
**JACKSON AREA COMPREHENSIVE TRANSPORTATION STUDY (JACTS)
TECHNICAL ADVISORY COMMITTEE**

**FOR FURTHER INFORMATION
CONTACT:**

**Steven Duke, Executive Director
Susan Richardson, Senior Planner
Region 2 Planning Commission
(517) 788-4426**

DATE: Tuesday, April 12, 2016

TIME: 9:30 A.M.

**PLACE: Jackson City Hall
161 W. Michigan Ave-10th Floor
Jackson, MI 49201**

A G E N D A

Comments will be solicited on each item following discussion and prior to any final action.

1. Call to Order / Introductions
2. Public Comment
3. Approve Minutes of the Technical Advisory Committee Meeting of March 8, 2016 and Receive the Minutes of the Policy Committee Meeting of March 17, 2016 (enclosed) – **ACTION**
4. Agency Status Reports (enclosed) – **DISCUSSION**
 - City of Jackson
 - Jackson Area Transportation Authority
 - Jackson County Department of Transportation
 - Michigan Department of Transportation
 - Jackson County Airport-Reynolds Field
 - Enterprise Group (<http://www.enterprisegroup.org>)
5. JACTS Long Range Plan Update – Travel Demand Model Development Process, MDOT (see enclosure) – **DISCUSSION**
6. Michigan Avenue Reconstruction Update, MDOT-Jackson TSC Office – **PRESENTATION**
7. MDOT Call for Projects – FY 2017 High Risk Rural Road Project Applications (see enclosure) – **DISCUSSION**
8. Other Business
 - FHWA Update
 - MDOT Update
9. Public Comment
10. Adjournment

MINUTES

JACTS TECHNICAL ADVISORY COMMITTEE

Jackson County Tower Building
120 W. Michigan Avenue - 5th Floor
Jackson, Michigan

Tuesday, March 8, 2016

Members Present: Joe Michalsky, Jackson County Dept. of Transportation
Jon Dowling, City of Jackson – Engineering
Aaron Dawson (Alt.), Region 2 Planning Commission
Mike Rand, Jackson County Dept. of Transportation
Troy White, City of Jackson – Engineering
Andrea Dewey, FHWA (Ex-officio)
Kent Maurer, Jackson County Airport – Reynolds Field
Jack Ripstra, Blackman Charter Township
Chris Gulock (Alt.), MDOT – University Region
Simon Foster (Alt.), JATA
Rick Fowler, MDOT- Lansing
Todd Knepper, City of Jackson Public Works

Members Absent: Amy Torres, The Enterprise Group
Christopher Bolt, Jackson County Dept. of Transportation

Others Present: Oliver Lindsay, Citizen

ITEM 1 CALL TO ORDER

Chair Michalsky called the meeting to order at 9:31 AM.

ITEM 2 PUBLIC COMMENT

Chair Michalsky asked if anyone from the public wished to address the Committee. No public comments were offered.

ITEM 3 APPROVE MINUTES OF THE TECHNICAL ADVISORY COMMITTEE MEETING OF FEBRUARY 9, 2016 AND RECEIVE THE POLICY COMMITTEE MINUTES OF FEBRUARY 18, 2016

A motion was made by Mr. Rand, supported by Mr. Ripstra, to approve the Technical Advisory Committee meeting minutes of February 9, 2016 and receive the Policy Committee meeting minutes of February 18, 2016. The motion passed unanimously.

JACTS TECHNICAL ADVISORY COMMITTEE

March 8, 2016

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ITEM 4 AGENCY STATUS REPORTS

Project status updates were presented by the City of Jackson, Jackson Area Transportation Authority, Jackson County Department of Transportation, Michigan Department of Transportation, and Jackson County Airport-Reynolds Field. Copies of the agency status reports were included in the meeting packet. Some highlighted items:

- City of Jackson – Mechanic St. reconstruction project – plans need to be submitted to MDOT by March 18 to be in the June letting.
- JCDOT – Robinson Rd. project should have a mid-June start. Dearing Rd., Mt. Hope Rd., and Francisco Rd. will be in the June letting.
- JCDOT – The ROW permit has been acquired for the Fifth St. project. Project is still under plan review by Amtrak.
- Several MDOT projects have been updated with work start dates.
- Mr. Simon stated that JATA will be receiving 5 transit vans this month, no changes from last month.
- Jackson County Airport – expansion project is in construction holding pattern and working on design.

