



ENGINEERING OPERATIONS COMMITTEE
MEETING MINUTES
JULY 21, 2022, 1:00 P.M. – 2:30 P.M.
VIA TEAMS

Present:	Carol Aldrich Mark Bott Gregg Brunner	Rebecca Curtis Mark Dionise Ryan Mitchell	Kristin Schuster Brad Wieferich Kim Zimmer
Absent:	Jason Gutting Dee Parker	Will Thompson Gorette Yung	Hal Zweng
Guests:	Zack Bratschi Ishrat Jahan Kevin Kennedy	Nathan Miller James Ranger Justin Schenkel	Megan Skelton

OLD BUSINESS

1. Approval of the June 17, 2022, meeting minutes – Brad Wieferich

ACTION: Approved

2. Michigan Department of Transportation (MDOT) new materials and products – Gregg Brunner

A new development sub-committee is being added and setting up guidance.

ACTION: For information only

NEW BUSINESS

1. Safety Topic: USDOT Pocket Guide to Transportation safety stats www.bts.gov/pocketguide
– Carol Aldrich

ACTION: For information only

2. Road Diet: US-12 Coldwater River to Western Avenue – Zack Bratschi

Issue Statement – JN 204322A – US-12 Coldwater River to Western Avenue

Major Issue(s) – Crash analysis for the project area shows that a majority of crashes are rear-end crashes involving vehicles attempting left turns. The 2019 annual average daily traffic of 9,386 does not raise any concerns.

Background/History – US-12 is a three-lane section east of the project location. Converting the four-lane section to three-lanes will provide safety benefits for turning movements in the area while continuing to provide an adequate level of service.

Recommendation(s) – The proposed project meets the requirements of the Road Diet Checklist.

Status – Scheduled for 9/22 letting.

ACTION: For information only

3. Update/republishing of Chapter 9 of the Road Design Manual, Utilities – Nathan Miller

Issue Statement – Update/republishing of Chapter 9 of the Road Design Manual (RDM), “Utilities.”

Major Issue(s) – Update of Chapter 9 is necessary to accommodate regulations from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) prohibiting partial replacements of water services containing lead (Pb) or galvanized steel that were once connected to lead (Pb) service lines.

Background/History – Based on regulations from the EGLE, partial replacements of water services containing lead (Pb) or galvanized steel that were once connected to lead (Pb) service lines are prohibited. Partial replacements are defined as any water service replacement that does not replace the entirety of the service line from the water main to the water meter before reintroducing water to that service. Impacted service lines must include replacement with proper materials outside the right of way, including from the curb stop into the building (or end user, where no building exists) being served. Coordination will be required with the local municipalities, their contractors, and/or the department’s Real Estate Services Section, as appropriate.

Significant portions of Chapter 9 were rewritten to comply with the EGLE regulations governing lead service lines. In addition, staff took this opportunity to streamline other areas within Chapter 9 that were not reflective of current practices, were repetitive, or conflicted with other areas in the Road Design Manual.

Due to the number of changes, both significant and clerical, that were made, the draft was submitted to the following areas for review and comments:

- Design Standards
- Statewide Design Alignment Team
- Project Manager Community of Learning
- Federal Highway Administration
- System Managers

The Word document submitted for review by the Engineering Operations Committee (EOC) is the most current version and reflects the changes that have been proposed by all the stakeholder groups. Due to the quantity of changes that had occurred, only clerical entries

had the track changes feature utilized and other sections are simply highlighted if they were essentially rewritten in their entirety.

Recommendation(s) – Approve the changes in Chapter 9 of the RDM and authorize for publishing.

ACTION: Approved

4. Revisions to Michigan Test Method 103, 104, and 123 – Kevin Kennedy

Issue Statement – Request approval of revisions to Michigan Test Method (MTM) 103 (DETERMINATION OF INSOLUBLE RESIDUE IN CARBONATE AGGREGATES), MTM 104 (PETROGRAPHIC ANALYSIS OF AGGREGATES), and MTM 123 (FIELD DETERMINATION OF THE BULK DENSITY (LOOSE MEASURE) OF COARSE AGGREGATES).

Major Issue(s):

MTM 103 - No change to procedures. Corrected typos from previous file conversions and updated worksheets.

MTM 104 - Updated test references. This test is only completed at Construction Field Services (CFS).

MTM 123 - Updated format and added language to clarify procedures.

Background/History – All MTMs were reviewed by CFS, the regions, industry (Michigan Aggregate Association), and the Federal Highway Administration.

Recommendation(s) – Approve revisions to MTM 103, MTM 104, and MTM 123.

Status – New Submittal

ACTION: Approved

5. Updated guidelines for MDOT minimum pavement thickness on non-freeway reconstruction – Justin Schenkel

Issue Statement – Updated guidelines for MDOT minimum pavement thickness on non-freeway reconstruction.

Major Issue(s) – To present new MDOT guidance for minimum pavement thickness for new reconstruction on non-freeways. Recommended changes and the attached summary of guidance changes were reviewed and approved by the MDOT Pavement Management team and region personnel. The Michigan Concrete Association and the Asphalt Pavement Association of Michigan were involved in the development of the proposed changes and drafting the attached summary. Subsequently, the industry groups reviewed and provided comments for MDOT consideration.

