



ENGINEERING OPERATIONS COMMITTEE
MEETING MINUTES
MAY 5, 2005 – 9:00 A.M.
UPTRAN CONFERENCE ROOM

Present: J. Polasek B. J. O'Brien J. W. Reincke
M. VanPortFleet J. D. Culp M. Chaput
A. Clover C. Bleech E. Burns
Absent: L. Tibbits J. Friend T. Fudaly
Guests: B. Krom D. Calabrese (For T. Fudaly)

OLD BUSINESS

1. **Approval of the Minutes of the March 3, 2005, Meeting – J. Polasek**

The minutes of the March 3, 2005, meeting were approved.

2. **Establishing Speed Limits for Work Zones (See February 7, 2005, Minutes, Old Business, Item 3) – B. Zimmerman**

The March 3, 2005, EOC approval of the draft Bureau of Highway Instructional Memorandum 2005-B, *Guidelines to Establish Speed Limits in Work Zones* is withdrawn. Implementation of the department's policy, as established in Director Jeff's April 18, 2005, letter to the Michigan Laborers' District Council, is underway (copy attached).

NEW BUSINESS

1. **Pavement Selections – B. Krom**

A. **M-24 Reconstruction: CS 44011, JN 55908**

The reconstruction alternates considered were: Alternate 1 – a hot mix asphalt (HMA) pavement (Equivalent Uniform Annual Cost [EUAC] \$29,398/directional mile), and Alternate 2 - jointed plain concrete pavement (JPCP) (EUAC \$37,206/directional mile).

A life cycle cost analysis was performed and Alternate 1 was approved based on having the lowest EUAC. The pavement design and cost analysis are as follows:

- 2.0" (50.8mm).....HMA, 5E10, Top Course (mainline & inside shoulder)
- 2.0" (50.8mm)..... HMA, 4E10, Leveling Course (mainline & inside shoulder)
- 3.5" (88.9mm).....HMA, 3E10, Base Course (mainline)
- 2.0" (50.8mm).....HMA, 4C, Top Course (outside shoulder)
- 2.0" (50.8mm)..... HMA, 3C, Leveling Course (outside shoulder)
- 6.0" (152.4mm).....Aggregate Base (mainline, 9.5" inside & outside shoulder)
- 18.0" (457.2mm)..... Sand Subbase
- 6.0"Underdrain System
- 31.5" (800.1mm)..... Total Section Thickness

Present Value Initial Construction Costs	\$433,713/directional mile
Present Value Initial User Costs	\$0/directional mile
Present Value Maintenance Costs.....	\$80,865/directional mile
Equivalent Uniform Annual Cost	\$29,398/directional mile

B. I-94 Westbound Reconstruction: CS 80023 & 80024, JN 53350

The reconstruction alternates considered were: Alternate 1 – HMA pavement (EUAC \$70,370/directional mile), and Alternate 2 – JPCP (EUAC \$61,546/directional mile).

A life cycle cost analysis was performed and Alternate 2 was approved based on having the lowest EUAC. The pavement design and cost analysis are as follows:

12.0" (304.8mm).....	Jointed Plain Concrete Pavement w/16' jt spacing (mainline) Freeway Shoulder Option
6.0" (152.4mm).....	Open Graded Drainage Course (Mainline & Shoulders may vary) Geotextile Separator Existing Sand Subbase
6".....	Underdrain System
18.0" (457.2mm).....	Total Thickness

Present Value Initial Construction Costs	\$628,179/directional mile
Present Value Initial User Costs	\$299,707/directional mile
Present Value Maintenance Costs.....	\$66,601/directional mile
Equivalent Uniform Annual Cost	\$61,546/directional mile

C. I-196 Reconstruction: CS 80012, 80013 & 03033, JN 60471

The reconstruction alternates considered were: Alternate 1 – HMA pavement (EUAC \$50,940/directional mile), and Alternate 2 – JPCP (EUAC \$43,348/directional mile).

