



**ENGINEERING OPERATIONS COMMITTEE
MEETING MINUTES
MARCH 1, 2018, 9:00 A.M. – 11:00 A.M.
MULTI-MODAL CONFERENCE ROOMS**

Present:	Mark Van Port Fleet	Jeff Forster	Dee Parker
	Kim Avery	Mark Geib	Kristin Schuster
	Mark Bott	Jason Gutting	Mark Sweeney
	Matt Chynoweth	Greg Losch	Hal Zweng
Absent:	Carol Aldrich	Theodore Burch	Brad Wieferrich
Guests:	Mark Dubay	Ben Krom	Michael Townley
	Patricia Johnson	Dave Morena	Dharmesh Valsadia
	Erick Kind	Hilary Owen	

OLD BUSINESS

1. Approval of the January 4, 2018, Meeting Minutes

ACTION: Approved.

2. I-696: From west of Dequindre Road to Nieman Road, Oakland and Macomb County – Ben Krom

Route/Location: I-696 from west of Dequindre Rd to Neiman Rd, Oakland & Macomb County

Job Number: 117578

Control Section: 63103, 50061, 50062

Letting Date: 3/16/2018

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 Selection Manual. Final pavement selection requires approval by the Engineering Operations Committee.

Alternative #1a: Reconstruct I-696 with Hot Mix Asphalt Pavement

2"	HMA, 4E30, Top Course
3.75"	HMA, 3E30, Leveling Course
6"	HMA, 3E30, Base Course
6"	Aggregate Base
18"	Sand Subbase (new & existing)

6" dia. Subbase Underdrain System
 35.75" Total Section Thickness

Alternative #1b: Reconstruct Ramps with Hot Mix Asphalt Pavement

2.5" HMA, 4E3, Top Course
 3.75" HMA, 3E3, Leveling Course
 3.25" HMA, 3E3, Base Course
 6" Aggregate Base
 18" Sand Subbase (new & existing)
 6" dia. Subbase Underdrain System
 33.5" Total Section Thickness

Present Value Initial Construction Cost	\$384,250/lane-mile
Present Value Initial User Cost	\$1,052,609/lane-mile
Present Value Maintenance Cost	\$136,093/lane-mile

Equivalent Uniform Annual Cost (EUAC) \$53,548/lane-mile

Alternative #2a: Reconstruct I-696 with Jointed Plain Concrete Pavement

11" Non-Reinforced Concrete Pavement, P1 Modified, w/ 14' joint spacing
 6" Open Graded Drainage Course
 Geotextile Separator
 Existing Sand Subbase
 6" dia. Open-Graded Underdrain System
 17" Total Thickness

Alternative #2b: Reconstruct Ramps with Jointed Plain Concrete Pavement

10" Non-Reinforced Concrete Pavement, P1 Modified, w/ 14' joint spacing
 6" Open Graded Drainage Course
 Geotextile Separator
 Existing Sand Subbase
 6" dia. Open-Graded Underdrain System
 16" Total Thickness

Present Value Initial Construction Cost	\$362,138/lane-mile
Present Value Initial User Cost	\$928,608/lane-mile
Present Value Maintenance Cost	\$138,774/lane-mile

Equivalent Uniform Annual Cost (EUAC) \$47,393/lane-mile

It was agreed that the Alternative Pavement Bidding component from this project be removed, and approve the pavement alternate with the lowest equivalent uniform annual cost based on the LCCA.

ACTION: February 2018, Email Approval of Alternative #2, reconstruction with Jointed Plain Concrete Pavement.

NEW BUSINESS

1. M-37, Village of Baldwin Mill/Resurface with Americans With Disabilities Act (ADA) Ramps – Patricia Johnson/Mark Bott

The Engineering Operations Committee (EOC) received information on the following Road Diet as part of a project to mill/resurface with ADA Ramps:

Route/Location: M-37 from Fourth to Seventh Street in the Village of Baldwin, Lake County
Job Number: 131558
Control Section: 43011
Letting Date: 02/02/2018

During review of the project, the Geometrics Unit recommended restriping from four (4) to three (3) lanes. The Village signed a resolution to do so. Public meeting comments were overwhelmingly positive and suggested extending three lanes even further north through the Village. Segment to south is two-lane and segment to north will be three-lane with turn lanes.