Background/History – To improve project cost effectiveness, MDOT and some of its Region offices have expressed interest in lowering MDOT’s minimum pavement thickness requirement for reconstruction projects. Currently, for reconstruction projects, MDOT requires a minimum pavement thickness of 6.5-inches for asphalt and 8- or 9-inches for concrete if non-freeway or freeway, respectively. MDOT has pavement history and performance data for 23 asphalt and three concrete jobs that were constructed at thicknesses less than the current MDOT minimums. Notably, two of the concrete jobs are pavement demonstration projects, constructed in 2005 and 2006. Analysis of the 26 projects (i.e., “thin” designs) shows that their performance is equivalent to the current list of corresponding reconstruction projects (i.e., “standard” designs). As a result, the attached guidelines are proposed to become MDOT’s new standard for minimum pavement thickness (for life cycle cost analysis (LCCA) and non-LCCA projects), lowering the minimums to 5- and 6-inches for asphalt and concrete, respectively for non-freeway reconstruction projects (as per the requirements outlined in the attachment). If the EOC approves this guidance change, all projects that have a let date after 1/1/2023 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 1/1/2023.

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

ACTION: Approved

6. Use of Design-Build and Fixed Price Variable Scope (type 2) for standby generators and ancillary infrastructures for pump stations statewide – James Ranger and Ishrat Jahan

Subject/Issue – Request the use of Design-Build (DB) delivery for up to three letting packages to design and install permanent standby generators and associated ancillary infrastructure to improve reliability at pump stations statewide for up to 148 pump stations.

Request the use of fixed price variable scope (type 2) procurement for one or more letting packages associated with this project to deliver the maximum number of stations based on the fixed budget available for the project.

Major Issue(s) – To capture private sector innovation, expertise and efficiency, the project team is recommending a DB delivery model to deliver a reliable backup power solution for pump stations, statewide. The projects will utilize lessons learned from the current Phase 1 procurement that is in progress, and lessons learned from earlier packages will be applied to subsequent DB contracts. A separate contractor will be responsible for operations and maintenance (O&M), utilizing an existing Department of Technology, Management, and Budget (DTMB) contract.

A one-step procurement is recommended, which would eliminate the need for a request for quote (RFQ) and shortlisting. Existing MDOT pre-qualifications in the request for proposal (RFP) are adequate to qualify proposers without the need for additional qualifications or experience. Eliminating the RFQ step will allow the project team to focus on development and issuance of the RFP to meet the schedule. This process is being utilized on Phase 1 of the project, and lessons learned will be incorporated into Phase 2.

It is anticipated that a limited number of pump station generators may be installed with the established budget. Fixed Price Variable Scope (FPVS) is intended to maximize the amount of work within the established budget.

Background/History – The project is expected to be split into up to three packages for delivery. Packages will be determined based on priority (see attachment) and the feasibility of completing the work as early as possible. The packaging will consider the Development phase-level risk assessment to determine the anticipated duration of procurement and delivery timeframes. An example of the packaging is as follows:

- Package 1 – Priority 1 and 2 locations with shortest procurement and delivery timeframes.
- Package 2 – Priority 2, 3, and 4 locations with longer procurement and delivery timeframes.
- Package 3 – Remaining locations with longest procurement and delivery timeframes.

Estimated Construction Cost: \$54.7M

Funding Type and Fiscal Year (Fed/state/local): Fed/State Funding 2023

Key Dates:

- Package 1
 - o Substantial completion prior to June 2024
 - o RFP in November 2022
 - o Letting in January 2023
 - o Award in February 2023
- Package 2
 - o RFP, Letting, and Award dates will be determined based upon development-phase risk assessment
 - o Substantial completion prior June 2025
- Package 3
 - o RFP, Letting, and Award dates will be determined based upon development-phase risk assessment
 - o Substantial completion prior to June 2026
- Final acceptance of all packages and all payments must be complete prior to December 31, 2026

Pump stations will be assigned to Design-Build packages based upon a development phase-level risk assessment. Packages will consist of pump stations with similar risk profile and priority level, and project schedules will consider the time necessary to address each major risk identified. For example, pump stations with longer development timeframes needed to address risks will be included in a later package.

Industry supply chain issues are expected to continue to impact completion dates and will be addressed in the procurement and implementation schedules.

Standby generators require scheduled preventative maintenance (PM). A best practice for generator PM is periodically “exercising” them by operating them under load. The responsibility for the generator PM after the contract is over will be included in the DTMB O&M contract.

Recommendation(s) – The Innovative Contracting Committee recommends approval to use Design-Build delivery and fixed price variable scope procurement.

ACTION: Approved

Carol Aldrich. Secretary
Engineering Operations Committee

RA:lr

cc: EOC Members	C. Libiran (MDOT)	D. DeGraaf (MCA)
Meeting Guests	L. Mester (MDOT)	C. Mills (APAM)
Region Engineers (MDOT)	C. Newell (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)	