ITEM 5 JACTS FY 2014-2017 TRANSPORTATION IMPROVEMENT PROGRAM (TIP) AMENDMENTS

Mr. Fowler and Mr. Gulock presented seven MDOT amendments for the FY 2014-2017 TIP. These projects are primarily PE with one construction project. A motion was made by Mr. Maurer, supported by Mr. Dowling, to approve the TIP amendments as presented. The motion passed unanimously.

ITEM 6 JACTS FY 2017-2020 TRANSPORTATION IMPROVEMENT PROGRAM DEVELOPMENT

Mr. Dawson presented the current Draft FY 2017-2020 TIP, requesting that the Committee review all projects when possible to ensure accuracy and that the correct projects are listed.

ITEM 7 ASSET MANAGEMENT – 2016 COLLECTION OF PAVED NON-FEDERAL AID ELIGIBLE ROADS AND STREETS

Mr. Dawson presented an update from the Transportation Asset Management Council. TAMC has made \$25,000 available for reimbursement of expenses incurred during local road PASER ratings. Any government entity who is interested in applying must apply by the end of March 2016. Applications should be submitted to the TAMC Coordinator in writing.

JACTS TECHNICAL ADVISORY COMMITTEE

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OTHER BUSINESS

- **FHWA**: Ms. Dewey informed the Committee that the FAST Act is still under review by FHWA and more guidance will be released soon. One of the major changes is the Freight program of the new legislation. There is also a guidebook for incorporating bike lanes into resurfacing projects. Health considerations in street design are available on the FHWA website.
- **MDOT**: No other business was discussed.

ITEM 8

PUBLIC COMMENT

Chair Michalsky asked if anyone from the public wished to address the Committee. Mr. Dawson asked that both JATA and JCDOT submit resolutions of support after review of the FY 2017-2020 Draft TIP. Also, there will be a church event June 27-29th, with 400-600 people attending on Robinson Rd. which may conflict with construction.

ITEM 9

ADJOURNMENT

There being no further business, Chair Michalsky adjourned the meeting at 9:53 AM.

Aaron Dawson
Senior Planner

Region 2 Planning Commission



Jackson Area Comprehensive Transportation Study

MINUTES

JACTS POLICY COMMITTEE

Jackson County Tower Building
120 W. Michigan Avenue – 5th Floor
Jackson, Michigan

Thursday, March 17, 2016

Members Present: Elwin Johnson, Region 2 Planning Commission
Phil Moilanen, Jackson Area Transportation Authority
Steve Shotwell, Chair, Jackson County Commission
Todd Brittain, Leoni Township
Pete Jancek, Blackman Charter Township
Marston Fortress, Spring Arbor Township
Keith Acker, Sandstone Charter Township
John Feldvary, Jackson County Airport-Reynolds Field
Mike Overton, Jackson County Department of Transportation
Dan Wymer, Napoleon Township
Jim Dunn (Alt), Summit Township

Members Absent: Joe Michalsky, JACTS Technical Advisory Committee
Bill Jors, Mayor, City of Jackson
John Lanum, MDOT – Lansing
Patrick Burtch, City of Jackson

Others Present: Steven Duke, Region 2 Planning Commission
Aaron Dawson, Region 2 Planning Commission
Chris Gulock, MDOT – University Region
Troy White, City of Jackson
Dave Herlein, Spring Arbor Township

ITEM 1 CALL TO ORDER

Mr. Jancek called the meeting to order at 8:04 AM. A quorum was present.

ITEM 2 PUBLIC COMMENT

No public comments were received.

JACTS POLICY COMMITTEE MINUTES

March 17, 2016

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ITEM 3 **APPROVE MINUTES OF THE POLICY COMMITTEE MINUTES OF FEBRUARY 18, 2016 AND RECEIVE THE TECHNICAL ADVISORY COMMITTEE MEETING MINUTES OF FEBRUARY 9, 2016**

The motion was made by Mr. Brittain, supported by Mr. Johnson, to approve the Policy Committee meeting minutes of February 18, 2016 and to receive the Technical Advisory Committee meeting minutes of February 9, 2016 as presented. The motion carried unanimously.

