveness, MDOT investigated a reduction to the existing minimum pavement thickness requirements for reconstruction projects on non-freeway roadways. MDOT collected pavement history and performance data for projects that had been constructed at reduced thicknesses. Analysis of these projects showed that their performance has been mostly equivalent to standard reconstruction projects.

As a result, guidelines were proposed to become MDOT's new standard for minimum pavement thickness (for LCCA and non-LCCA projects), which lowered the minimums to 5- and 6-inches (from 6.5- and 8-inches) for asphalt and concrete, respectively for non-freeway reconstruction projects. It should be noted that to ensure the design and lower potential risks, specified project characteristics must be met for the new minimums to apply.

Following the implementation of these guidelines, MDOT region personnel have provided recommendations for further improvement. Consequently, the guidelines are now updated to provide more options for the minimum pavement thickness as per unique location requirements. The revised minimum thickness options allow the HMA top course layer to be paved at 1.5-inches with either 2- or 3-lift applications. The HMA minimum thickness at 5-inches made this difficult to achieve. HMA top course at 1.5-inches matches the top course thickness used for the conventional minimum thickness of 6.5" total thickness, enhancing consistency and constructability.

Specifically, the minimum pavement thickness guidance for non-freeway routes has been updated to the following:

- (A) = HMA: 6.5"  
JPCP: 8" (includes ramps & roundabouts)
- (B) = HMA: 5.5"  
JPCP: 6"
- (C) = HMA: 4.5"  
JPCP: 6"

The applicable minimum pavement thickness option (A), (B), and (C) depends on the project's characteristics, which includes roadway type, average annual daily traffic (all and commercial), vehicle classification distribution, and subgrade type.

Note that freeway minimum pavement thickness would remain as follows:

- HMA – 6.5”
- JPCP – 9”

If the EOC approves this guidance change, all projects that have a let date after 1/1/2025 will be subject to these new guidelines, except if a LCCA is already complete; then these new guidelines are optional. Regions have the option to accept the new minimums for any projects let prior to 1/1/2025.

Also, if the EOC approves, these guidelines and their changes will be formally incorporated into the “Michigan DOT User Guide for Mechanistic-Empirical Pavement Design” and as found to be suitable in other MDOT literature.

Recommendation(s): Recommend approval of the proposed changes to the guidelines for MDOT minimum pavement thickness on non-freeway reconstruction.

*ACTION: Approved*

10. Use of Design-Build-Operate-Maintain (DBOM) for the statewide solicitation of funds to repair or replace non-functioning electric vehicle supply equipment – James Ranger

Issue Statement: Request approval for the use of DBOM for the statewide solicitation of funds to repair or replace non-functioning electric vehicle supply equipment (EVSE) as identified by the FHWA.

Major Issue(s): Procurement and Payment Technique(s) - Competitive, 1-step request for proposals (RFPs) or 2-step (request for qualifications and RFPs), Best Value, DBOM.

Recommendation Summary: A DBOM contracting approach will allow MDOT to utilize federal Electric Vehicle Charger (EVC) Reliability and Accessibility Accelerator (EVC-RAA) funding for statewide solicitation of funds to improve reliability of existing electric vehicle infrastructure (EVI) by repairing and replacing existing chargers that are broken or non-operational. The scope of work includes the design, construction, operations, and maintenance of Level 2 or Direct Current Fast Charging EV chargers that will be repaired or replaced as part of this project. Funded projects to repair existing broken or non-operational chargers must meet the National EVI standards found in 23 CFR 680. Operation and maintenance of the EV charging infrastructure must be provided for a term length of five years following the date when the EV charging station is commissioned.

Identification of Risk

Permits: Depending on the project’s repair or replace components, final plans may be required. Final plans will require submittal to LARA for electrical code review. Permits may be required from the authority having jurisdiction where chargers are sited.

Environmental: Minor impact anticipated.

Utilities: Close coordination with utilities by MDOT, the Department of Environment, Great Lakes, and Energy, the Department of Licensing and Regulatory Affairs (LARA), and contractor teams, will be necessary.

Maintaining Traffic: Little or no maintenance of traffic impact anticipated.