It is recommended to restripe M-37 from Fourth to Seventh Street as a three-lane roadway in the Village of Baldwin as part of a larger mill/resurface project.

Parking areas will be repaved in the business section and the Village will provide funding for this. The environmental review includes the Road Diet.

ACTION: No action was taken as this item was presented to the EOC for information only.

2. I-69 to US-12, Coldwater Road Diet – Dharmesh Valsadia/Mark Bott

The EOC received information on the following proposed Road Diet project:

Route/Location: I-69BL from I-69 to US-12, City of Coldwater, Southwest Region
Job Number: 200511
Control Section: 12031
Letting Date: 05-04-2018

Based on 6,000 annual daily traffic, it was mutually agreed between MDOT and the City of Coldwater to convert 2,500 feet of I-69BL from its current four-lane section to a three-lane section with a center left turn lane. Traffic volume and crash data were collected, and Synchro modeling was performed to evaluate the conversion.

ACTION: No action taken as this item was presented to the EOC for information only.

Dave Morena of FHWA asked that FHWA not be notified when a Road Diet is proposed as indicated on the form. Mark Bott's staff are working on the form and will make changes.

3. I-75 from M-13 Connector to North of Beaver Road, Bay County – Ben Krom

Route/Location: I-75 from the M-13 Connector to north of Beaver Road, Bay County

Job Number: 123642

Control Section: 09035

Letting Date: 12/7/2018

Department policy requires that LCCA be used to determine the lowest cost pavement design alternative following the procedures outlined in the MDOT Pavement Selection Manual.

Final pavement selection requires approval by the Engineering Operations Committee.

Alternative #1a: Rehab I-75 with HMA Pavement over Rubblized Concrete (~69% of project)

1.5"	HMA, 5E10, Top Course (mainline & inside shoulder)
2"	HMA, 4E10, Leveling Course (mainline & inside shoulder)
3"	HMA, 3E10, Base Course (mainline & inside shoulder)
9"	Rubblized Concrete (mainline)
	Existing Base & Sand Subbase
1.5"	HMA, 5E03, Top Course (outside shoulder)
2"	HMA, 4E03, Leveling Course (outside shoulder)
3"	HMA, 3E03, Base Course (outside shoulder)
6"	Aggregate Base (outside & inside shoulders)
	PDS Underdrain System
15.5"	Total Section Thickness

Present Value Initial Construction Cost	\$310,649/lane-mile
Present Value Initial User Cost	\$78,276/lane-mile
Present Value Maintenance Cost	\$123,851/lane-mile
Rehab Equivalent Uniform Annual Cost (EUAC)	\$23,963/lane-mile

Alternative #1b: Reconstruct I-75 with HMA Pavement (~31% of project)

1.5"	HMA, 5E10, Top Course (mainline & inside shoulder)
3.25"	HMA, 3E10, Leveling Course (mainline & inside shoulder)
3.25"	HMA, 3E10, Base Course (mainline & inside shoulder)
1.5"	HMA, 5E03, Top Course (outside shoulder)
2"	HMA, 4E03, Leveling Course (outside shoulder)
2"	HMA, 4E03, Base Course (outside shoulder)
6"	Aggregate Base (mainline & inside shoulder)
8.5"	Aggregate Base (outside shoulder)
18"	Sand Subbase
6" dia.	Subbase Underdrain System
32"	Total Section Thickness
Present Value Initial Construction Cost	\$429,303/lane-mile
Present Value Initial User Cost	\$81,153/lane-mile
Present Value Maintenance Cost	\$120,781/lane-mile

Recon Equivalent Uniform Annual Cost (EUAC)	\$24,392/lane-mile
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Combined Equivalent Uniform Annual Cost (EUAC)	\$24,095/lane-mile
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Alternative #2a: Rehab I-75 w/Unbonded Jointed Plain Conc. Overlay (~69% of project)

6"	Non-Reinforced Concrete Pavement, P1 Modified, with 12' joint spacing
1"	HMA Separator Layer (mainline)
9"	Repaired JRCP (mainline)
	Existing Base & Subbase
6"	Open Graded Drainage Course (outside & inside shoulders)
	Non-Woven Geotextile Separator (outside & inside shoulders)
	PDS Underdrain System
16"	Total Thickness

