



**ENGINEERING OPERATIONS COMMITTEE  
MEETING MINUTES  
APRIL 25, 2019, 9:00 A.M. – 11:00 A.M.  
MULTI-MODAL CONFERENCE ROOMS**

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Present:	Carol Aldrich	Jason Gutting	Brad Wieferich
	Mark Bott	Tony Kratofil (phone)	Hal Zweng
	Gregg Brunner	Kristin Schuster	
	Mark Geib	Brandy Solak	
	Jason Garza	Will Thompson (phone)	
Absent:	Ted Burch	Matt Chynoweth	Gorette Yung
Guests:	Pete Pfeiffer (phone)	Jonathon Stratz	
	Carlos Torres		

#### OLD BUSINESS

1. Approval of the March 14, 2019, Meeting Minutes – *Approved*
2. Michigan Department of Transportation (MDOT) New Materials and Products – Jason Gutting

Committee members were asked to have their respective areas review and comment on the new materials list. Comments should be provided to Jason Gutting. Tony Kratofil asked if there was more discussion on a public posting of the list. Jason Gutting mentioned that the New Product Steering Committee haven't had an opportunity to meet. Tony requested the Steering Committee meeting be scheduled.

#### NEW BUSINESS

1. Guardrail Anchorage Action Plan-Projects Let After 12/31/19 – Carlos Torres

Subject/Issue – Guardrail anchorage action plan for selection of guardrail anchorages on projects let after 12/31/19.

Major Issue(s)/Potential Complication(s) – The Manual for Assessing Safety Hardware (MASH)-compliant guardrail anchorages must be used for new installations on the National Highway System (NHS) on construction projects let after 12/31/19. To date, the Federal Highway Association (FHWA) and American Association of State Highway and Transportation Officials (AASHTO) have not granted an extension to the 12/31/19 sunset date for guardrail anchorages.

The potential issues with state transportation agencies trying to meet the 12/31/19 sunset date for guardrail anchorages are:

- a. Only a few guardrail anchorage connection types have been evaluated.
- b. There are no double-sided guardrail anchorages meeting MASH criteria.

Refer to the document titled *MDOT Draft Action Plan for Guardrail Anchorages on Projects Let after December 31, 2019*, dated April 12, 2019, for more information and detailed explanations on the issues associated with guardrail anchorages.

Background – The MASH was published in 2009 as an updated crash testing standard to supersede National Cooperative Highway Research Program Report 350 (NCHRP 350). In addition, MASH crash testing was required for new or revised roadside safety devices tested after January 1, 2011. In 2016, AASHTO adopted an updated version of MASH, called MASH 2016, and MASH 2016 crash testing will be required for new or revised roadside safety devices tested after December 31, 2016. To avoid any confusion, the original version of MASH, published in 2009, will be known as MASH 2009. The biggest change between MASH 2009 and MASH 2016 involves the addition of several test matrices for cable barrier systems. As a result, most roadside safety devices, with the exception of cable barrier systems, that successfully passed MASH 2009 crash testing will be grandfathered into MASH 2016 without further testing.

The current FHWA-AASHTO joint implementation agreement requires MASH 2016-compliant devices to be used for new installations on contracts involving NHS roadways with a letting date after the dates below:

- December 31, 2017: guardrail systems and cast-in-place concrete barriers
- June 30, 2018: tangent, single-sided guardrail terminals
- December 31, 2018: crash cushions (impact attenuators)
- December 31, 2019: cable barriers and cable terminals, double-sided guardrail terminals, flared guardrail terminals, bridge railings, transitions (including guardrail anchorages), temporary work zone devices, all other longitudinal barriers (including portable barriers installed permanently), all other terminals, sign supports, and all other breakaway hardware

Recommendation(s) – MDOT's Barrier Advisory Committee (BAC) recommends approving the action plan described in the document titled *MDOT Draft Action Plan for Guardrail Anchorages on Projects Let after December 31, 2019*, dated April 12, 2019. A single-sided guardrail anchorage action plan matrix was developed identifying the various single-sided guardrail anchorage recommendations based on the bridge railing/concrete barrier and guardrail types attached to the anchorage. Refer to Table 1 of the document titled *MDOT Draft Action Plan for Guardrail Anchorages on Projects Let after December 31, 2019*, dated April 12, 2019, for more information.

If the EOC approves the recommended action plan, it is recommended that work commence on revising existing standard plans, developing new standard plans, and writing new special provisions as needed to implement the proposed action plan. New and revised standard plans and related information will be shared with MITA for review and commentary. Lastly, prior to implementation, this information will be shared with EOC at a future meeting for review and approval.

It is also recommended that the action plan remain subject to change at any time and for any reason. The EOC will review and approve changes to the action plan. Changes may be due to events, including but not limited to industry-wide material shortages, sunset date extensions/revisions by the FHWA and AASHTO, changes in eligibility for federal aid reimbursement for certain guardrail anchorages, new information/research related to guardrail anchorages, etc.