ITEM 4 **AGENCY STATUS REPORTS**

Project status updates were reviewed by the City of Jackson, Jackson Area Transportation Authority, Jackson County Department of Transportation, Michigan Department of Transportation, and Jackson County Airport – Reynolds Field.

City of Jackson – Wisner St. project has Michigan Paving and Materials as the low bidder approximately 16% under the engineer's estimate. West Ave. is complete except for spring restoration. The Lansing/Ganson signal work will begin next week or shortly thereafter. Kibby Rd. will be reduced to two lanes in 2017, removing the entire boulevard section. Proposals from consultants are due March 1st, 2016.

JATA – Mr. Moilanen reviewed all of the vehicle purchase and building upgrade projects in the packet, focusing on the motor replacements and Ford Transit purchases in FY 2016.

Jackson County DOT – A list of new FY 2018-2020 Draft TIP projects are included in the staff report.

MDOT – Mr. Gulock reviewed the included projects. I-94 bridge repairs at several interchanges will begin in mid-April. M-50 will be reconstructed in two phases, phase one being Michigan to Wildwood and phase two is Ganson to North.

Jackson County Airport – Tree removal on Maynard is now complete, and the final design for the runway project is underway. There are approximately two months of work left to clear the area for the project. The committee raised concerns about road damage from the amount of trucks hauling material from the airport. Traffic control is also a concern.

ITEM 5 **JACTS FY 2014 – 2017 TRANSPORTATION IMPROVEMENT PROGRAM (TIP) AMENDMENTS**

Mr. Gulock presented several requested modifications to the JACTS FY 2014-2017 TIP. Six projects were added for the preliminary engineering of FY 2017 projects. There was also a request for moving and changing funding amounts for the I-94 BL project. The committee discussed the project and agreed not to take action on this request until there is another public meeting to discuss the design changes. A motion was made by Mr. Jancek, supported by Mr. Brittain, to approve the JACTS FY 2014-2017 TIP amendments for the six preliminary engineering projects and take no action on the I-94 BL project (until another public meeting is held by the City of Jackson – Chair Shotwell indicated that there would be a level of service reduction with the current design). The motion carried unanimously. The I-94 BL project (#113565) TIP amendment will be reconsidered at the next regular meeting.

JACTS POLICY COMMITTEE MINUTES

March 17, 2016

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ITEM 6 JACTS FY 2017-2020 TRANSPORTATION IMPROVEMENT PROGRAM (TIP) DEVELOPMENT

Mr. Dawson distributed copies of the currently proposed Draft FY 2017-2020 TIP. Mr. Dawson requested that each agency review all projects in the Draft TIP and the illustrative list. Any additions or corrections should be sent as soon as possible.

ITEM 7 ASSET MANAGEMENT – 2016 COLLECTION OF PAVED NON-FEDERAL AID ELIGIBLE ROADS AND STREETS

Mr. Dawson notified the committee that any local agencies interested in being reimbursed for local road PASER data collection had to apply by the end of March. There are \$25,000 dollars available statewide and it will be distributed on a “first come, first served” basis. Interested parties should email the Transportation Asset Management Council Coordinator directly.

ITEM 8 OTHER BUSINESS

The Moon Lake Rd. bridge was discussed due to a hole in the decking. Also, the resurfacing project that was completed on McDevitt Rd. seems to be failing very quickly. There was a long discussion about JATA funding and service limits. Mr. Jancek raised concerns that despite rural funding going to JATA, rural areas must still pay extra to receive service.

ITEM 9 PUBLIC COMMENT

No additional public comments were received.

ITEM 10 ADJOURNMENT

There being no further business, Chair Shotwell adjourned the meeting at 8:50 AM.

Aaron Dawson
Senior Planner

TO: JACTS Technical Advisory and Policy Committees

DATE: April 1, 2016

FROM: Jon H. Dowling, P.E.

SUBJECT: TIP Project Status

2012

Trail St at Railroad Crossing (Local Safety Program) – Construct non-motorized crossing and bridge sidewalk repair. MDOT contract is finalized. City received the payment from the bond company. Final work to be completed in the Spring.