Present Value Initial Construction Cost	\$380,623/lane-mile
Present Value Initial User Cost	\$81,153/lane-mile
Present Value Maintenance Cost	\$57,388/lane-mile
Rehab Equivalent Uniform Annual Cost (EUAC)	\$25,057/lane-mile

Alternative #2b: Reconstruct I-75 w/ Jointed Plain Concrete Pavement (~31% of project)

9.5"	Non-Reinf Conc Pavt, P1 Mod, w/ 14' joint spacing (mainline & inside shoulder)
6"	Open Graded Drainage Course (mainline & inside shoulder)
9.5"-6.5"	Tapered Non-Reinf Conc Pavt, P1 Modified, w/ 14' jt spacing (outside shoulder)
6"-9"	Tapered Open Graded Drainage Course (outside shoulder)
	Geotextile Separator
10"	Sand Subbase
6" dia.	Open-Graded Underdrain System
25.5"	Total Thickness

Present Value Initial Construction Cost	\$598,244/lane-mile
Present Value Initial User Cost	\$95,274/lane-mile
Present Value Maintenance Cost	\$124,489/lane-mile
Recon Equivalent Uniform Annual Cost (EUAC)	\$30,890/lane-mile

Combined Equivalent Uniform Annual Cost (EUAC)	\$26,850/lane-mile
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It was agreed that the Alternative Pavement Bidding component from this project be removed, and approve the pavement alternate with the lowest equivalent uniform annual cost based on the LCCA.

ACTION: Alternative #1, rehabilitation and reconstruction with Hot Mix Asphalt pavement, is approved.

4. Job Order Contracting (JOC) on Traffic Signal Modernization and American's with Disabilities Act (ADA) Sidewalk Upgrades-Bay Region (various locations) – Erick Smalley/Greg Losch

The JOC method is proposed for several traffic signal modernization and ADA sidewalk upgrades.

Route/Location: The various locations in Bay Region are tentative and subject to change:

- M-24 at Turrill Road
- US-127 BR at Broomfield Road
- M-54 at Mt. Morris Road
- M-54 at Stanley Road
- M-54 at Coldwater Road

Job Number: 201684

Control Section: Various

Construction Cost: \$1,150,000

Letting Date: May 2018

The Innovative Contracting Committee (ICC) and FHWA has approved the use of the JOC contracting method for this traffic safety project.

ACTION: Approved the use of the JOC method on traffic signal modernization and ADA sidewalk upgrades.

5. JOC on Traffic Signal Modernization and ADA Sidewalk Upgrades-Grand Region (various locations) – Erik Smalley/Greg Losch

The JOC method is proposed for several traffic signal modernization and ADA sidewalk upgrades.

Route/Location: The various locations in the Grand Region are tentative and subject to change:

- 03023-01-001 M-89 at Farmer
- 67022-01-001 US-10 at Main
- 61023-01-002 M-46 (Apple) at Wolf Lake Road
- 61023-01-005 M-46 at Mill Iron
- 61073-01-003 US-31BR (Colby) at White Lake Shopping
- 54032-01-003 M-66 at M-20

Job Number: 201686

Control Section: Various

Construction Cost: \$1,150,000

Letting Date: July 2018

On March 7, 2018, the ICC and FHWA approved the use of the JOC contracting method for this traffic safety project.

ACTION: Approved the use of the JOC method on traffic signal modernization and ADA sidewalk upgrades.

6. JOC on Traffic Signal Modernization and ADA Sidewalk Upgrades-Metro Region (Various Locations) – Erik Smalley/Greg Losch

The JOC method is proposed for several traffic signal modernization and ADA sidewalk upgrades.

Route/Location: The various locations in the Metro Region are tentative and subject to change:

- M-85 (Fort Street) at Shelby
- M-85 (Fort Street) at Washington
- M-85 (Fort Street) at Cass Avenue
- M-85 (Fort Street) at First
- M-85 Fort Street at Second
- M-85 (Fort Street) at Third
- M-10 NB Off Ramp at Milwaukee/Baltimore

Job Number: 201685

Control Section: Various

Construction Cost: \$1,850,000

Letting Date: May 2018

The ICC and FHWA has approved the use of the JOC contracting method for this traffic safety project.

