



**ENGINEERING OPERATIONS COMMITTEE
MEETING MINUTES
APRIL 3, 2014 – 9:00 A.M.
MULTI-MODAL CONFERENCE ROOM**

Present: G. Johnson M. Van Port Fleet S. Bower
P. Ajegba M. Geib B. Wieferrich
M. Bott K. Schuster M. Chynoweth
B. O'Brien J. Forster (FHWA)

Absent: R. Van PortFliet

Guests: L. Swanson S. Montes V. Weerstra
C. VanNorwick N. VanDrunen S. Rozema
J. Ealy

OLD BUSINESS

1. Approval of the March 6th, Meeting Minutes – G. Johnson

ACTION: The March 6, 2014 meeting minutes were approved as written.

NEW BUSINESS

1. I-75 at University Drive – L. Swanson & S. Montes, Oakland TSC

Based on a bridge inspection in January 2014, the University Drive Bridge over I-75 is in poor condition. Vehicular traffic over the bridge was temporarily closed to allow for temporary supports to be installed. Due to the condition of the bridge, the city of Auburn Hills has applied for Tiger Grant funding to replace the I-75 and University Dr. interchange. As part of the Tiger Grant application process, the City's consultant provided an operational analysis of different interchange alternatives which included a streamlined parclo interchange with University being a 5 lane cross section, a diverging diamond interchange, and a diamond interchange with roundabouts at the ramp terminals. The report also included an analysis of no build scenario. The no build scenario shows failing levels of service while the proposed interchange types showed improved operation with the future traffic levels.

The report also includes preliminary cost estimates and right-of-way impacts. The DDI and roundabout options do not have ROW impacts while the parclo option does. The DDI and roundabout options are both estimated to cost approximately \$12 million (without engineering costs) while the parclo option is estimated at \$21 million.

The safety benefit of the proposed interchanges was also reviewed. The DDI reduces the crossing conflict points to two per interchange. In the existing DDI's across the nation, a reduction in crashes has been realized. The MoDOT's DDI's have shown a 50% reduction in crash rates. It is expected that a DDI at University Dr. and I-75 would follow suit.

Location: I-75 at University Drive
Control Section: 63127

Job Number: 123143

Letting Date: TBD

ACTION: Metro Region will work with the consultant to modify the Operational Analysis report. Additional benefits were discussed at the meeting, primarily for the DDI option, that should be reflected in the cost benefit analysis. MDOT staff (Metro and Lansing Design Division) will also initiate further discussions with other states regarding DDI interchange configurations. The Metro Region is directed to update EOC, at a future meeting, on the results of discussions with other states, primarily Missouri.

2. I-96/Cascade Road Interchange, City of East Grand Rapids, – V. Weerstra

The Cascade Road Bridge over I-96 requires rehabilitation. Scoping review identified several geometric deficiencies with the I-96 mainline, Cascade Road lane configurations, bridge cross section and interchange geometrics that require attention in order to utilize federal aid on the project. These additional scope items require that the bridge be reconstructed as part of an overall interchange reconstruction project. An interchange study was initiated to investigate geometric alternatives for the interchange. The two alternatives include a Parclo option and a Diverging Diamond Interchange (DDI). The DDI is the preferred alternative. Grand Region is requesting approval from EOC to design and construct the DDI alternative.

Location: I-96/Cascade Road Interchange

Control Section: 41025

Job Number: 122943

Letting Date: 01-09-2015

ACTION: Approved

3. M-11 Intersection (Intersection of Remembrance and Wilson Roads), City of Walker, Kent County – V. Weerstra

The intersection is a skewed configuration and is elevated with all four legs sloping away from the intersection. The intersection geometry provides marginal sight distance which has resulted in higher than average crash history including increased personal injury crashes. During the scoping phase, several options were evaluated including adding dedicated left turn phasing, mast arm signals, offset turn lanes and indirect left turn lanes. None of these proposed modifications would improve the sight distance issues caused by the skewed intersection.

A Road Safety Audit (RSA) was performed to identify possible solutions. Various alternatives were analyzed such as traffic signal upgrades including adding left turn signal phasing and reconfiguring the intersection utilizing a roundabout. The traffic analysis indicates that the roundabout option will have the largest impact on reducing total crashes at the intersection. In addition, the roundabout option will provide the best mitigation for reducing high severity crashes.

The roundabout alternative has been endorsed by the city of Walker through city council resolution. The city is also looking to the roundabout design to create a gateway to the city. The city is also providing the majority of the right-of-way required for the roundabout design along with funding a significant portion of the construction costs.

ACTION: Approved

Steven Bower, Secretary
Engineering Operations Committee

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. Lippert D. Hollingsworth (MCA)
 Assoc. Region Engineers B. Shreck J. Becsey (APAM)
 D. Parker T. Phillips M. Newman (MAA)
 M. DeLong J. Murner (MRPA)