A life cycle cost analysis was performed and Alternate 2 was approved based on having the lowest EUAC. The pavement design and cost analysis are as follows:

11.0".....	Jointed Plain Concrete Pavement w/15' jt spacing (mainline) Freeway Shoulder Option
6.0".....	Open Graded Drainage Course (mainline) Geotextile Separator Existing Sand Subbase
6".....	Open Graded Underdrain System
17.0".....	Total Thickness

Present Value Initial Construction Costs	\$578,507/directional mile
Present Value Initial User Costs	\$113,766/directional mile
Present Value Maintenance Costs.....	\$73,805/directional mile
Equivalent Uniform Annual Cost	\$43,348/directional mile

D. US-12 Reconstruction: CS 78022, JN 50768

The reconstruction alternates considered were: Alternate 1 – HMA pavement (EUAC \$61,595/directional mile), and Alternate 2 – JPCP (EUAC \$79,951/directional mile).

A life cycle cost analysis was performed and Alternate 1 was approved based on having the lowest EUAC. The pavement design and cost analysis are as follows:

1.5"	.....	HMA, 5E3, Top Course
2.0"	.....	HMA, 4E3, Leveling Course
3.0"	.....	HMA, 3E3, Base Course
6.0"	.....	Aggregate Base
18.0"	.....	Sand Subbase
		Underdrain System
30.5"	.....	Total Section Thickness
Present Value Initial Construction Costs	.....	\$721,143/directional mile
Present Value Initial User Costs	.....	\$255,237/directional mile
Present Value Maintenance Costs	.....	\$215,446/directional mile
Equivalent Uniform Annual Cost	.....	\$61,595/directional mile

2. Pavement Design and Selection Manual – B. Krom

The Pavement Design and Selection Manual was last revised when the department utilized metric units. This revision changes the manual to English units and clarifies certain aspects of the process.

ACTION: The committee approved the revised *Pavement Design and Selection Manual* for distribution.

(Signed Copy on File at C&T)

André Clover, Acting Secretary
Engineering Operations Committee

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Attachment

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|-----|-------------------------|--------------------|--------------------------|
| cc: | G. J. Jeff | S. Mortel | J. Steele (FHWA) |
| | K. Steudle | D. Jackson | R. Brenke (ACEC) |
| | L. Hank | W. Tansil | G. Bukoski (MITA) |
| | EOC Members | D. Wresinski | R. J. Risser, Jr. (MCPA) |
| | Region Engineers | C. Libiran | D. Hollingsworth (MCA) |
| | TSC Managers | R. J. Lippert, Jr. | J. Becsey (MAPA) |
| | Assoc. Region Engineers | T. L. Nelson | M. Newman (MAA) |
| | T. Kratofil | T. Phillips | C. Mills (MPA) |
| | M. DeLong | K. Peters | J. Murner (MRPA) |
| | B. Kohrman | J. Ingle | G. Naeyaert (ATSSA) |
| | J. Shinn | C&T Staff | |



STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

GLORIA J. JEFF
DIRECTOR

April 18, 2005

Mr. Gary Jorgensen, Business Manager
Michigan Laborers' District Council
302 S. Waverly Road, Suite 8
Lansing, Michigan 48917-3631

Dear Mr. Jorgensen:

Pursuant to our discussions regarding the establishment of speed limits within MDOT work zones, it seems we continued to have significant differences as to the resolve for the 2005 construction season.

As a result and in consultation with members of the Governor's Office, I have committed to the following:

- For the 2005 construction season MDOT will have a statewide policy of 45 M.P.H. in those work zones where barrels and cones delineate the work zone.
- MDOT will continue to use concrete barriers in those situations where there are severe pavement drop off, traffic crossovers, or where there is a long term construction activity at a sole location (typically bridge work), then the project will be designed to incorporate concrete barriers.
- I renew my agreement to schedule a meeting with representatives of your council and other interested unions, members of Team MDOT, the Michigan State Police, and the Michigan Infrastructure and Transportation Association (MITA) to address a consistent and mutually agreed upon policy for the establishment of speed limits in work zones for the 2006 construction season and beyond.

Our continued efforts to address these issues can only result in a safer working environment which is ultimately our mutual goal. If you have any questions please feel free to contact my Chief of Staff Jacqueline Shinn at (517) 335-1069.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jacqueline Shinn".

Gloria J. Jeff
Director

cc: M. Fikes