ACTION: Approved the use of the JOC method on traffic signal modernization and ADA sidewalk upgrades.

7. Fixed Price Variable Scope Contracting Method on Local Agency Project – Brent Schriener/Greg Losch

The Fixed Price/Variable Scope (FPVS) contracting method is proposed on a Local Agency Project (LAP). The project includes a hot mix asphalt (HMA) mill and resurface with placement of geosynthetic paving interlayer, HMA overlay, aggregate shoulders and slope restoration on Saginaw Road and Waldo Road in Midland County, Bay Region, Mt. Pleasant TSC.

Route/Location:

- Saginaw Road (Waldo Road/Gordonville Road to the Saginaw County Line) in Ingersoll Township and City of Midland, Midland County
- Waldo Road (Monroe Rd. to Hubbard Rd.) in Larkin Charter Township, Midland County

Job Number: TBD

Control Section: TBD

Construction Cost: \$735,390

Letting Date: June 2018

The ICC has approved the use of the FPVS contracting method for this LAP project. The Midland County Road Commission will complete remaining portion of work using Midland County Road Commission funds within three years.

ACTION: Approval for the use of the FPVS contracting method on a local agency project.

8. Acceptable Use of Dynamic Message Sign Messaging on State Trunk Lines – Hilary Owen

MDOT currently has no specific written guidelines at the statewide level regarding acceptable use of Dynamic Message Sign (DMS) messaging on state trunk lines. Each Transportation Operations Center (TOC) has standard operating procedures that they follow which adhere to the messaging restrictions outlined in the Michigan Manual of Uniform Traffic Control Devices. The TOC professionals, both MDOT employees and contract employees, work together to create consistency in our messaging. However, this process would be greatly streamlined and strengthened with basic written guidelines applying to message structure and use that applied statewide.

A team consisting of members from all four TOCs and all seven regions have participated in putting together a document that outlines all the previously agreed upon guidelines associated with DMS messaging in Michigan. The document covers planned incidents like construction or special events, unplanned incidents such as traffic crashes, as well as weather messaging, safety messaging and other special messages as appropriate.

The document presented to the EOC is mutually agreed upon language that reflects current practice at MDOT TOCs statewide. This document provides general guidance on how to construct a message so that it is easy to read and informs drivers of the most important piece of information at any single point in time. The guidelines provide enough flexibility that region preferences can be upheld, while still striving for statewide consistency to simplify a driver's understanding of our messages.

The DMS messaging team, the TOCs, the TOC Users Group and SOMAT have all approved the draft document.

ACTION: The following feedback was provided on the document:

- *Determine if this document is a guide or a manual.*
- *Request Office of Communications input on the document.*
- *Consider including response procedures for sign cyber-attack. Consider how to expedite approval for active Police situations.*
- *Request Attorney General review, if appropriate.*

9. US-131 Maintenance of Traffic Pilot Summary – Erick Kind

The Grand Region developed and successfully implemented a traffic scheme that consisted of maintaining two-way traffic on one bound of the freeway without the use of temporary concrete barrier wall separating opposing traffic for a limited time during construction.

Route/Location: US-131 project from 14 Mile to 17 Mile in northern Kent County

ACTION: A team will be assembled to review the pilot study and determine under what terms MDOT will consider using this practice in the future on low risk sites. The

Region Bureau Management Team will be asked to have a discussion on this topic.

10. Guard Rail Endings – Mark Van Port Fleet

Federal regulations indicate that three guardrail ending bid alternatives need to be included in contract documents. However, there has been some Region Engineer support for having two alternatives. Maintenance efficiency may be improved if the number of types of devices is decreased. Installation, repair, and stocking of materials may be more efficient. At the same time, maintaining open competition during selection of a device is also important for cost effective and innovative solutions. The Barrier Advisory Committee has recommended the continued use of three guardrail ending bid alternatives.

A national survey of best practices could be conducted to determine how other states are approaching this issue. Additionally, it would be helpful to evaluate the various processes and procedures MDOT garages are currently using to maintain guardrail. The EOC may be asked to weigh in on this discussion.

ACTION: The topic will be discussed more with Region Engineers.

Carol Aldrich, Secretary
Engineering Operations Committee

RA:

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