



**ENGINEERING OPERATIONS COMMITTEE
MEETING MINUTES
FEBRUARY 6, 2017 – 8:00 A.M.
MULTI-MODAL CONFERENCE ROOM**

Present: M. Van Port Fleet R. Ranck C. Rogers
B. Wieferich M. Geib S. Bower
K. Avery K. Schuster M. Sweeney
H. Zweng M. Bott

Absent: J. Gutting T. Marshall (FHWA)

Guests: G. Dawe M. Townley M. Bramble
A. Ceifetz (Opus)

OLD BUSINESS

1. Approval of the December 1, 2016 Meeting Minutes – M. Van Port Fleet

ACTION: Approved (January 2017 Email Approval)

2. Pavement Selection US-2/US-41 – B. Krom

Route/Location: US-2/US-41 WB: from the CN RR to End Divided, Delta County
Job Number: 126833
Control Section: 21025
Letting Date: February 2018

Department policy requires that Life Cycle Cost Analysis (LCCA) be used to determine the lowest cost pavement design alternative following the procedures outlined in the MDOT Pavement Design and Selection Manual. Final pavement selection requires approval by the Engineering Operations Committee.

The aggregate lift alternatives being considered are a Hot Mix Asphalt Pavement (HMA Alt #1) and a Jointed Plain Concrete Pavement (JPCP Alt #2). For both alternatives, the existing pavement, shoulders, base and subbase materials will be left in place. The pavement designs being considered are as follows:

Alternative #1: Reconstruct with Hot Mix Asphalt Pavement

1.5” HMA, 5E3, Top Course (mainline & inside shoulder)
2” HMA, 4E3, Leveling Course (mainline & inside shoulder)
3” HMA, 3E3, Base Course (mainline & inside shoulder)
1.5” HMA, 5E03, Top Course (outside shoulder)
2” HMA, 4E03, Leveling Course (outside shoulder)

14"	Aggregate Base (mainline & inside shoulder)	
17"	Aggregate Base (outside shoulder)	
	Existing pavement, base, subbase	
20.5"	Total Thickness	
	Present Value Initial Construction Cost	\$819,589/directional mile
	Present Value Initial User Cost	\$47,520/directional mile
	Present Value Maintenance Cost	\$239,731/directional mile
	Equivalent Uniform Annual Cost (EUAC)	\$42,770/directional mile

Alternative #2: Reconstruct with Jointed Plain Concrete Pavement

8"	Non-Reinforced Conc Pavt, P1 Mod., w/ 12' jt spacing (mainline & inside shldr)	
8"-5"	Tapered Non-Reinforced Conc Pavt, P1 Mod., w/ 12' jt spacing (outside shldr)	
14"	Open Graded Drainage Course (mainline & inside shoulder)	
14"-17"	Tapered Open Graded Drainage Course (outside shoulder)	
	Existing pavement, base, subbase	
22"	Total Thickness	
	Present Value Initial Construction Cost	\$879,020/directional mile
	Present Value Initial User Cost	\$51,022/directional mile
	Present Value Maintenance Cost	\$236,076/directional mile
	Equivalent Uniform Annual Cost (EUAC)	\$44,035/directional mile

Pavement designs are based on the 1993 AASHTO "Guide for Design of Pavement Structures" and the AASHTO pavement design software, DARWin Version 3.1, 2004.

The Equivalent Uniform Annual Cost calculation is based on the pavement selection process as approved by the EOC on June 3, 1999. Construction costs are derived from historical averages on similar projects while user costs are calculated using the MDOT Construction Congestion Cost model.

ACTION: EOC approves the selection of Alternative #1, Reconstruct with Hot Mix Asphalt Pavement, which has the lowest life cycle cost. (January 2017 Email Approval)

3. Contractor Manager General Contractor (CMGC) Contracting Approach, Site Structure Demolition – Gordie Howe Bridge – C. Stein

The Gordie Howe International Bridge Project requires the acquisition and demolition of several commercial and industrial parcels. The parcels that will be included in the CMGC project are expected to have complex staging, abatement of environmental containments, and tight time frames for demolition.

The intent of CMGC is to develop the most efficient means to remove the structures by partnering with a demolition contractor during the design process, the development of

strategies to minimize or avoid impacting contaminated materials, and to develop abatement means and methods for contaminated materials that are impacted. The project schedule will be tied to the property acquisition and the needs of the Gordie Howe International Bridge project. Major issues include the following,

Permits: Various demolition permits are required to be obtained by the contractor. MPDES permits may be required. EPA superfund sites are in the project area and there may be EPA permits required.

Environmental Risks: Various non-hazardous and hazardous contaminants are expected to be present and will not be known until MDOT has rights to access various parcels and perform the required testing.