*ACTION: Approved*

2. I-196 Design-Bid-Build Project-Ottawa County, Grand Region – Jason Garza

Subject/Issue: I-196 Design-Bid-Build project in Ottawa County, Grand Region

Route/Location: I-196 eastbound from west of 32nd Avenue to Kenowa Avenue

Job Number: 118616

Control Section: 70024

Letting Date: January 2020

Est. Const. Cost: \$20,275,000

Major Issue(s) – Use of Alternate Pavement Bidding on the I-196 Design-Bid-Build 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 only 0.25%. Hot mixed asphalt was the low-cost alternative.

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 Alternate Pavement Bidding.

Recommendation(s) – The Innovative Contracting Committee recommends approval of the use of Alternate Pavement Bidding on this Design-Bid-Build project.

*ACTION: Approved*

3. Construction Manager/General Contractor (CMGC) Procurement Method for I-75 Segment Two Landscaping – Jason Garza

Subject/Issue – Request approval to use the CMGC procurement method for tree replacements, landscape plantings, and long-term maintenance within the I-75 Modernization Segment Two project limits (North of 13 Mile Road to North of Coolidge Road).

Major Issue(s) – A CMGC contracting method is proposed for development and construction, including the long-term maintenance of tree replacements and landscaping within the limits of the second segment of the I-75 Modernization Project. The CMGC will provide expertise for plant selection and locations along with input on long-term maintenance specifics to achieve the desired outcome of creating a viable vegetative buffer for the neighborhoods adjacent to I-75. The construction contract is expected to be a longer-term contract (about five years) with performance criteria and associated deductions if criteria is not met. Using the CMGC method will allow us to find the appropriate balance of costs as they relate to performance.

Background – JN 201437, I-75 Segment Two was let last year. Landscaping and plantings are not part of the contract prior to letting and it was decided that a separate contract would be developed and let. The main reasons for this were to continue discussions with the local stakeholders to ensure their needs were addressed and receive input and recommendations on the proposed plantings to better their chances of survival and provide the best opportunity for a successful project that meets all stakeholder expectations. This contracting method was also used for the tree replacements and landscaping the I-75 project's Segment One area and is a success with much positive feedback.

Job Number: 204538

Control Section: 63174

Project Cost: Estimated between \$3-\$4M

Letting Date: Spring 2021 proposed planting, with a February 2021 letting if no Guaranteed Maximum Price (GMP) agreement

Recommendation(s) – The Innovative Contracting Committee (ICC) has approved the use of the CMGC contracting method for this project.

*ACTION: Approved*

4. Design-Build Contracting Method-Mound Road Reconstruction – Jason Garza/Jonathon Stratz

Subject/Issue – Request approval for the use of Design-Build contracting method to Reconstruct Mound Road from I-696 to M-59, add one lane each direction from 17 Mile to M-59; add Intelligent Transportation Systems (ITS), safety and pedestrian/bike features. The

construction estimate is \$185M. This is a Macomb County local agency programs project within the Metro Region, Macomb Transportation Service Center.

Major Issue(s) – The goal is to assess the schedule concerns restricting the acceleration of the delivery of the entire corridor, generate cost and construction efficiencies, and utilize industry experience and innovation while meeting the schedule requirements in the Infrastructure for Rebuilding America (INFRA) grant. JN 205725 is scheduled for an April 2020 plan completion with an August 2020 letting. This job is partially funded by an INFRA Grant, which requires all phases to be obligated by April 2021 and a construction start date of May 1, 2021. Below is a risk assessment matrix provided by the consultant for Macomb County, HNTB Corporation highlighting potential risks.

Background – Macomb County received an INFRA Grant in Spring of 2018 for the reconstruction and modernization of Mound Road from I-696 to M-59. The county has selected HNTB Corporation as the project management team. HNTB Corporation investigated and recommended the best delivery method to fulfill the needs of Macomb County and meet the project constraints. The \$97.8M INFRA grant was awarded based on the description below.

Reconstruct nine miles of the Mound Road Corridor, part of the National Freight Highway Network, from a 30-year-old, 8-lane roadway to a next-generation critical commercial corridor, providing:

- High performance concrete pavement for improved surface rideability and extensive service life;
- Enhanced egress to and from the U.S. Army TACOM and TARDEC facilities;
- ITS for optimized traffic operations and proactive incident management;
- Connected vehicle technology deployment to enhance freight movement and facilitate overall real-time communication between vehicle and infrastructure (V2I);
- Comprehensive signal infrastructure and signage improvements to improve traffic flow and safety along the corridor for passenger and commercial/industrial freight;
- Two grade-separated pedestrian crossings supplemented by the installation of non-motorized multi-use paths to improve non-motorized user safety, mobility and promote regional trails; and
- Install energy efficient unified lighting to increase visibility along the corridor and reduce energy consumption.

Recommendation(s) – The ICC has recommended the use of the Design-Build contracting method for this project considering the timeframe with the INFRA Grant and efficiencies gained by coordinating/combining the corridor into one project.

*ACTION: Approved*

5. Grosse Ile Parkway Bridge over Trenton Channel SN 12006 – Jason Garza/Jonathon Stratz

Subject/Issue – Follow-up action item from the EOC meeting on May 10, 2018. ACTION: Approved based on two tier selection including low bid determination. This also needs to include appropriate NEPA assessment and permitting, defined roles and responsibilities and Attorney General review.

