OLD BUSINESS

1. Approval of the February 9, 2012, Meeting Minutes

The February 9, 2012, meeting minutes were approved.


The Engineering Operations Committee (EOC) is the principal technical policy making body in the department on engineering, research, and related matters. Guidance Document (GD) 10032 defines the roles and responsibilities of the EOC, committee memberships, EOC appointed subcommittees, and general operating procedures. The GD was last updated on April 1, 2004. Since then, the department has gone through organizational changes that will change the GD. Revisions have been made to reflect organizational changes as well as changes made to the EOC appointed subcommittees. The significant changes to the GD are as follows:

- The Engineer of Maintenance and the Engineer of Traffic and Safety are now represented by the Engineer of Operations, which is a new position.
- The State Environmental manager has been added as a member of the EOC. This is a new position.
- Four new subcommittees have been added to the EOC: Pavement Marking Operations Committee, Joint Pipe Operations Committee, Environmental Committee, and the Innovative Contracting Committee. The EOC membership includes representation from each subcommittee.

Approval of the revised guidance document is requested.

ACTION: The EOC approves the revised GD with minor editorial changes.
NEW BUSINESS

1. **Pavement Selection – B. Krom**

   a. **M-28 Rehabilitation/Reconstruction: CS 17062 JN 103229**

   The rehabilitation alternatives being considered are a Hot Mix Asphalt over Rubblized Concrete (HMA Alt #1a – EUAC $39,690/mile) and a Unbonded Jointed Concrete Pavement Overlay (JPCP Alt #2a – EUAC $43,682/mile) and the reconstruction alternatives being considered for the center two lanes of the passing relief section are a Hot Mix Asphalt Pavement (HMA Alt #1b – EUAC $20,308/mile) and a Jointed Concrete Pavement (JPCP Alt #2b – EUAC $25,513/mile). A life cycle cost analysis was performed and Alternative 1 was approved based on having the lowest EUAC. The pavement design and cost analysis are as follows:

   **Alt #1a**
   
<table>
<thead>
<tr>
<th>Thickness</th>
<th>Description</th>
<th>Mainline</th>
<th>Shoulders</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5”</td>
<td>HMA, 5E1, Top Course</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0”</td>
<td>HMA, 4E1, Leveling Course</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.0”</td>
<td>HMA, 3E1, Base Course</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.0”</td>
<td>Rubblized Concrete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5”</td>
<td>HMA, 5E03, Top Course</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0”</td>
<td>HMA, 4E03, Leveling Course</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Existing Base &amp; Sand Subbase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.5”</td>
<td>Total Section Thickness</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   Present Value Initial Construction Cost ........................................ $515,987/mile
   Present Value Initial User Cost .................................................. $9,233/mile
   Present Value Maintenance Cost .................................................... $123,765/mile

   **Alt #1b**
   
<table>
<thead>
<tr>
<th>Thickness</th>
<th>Description</th>
<th>Mainline</th>
<th>Shoulders</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5”</td>
<td>HMA, 5E1, Top Course (center two lanes of passing relief section)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0”</td>
<td>HMA, 4E1, Leveling Course (center two lanes of passing relief section)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.0”</td>
<td>HMA, 3E1, Base Course (center two lanes of passing relief section)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.0”</td>
<td>Aggregate Base</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.0”</td>
<td>Sand Subbase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30.5”</td>
<td>Total Section Thickness</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   Present Value Initial Construction Cost ........................................ $351,696/mile
   Present Value Initial User Cost .................................................. $398/mile
   Present Value Maintenance Cost .................................................... $102,738/mile