Utilities: Gas, electric, water, sanitary and telecom utilities will need to be coordinated with for disconnections

Maintaining Traffic: Traffic impacts are expected to be minimal

Third Party Involvement: Coordination with MDEQ, EPA, City of Detroit and multiple utility companies is expected

Right of Way: MDOT does not currently own the properties with items to be demolished. A Public Interest Finding will need to be submitted to the FHWA for approval to move forward with this project prior to having acquired the ROW. Parcels will not be released for demolition until MDOT has rights to do so.

The Innovative Contracting Committee (ICC) has approved the use of the CMGC contracting method for this project. Using a CMGC procurement will allow us to partner with the Contractor to better deal with the risks of potential for contamination, extensive utility coordination and tight scheduling needs. Identifying the risks and partnering with the Contractor should help deliver the project in a more efficient manner and at a better price.

ACTION: Approved (January 2017 Email Approval)

NEW BUSINESS

1. Evaluating Road Delineation Practices – M. Bott

EOC directed, at the November 2012 meeting, that a Technical Agenda Team be formed to address issues with roadway delineation. EOC was presented with team recommendations at the July 2013 meeting. EOC adopted the proposed roadway delineation recommendations and also directed that the Technical Agenda Team initiate a research project to address ongoing issues with roadway delineation including pavement markings.

A research project was initiated to evaluate Michigan pavement marking practices. A presentation today will summarize the results of the research and identify potential next steps.

ACTION: For information only. No action required.

2. Movable Bridge Guidance Document – C. Rogers

Senate Bill 105 amends the 1951 PA 51 effective September 22, 2016 and establishes a \$5 million fund to pay for the operations of any publically owned moveable bridge. The state of Michigan currently has 24 publically owned moveable bridges (12 MDOT, 12 local agency). A Guidance Document (GD) has been drafted to provide direction on how to implement the legislation. The GD reflects input from all local agency movable bridge owners along with MDOT staff from Bridge Field Services, the Regions and the Bureau of Finance.

The Guidance Document establishes guidance for the reimbursement/payment of publically owned moveable bridge operations in Michigan. Issues addressed include:

- Clearly identifying operational costs versus routine maintenance, capital improvements, rehabilitation, etc.
- Establishing clear procedures based on the multiple operational methods of various MDOT regions and local agencies responsible for the 24 publically owned moveable bridges.
- Establishing reimbursement methods
- Contract administration responsibilities
- Audit responsibilities

EOC is requested to approve the Guidance Document for implementation.

ACTION: Approved with minor edits.

3. Traffic Signal Modification, Traverse City Area, North Region– K. Schuster/G. Dawe

Job Number: 129391

Control Section: 28012 / 28013 / 28041

Project Cost: \$2,923,000

Letting Date: December 2018

EOC is being requested to approve a two-step process to select a design consultant for the design of new traffic signals at 21 locations utilizing Adaptive Signal Control Technology (ASCT). The type of ASCT utilized has a significant impact on the signal design.

The first step would utilize a Qualification Based Selection (QBS) approach to evaluate and select the ASCT vendor and associated technology that would be used in the signal design. The second step would utilize a QBS based process to select the design consultant after the ASCT vendor and associated ASCT technology had been selected. The ASCT vendor would ultimately be part of the design team as a sub-consultant.

The Innovative Contracting Committee (ICC) has approved the use of a two-step QBS

contracting method for this project.

ACTION: Approved

4. Contractor Manager General Contractor (CMGC), Blue Water Bridge Gusset Plate/Anchor Link Fabrication & Replacement – K. Schuster

Job Number: 131263

Control Section: 77111

Project Cost: \$1,744,000

Letting Date: July 2017

Fabrication and replacement of deteriorated anchor links and gusset plates on the Blue Water Bridge will require early purchasing of materials, possible night and weekend work for the city, and single lane closures with potential short term bridge closures.

A CMGC contracting method is being requested to allow for the Contractor's input for access issues and how they intend to support the structure temporarily while the repairs are being made.

The Innovative Contracting Committee (ICC) has approved the use of a CMGC contracting method for this project. EOC approval is requested.

ACTION: Approved

5. Alternate Pavement Bidding (APB) Selection Criteria – M. Van Port Fleet

In September 2016 (reflected in the November 2016 EOC minutes), the EOC approved multiple changes to the criteria used for selecting projects that would be considered for alternate pavement bidding. After further consideration, EOC is rescinding the approval while a re-evaluation of the selection criteria is conducted.

Additional review is required including additional data updates, an improved summary of methods and costs used to develop alternate bidding documents and the inclusion of updated pavement performance curves for rehabilitation fixes. The review will also include developing criteria to improve the consistency of maintaining traffic approaches that are stipulated.

ACTION: EOC directs the Innovative Contracting Unit, Design Division, and the Pavement Operations Section, Construction Field Services, to conduct the evaluation. EOC will reconsider the updated APB criteria at a future meeting. In the interim, any new projects being considered for alternate pavement bidding will use the existing process.

Steven Bower, Secretary
Engineering Operations Committee

RA:SB

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