Major Issue(s) – There is a loss of bearing at the five piers that sit on timber cribs due to the rock infill spilling out of the cribs. This project is to stabilize the timber cribs by encapsulating the cribs to prevent leakage and then pressure grouting to fill the voids within at each of the five piers with this condition. Innovative contracting is requested so contractors can bid with their strength and experience for underwater work with existing products available that they are familiar with. The Action items from the May 10, 2018 EOC meeting have been resolved and are listed below:

- The National Environmental Policy Act (NEPA) assessment and permitting: NEPA was completed in summer 2018 and permits have been issued.
- Defined roles and responsibilities: Internal roles and responsibilities have been defined and will be refined throughout the project as necessary. All design and construction submittals along with Wayne Counties comments to the Design-Builder will be reviewed and requires MDOT concurrence as defined in the third-party cost sharing agreement. A single point of contact has been established at the TSC to receive, review, and distribute all submittals.
- Attorney General review: AG has completed the review of the RFP and the third-party cost sharing agreement. There are minor comments outstanding in book 1. A final meeting has been scheduled for April 26th to resolve the outstanding comments.
- Background – Grosse Ile Parkway Bridge over Trenton Channel SN 12006 was originally built approximately in the 1880's for railroad company use. Design of five piers in the water was to construct timber cribbing boxes filled with boulders. 1930 plans show new concrete piers poured on top of the existing timber cribbing which are approximately 32' long, 9' wide and 10' tall. Deterioration of the timbers was identified during the underwater inspection. The deterioration of the timbers means that the rock fill is no longer completely surrounded, and therefore allows the rock fill to spill out of the cribs. The result is that there is loss of bearing for the pier footings.

Recommendation(s) – This project has received ICC approval and EOC conditional approval.

*ACTION: Approved*

6. Road Diet – City of South Haven, I-196BL (Broadway) Between Aylworth Avenue to Phoenix Road - Mark Bott/Pete Pfeiffer

Route/Location: I-196BL(Broadway) between Aylworth Avenue to Phoenix Road

Job Number: Permit Job

Control Section: 80032

Letting Date: May 2019

Issue(s) – The proposed action is being done under permit. The proposed cross section and checklist is being reviewed by the Geometrics Unit.

Background – City of South Haven would like the road diet to occur prior to Memorial Day 2019 for acclimation of the change to the public before the seasonal tourist season begins.

Recommendation(s) – Road Diets are for informational purposes only.

*ACTION: For information only*

7. Project Specific Prequalification Requirements for Portable Concrete Crushing Plants– Jason Gutting

Issue Statement – For statewide uniformity, the CFS Aggregate Quality Unit is proposing to incorporate the Project Specific Prequalification requirements for portable concrete crushing plants into the MDOT Aggregate Production Manual. These portable plants crush the broken concrete pavement and reclaim it as processed aggregate for use on the project. CFS recently circulated this draft document to Michigan Concrete Association (MCA), Michigan Aggregates Association (MAA), and the FHWA for review and feedback.

Major Issue(s) – The requirements for prequalification included in the draft document have been vetted by the region materials supervisors and are currently being employed at the project level. The recent feedback from industry (MCA and MAA) review was very positive with no comments. All the above parties are in support of MDOT moving forward, statewide, with inclusion of it as part of the MDOT Aggregate Production Manual. The FHWA responded in favor of the document with no comments relative to its content.

Background/History - The draft procedure, which is proposed to be incorporated into Chapter 3 of the Aggregate Production Manual, outlines the criteria that contractors must comply with in order to attain project-specific prequalification for their portable aggregate crushing operation. Being MDOT prequalified allows the contractor to produce aggregate from their on-site crushing plant for the project without requiring each production stockpiles of material to be tested and approved by the Region Materials staff prior to incorporation into the project. This procedure requires that the contractor/aggregate producer have enough dedicated acreage on the project site to properly manage their production and consistently control their operations without contamination. Further, they must demonstrate to the engineer that they will administer and maintain the appropriate and continual quality control

throughout the life of the project. This document provides the region materials staff with the necessary contractual authority to enforce the specifications while acknowledging the quality control efforts of the contractor/aggregate producer in efforts to assure quality without unduly impacting the progress of the project.

Recommendation(s) – Move forward with its incorporation of the Project Specific Prequalification requirements for portable concrete crushing plants into Chapter 3 of the Aggregate Production Manual for this upcoming construction season, and beyond.

Status – New Submittal

*ACTION: Approved*

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Carol Aldrich, Secretary  
Engineering Operations Committee



RA:lrb

cc: EOC Members	M. DeLong	D. DeGraaf (MCA)
Meeting Guests	D. Jones	J. Becsey (APAM)
P. Ajegba	C. Libiran	D. Needham (MAA)
L. Mester	R. Jorgenson (FHWA)	M. Ackerson-Ware (MRPA)
Region Engineers	R. Brenke (ACEC Michigan)	
Assoc. Region Engineers	G. Bukoski (MITA)	
TSC Managers		