   b. **I-94/I-69 Reconstruction: CS 77111 & 77023 JN 85439**

   The reconstruction alternatives being considered are a Hot Mix Asphalt Pavement (HMA Alt #1 – EUAC I-94=$82,261 and I-69=$68,810/directional mile) and a Jointed Plain Concrete Pavement (JPCP Alt #2 – EUAC I-94=$57,395 and I-69=$56,662/directional mile). For both alternatives, the proposed plan grade will be raised at a project-wide average of 4.22’ (50.64”) higher than the existing plan grade elevation. A life cycle cost analysis was performed and Alternative #2 was approved based on having the lowest EUAC. The pavement design and cost analysis are as follows:
The reconstruction alternatives being considered are a Hot Mix Asphalt Pavement (HMA Alt #1 – lowest EUAC $1,342,908/directional mile) and a Jointed Plain Concrete Pavement (JPCP Alt #2 – lowest EUAC $1,118,387/directional mile). For both alternatives, the proposed plan grade will be lowered at a project-wide average of 10.4” lower than the existing plan grade elevation. A lifecycle cost analysis was performed and Alternative #2 was approved based on having the lowest EUAC. The pavement design and cost analyses for three separate maintaining traffic schemes are as follows:

- **I-94**
  - 12” Non-Reinforced Concrete Pavement, High Performance, with 16’ joint spacing
  - 16” Open Graded Drainage Course
  - 6” dia. Open-Graded Underdrain System
  - 28” Embankment

  Present Value Initial Construction Cost $807,420/directional mile
  Present Value Initial User Cost $262,285/directional mile
  Present Value Maintenance Cost $85,149/directional mile

- **I-69**
  - 11” Non-Reinforced Concrete Pavement, High Performance, with 14’ joint spacing
  - 16” Open Graded Drainage Course
  - 6” dia. Open-Graded Underdrain System
  - 27” Embankment

  Present Value Initial Construction Cost $925,464/directional mile
  Present Value Initial User Cost $129,477/directional mile
  Present Value Maintenance Cost $85,149/directional mile

- **I-96 Reconstruction: CS 82122 JN 89095**

  The reconstruction alternatives being considered are a Hot Mix Asphalt Pavement (HMA Alt #1 – lowest EUAC $1,342,908/directional mile) and a Jointed Plain Concrete Pavement (JPCP Alt #2 – lowest EUAC $1,118,387/directional mile). For both alternatives, the proposed plan grade will be lowered at a project-wide average of 10.4” lower than the existing plan grade elevation. A lifecycle cost analysis was performed and Alternative #2 was approved based on having the lowest EUAC. The pavement design and cost analyses for three separate maintaining traffic schemes are as follows:

  - 11.5” Non-Reinforced Conc Pavin, High Performance, w/ 14’ joint spacing
  - 16” Open-Graded Drainage Course
  - 6” dia. Open-Graded Underdrain System
  - 27.5” Total Thickness

  Present Value Initial Construction Cost $1,998,804/directional mile
  Present Value Maintenance Cost $172,067/directional mile

  Present Value Initial User Cost: MOT Option 1 $20,332,239/directional mile
  Equivalent Uniform Annual Cost: MOT Option 1 $1,118,387/directional mile

  Present Value Initial User Cost: MOT Option 2 $26,389,454/directional mile
  Equivalent Uniform Annual Cost: MOT Option 2 $1,419,426/directional mile
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Present Value Initial User Cost: MOT Option 3...............................$22,259,072/directional mile
Equivalent Uniform Annual Cost: MOT Option 3 .........................$1,214,149/directional mile

d. I-96 Reconstruction: CS 82122 JN 106952

The reconstruction alternatives being considered are a Hot Mix Asphalt Pavement (HMA Alt #1 – lowest EUAC $1,343,803/directional mile) and a Jointed Plain Concrete Pavement (JPCP Alt #2 – lowest EUAC $1,114,080/directional mile). For both alternatives, the proposed plan grade will be lowered at a project-wide average of 10.4” lower than the existing plan grade elevation. A life cycle cost analysis was performed and Alternative #2 was approved based on having the lowest EUAC. The pavement design and cost analyses for three separate maintaining traffic schemes are as follows:

11.5” .................................. Non-Reinforced Conc Pavt, High Performance, w/ 14' joint spacing
16” ............................................. Open-Graded Drainage Course
6” dia. .................................................. Open-Graded Underdrain System
27.5” ............................................. Total Thickness

Present Value Initial Construction Cost...........................................$1,999,132/directional mile
Present Value Maintenance Cost ....................................................$172,067/directional mile

Present Value Initial User Cost: MOT Option 1...............................$20,245,239/directional mile
Equivalent Uniform Annual Cost: MOT Option 1 .........................$1,114,080/directional mile