Third Party Involvement: Third parties will include cities, counties, and site hosts. Much of the risk of coordination and communicating with third parties is transferred to the contractor through the DBOM contract.

Right of Way: No impacts are anticipated. All sites will be on private property.

Railroad: No impacts are anticipated.

Other:

- Interagency and partner agency coordination, as well as monitoring/oversight, will be challenging with up to 105 sites across the entire state.
- LARA electrical code review of final plans could take up to 45-60 days to receive approval.
- Industry supply chain issues could impact an expedited construction schedule. Lack of clarity and understanding on the scope of repair/replacement at each site and site host relationship with network providers.

#### Background/History

Region/TSC: Statewide

Control Section: Varies

Job Number(s): 221762

Route: Varies

Project Location: Statewide

Work Description: Statewide solicitation of funds to repair or replace non-functioning EVSE. The scope of work includes the design, construction, operations, and maintenance of EV charging site upgrades as part of this project.

Estimated Construction Cost: \$2,010,000

Funding Type and Fiscal Year (fed/state/local): Federal/private (80/20)

#### Key Dates

RFPs Issue Date: First quarter of 2025

Proposals Due: 60 days after the RFPs

Planned Construction Substantial Completion: 12/31/2026

Budget Period End Date: 6/31/2027

Recommendation(s): The ICC recommends the use of DBOM.

*ACTION: Approved*



11. Waiving the requirement for Tier 3 approvals on change orders after the initial change order increases the contract amount for the Fixed Price Variable Scope (FPVS) Type 3 Contract Modifications – James Ranger

This applies to the Grand Region’s recently awarded I-96 Reconstruct (Bliss Road to Sunfield Highway) FPVS Type 3 JN 125986 and all other FPVS Type 3 jobs that fall under the contract administrative challenge described in the white paper.

Procurement and Payment Technique(s): FPVS

Recommendation Summary: The FPVS white paper includes details and definitions. The Construction Team is proposing that the change order for the I-96 FPVS include language indicating that going forward the value to calculate the percent change that determines tier levels on all future change orders will be the adjusted low bid amount instead of the pre-established programmed contract amount. This language would include justification for the waiver on the requirement for Tier 3 approval for all change orders after the initial change order increasing the contract to the adjusted low bid amount.

If approved, collaboration with the ICU and OMP will continue to clarify the Innovative Contracting Guidelines and associated special provisions for FPVS Type 3 projects. There will also be discussion regarding how these projects are reported to State Transportation Commission, given their unique nature where the awarded contract amount/original contract amount may differ significantly from the pre-established programmed contract amount.

Identification of Risk

Permits: N/A

Environmental: N/A

Utilities: N/A

Maintaining Traffic: N/A

Third Party Involvement: N/A

Right of Way: N/A

Railroad: N/A

Other: N/A

Region/TSC: Various

Control Section: Various

Job Number(s): Various

Route: Statewide

Project Location: Statewide

Work Description: Revise Contract Modification Tier 3 requirements for change orders on FPVS Type 3 jobs after the initial change order increases the contract amount.

Estimated Construction Cost: Various

Funding Type and Fiscal Year (fed/state/local): Various

Key Dates: Various

On FPVS Type 3 Projects, the budget threshold for determining the tier level of contract modifications will be based on the total negotiated cost for the project after variable scope has been added, also known as the Adjusted Low Bid Contract Amount.

*ACTION: Approved*

12. Revisions to the Alternate Pavement Bidding Process document – James Ranger

*ACTION: Tabled*



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Michael Townley, Secretary  
Engineering Operations Committee

RA:lrp

cc: EOC Members	L. Mester (MDOT)	S. Waalkes (MCA)
Meeting Guests	C. Newell (MDOT)	C. Mills (APAM)
Region Engineers (MDOT)	V. Zokvic (MDOT)	D. Needham (MAA)
Assoc. Region Engineers (MDOT)	M. Ackerson-Ware (MRPA)	R. Vandeventer (MITA)
TSC Managers (MDOT)	T. Burch (FHWA)	
L. Doyle (MDOT)	R. Brenke (ACEC)	