Present Value Initial User Cost: MOT Option 2...............................$26,430,362/directional mile
Equivalent Uniform Annual Cost: MOT Option 2 .........................$1,421,476/directional mile

Present Value Initial User Cost: MOT Option 3...............................$22,287,013/directional mile
Equivalent Uniform Annual Cost: MOT Option 3 .........................$1,215,554/directional mile

2. Guidance Document for the Statewide Alignment Construction Team – J. Gutting

The Statewide Alignment Construction Team has been established to facilitate and ensure alignment and consistency of construction operations statewide. The primary role of the SACT is to address all issues relative to the construction of Michigan’s transportation program. The team will develop, recommend, and implement new or revised processes, practices, and procedures relating to the construction of federal aid and state funded projects.

The team is chaired by the Engineer of Construction Operations and the membership includes the Region Construction Engineer from each Region. The team meets approximately every month and will include other work areas and external partners in the meetings as needed and requested to ensure open communications and optimal implementation of processes, procedures, and practices.

Approval of the guidance document is requested.

ACTION: The EOC approves the guidance document with minor revisions as follows:
- Add a member from the Statewide Design Alignment Team (SDAT) to the SACT. This member shall be a region member of the SDAT and will serve a
one year period on the SACT. The region representative shall be identified through the Region Engineer liaisons for Construction Field Services.

3. **MDEQ Consent Order Against MDOT for Bridge Painting Projects – M. Chynoweth**

The MDEQ visited two bridge painting projects and found spent blast material not contained, not labeled properly, and not characterized. As a result, the MDEQ has issued a consent order against MDOT and the City of Lansing over alleged violations of part 111 of the Natural Resources and Environmental Protection Act. Provisions of the consent order require MDOT to follow a compliance program consisting of submitting proper hazardous waste manifests, inspecting hazardous waste satellite accumulation areas, providing hazardous waste training within 180 days to appropriate staff, notifying the MDEQ of hazardous waste release, insuring hazardous waste manifests comply with part 111, and reporting any and all violations. The MDEQ is proposing that MDOT sign the consent order for both the MDOT bridges and the City of Lansing bridges, since current contract language allows the MDEQ to consider violations on a local agency project to be MDOT’s responsibility. MDOT is not being fined for the local agency project, but will be fined for the MDOT project violations.

It is recommended that MDOT accept the provisions of the consent order and revise boilerplate contract language to limit future exposure on local agency projects.

**ACTION:** The EOC accepts the consent order as proposed and directs the Bureau of Field Services to take the following actions:

- Beginning with calendar year 2013 bridge painting projects; require that someone from the owner agency with responsibility for the inspection of the bridge painting have attended bridge paint inspection training offered by the department. This may be an agency person or a consultant if the inspection is done by consultant.
- Develop a Construction Advisory that explains the new requirements for bridge paint inspection school attendance and the timeline for this requirement.

4. **Prompt Pay – G. Johnson**

With increased focus on prompt payment to contractors, the Chief Operations Officer is assigning the SACT to investigate and identify best practices to ensure prompt payment on construction projects. The SACT shall develop a checklist that can be handed out and discussed at preconstruction meetings for both MDOT and local agency projects. The checklist shall include items for:

- ensuring prompt pay
- ensuring proper pay
- potential actions/consequences for non-compliance

**ACTION:** The SACT shall bring draft recommendations to the June 2012 EOC meeting with a plan and schedule for implementation.

_Brenda J. O'Brien, P.E._
Engineering Operations Committee
BJO:lmw

cc:  K. Steudle  D. Jackson  R. Jorgenson (FHWA)
     L. Mester  W. Tansil  R. Brenke (ACEC)
     EOC Members  D. Wresinski  G. Bukoski (MITA)
     Region Engineers  C. Libiran  D. DeGraaf (MCA)
     TSC Managers  R. J. Lippert, Jr.  D. Hollingsworth (MCA)
     Assoc. Region Engineers  B. Shreck  J. Becsey (APAM)
     D. Parker  T. Phillips  M. Newman (MAA)
     M. DeLong  J. Murner (MRPA)