2015

Wisner: Argyle to Boardman (Cat F) – Mill and resurface with new sidewalk on the east side. Hubbell, Roth and Clark (HRC) is the City's consultant. Michigan Paving and Materials is the contractor. **Pre-Construction meeting is scheduled for April 5 and work is planned to start mid April.**

West Ave: Bloomfield to High (urban) - Reconstruct pavement with curb repairs. Wade-Trim is the City's consultant. Bailey Excavating is the City Contractor. Project is complete except for Spring restoration.

Lewis Street Bridge (Local Bridge) – Bridge replacement over the Grand River. FTC&H is the City's consultant. Bridge is complete.

Lansing-Ganson Signal (Urban) – New box span signal with a south bound left turn lane add. FTC&H is the City's Consultant. Bids received in September, Bailey Excavating is the contractor. **Construction started March 21.**

2016

Mechanic: Morrell to Washington (Urban) - Reconstruction with water main replacement. DLZ is the City's consultant. **Project is in the June letting.**

2017

Kibby Road: City Limits to West Ave (Urban) - Reconstruct pavement with curb repairs on boulevard islands and curb replacement on outside lanes to reduce pavement width to one lane. **City Council awarded the engineering services to Mannik Smith Group on March 15.**

2018

Fourth Street: Horton to Audubon (Urban) – Roadway resurfacing with a new roundabout at Hickory and Fourth. **City Council awarded the engineering services to Mannik Smith Group on March 15.**



2350 EAST HIGH STREET
JACKSON, MICHIGAN 49203-3490
(517) 787-8363 FAX (517) 787-6833

**Projects
2014-2017 TIP
(April, 2016 Report)**

FY 2014

1. **Vehicle procurements**
 - a. **5 Ford Transits and 1 El Dorado have been ordered**
 - b. **Will begin taking delivery of Ford Transits this month**
2. **Transit Center Refurbishment**
 - a. **Contract has been awarded**
 - b. **Projected project completion by Mid-Summer 2016**
3. **HVAC replacement and upgrade at Main Base**
 - a. **Contract has been awarded**
 - b. **Projected start date 3rd Quarter FY2016**

FY 2015

1. **ADA Compliant Software for increasing rider mobility**
 - a. **Researching vendors and available technologies**
 - b. **Plan on starting project in August 2016.**

FY 2016

1. **Bus engine replacements**
 - a. **Replace all Gillig motors to extend useful life of busses**
 - b. **Projected start date 4th Quarter of FY2016**
2. **Vehicle procurements**
 - a. **Replace 3 minivans with Ford Transits**
 - b. **Projected start date 4th Quarter of FY2016**



**JACKSON
COUNTY**
**DEPARTMENT OF
TRANSPORTATION**

Christopher J. Bolt, MPA, PE
Managing Director

Robert D. Griffis
Director of Operations

Angela N. Kline, P.E.
Director of Engineering

Shawn R. Surque
Project Manager

Vacant
Administrative Services Manager

**Jackson Area Comprehensive Transportation Study (JACTS)
Technical Advisory Committee & Policy Committee
April 12, 2016**

2016 PROJECTS:

ROBINSON ROAD: WEST MICHIGAN AVENUE TO MCCAIN ROAD (STUL): In the May 6th letting

DEARING ROAD: COUNTY FARM ROAD TO MCCAIN ROAD (STP-Rural): Final plans submitted; scheduled for the June letting

MT. HOPE ROAD: GRASS LAKE VILLAGE TO I – 94 (STP-Rural): Final plans submitted; scheduled for the June letting

FRANCISCO ROAD/CLEAR LAKE ROAD: EAST MICHIGAN AVENUE TO I – 94 (STP-Rural): Final plans submitted; scheduled for the June letting

FIFTH STREET: PAGE AVENUE TO BROAD STREET (Category F and Streetscape TAP Grant): Amtrak has approved the plans and MDOT has awarded the contract. Preconstruction meeting March 30th

WEST MICHIGAN AVENUE BRIDGE OVER MDOT RAILROAD AND RAILROAD STREET (Local Bridge): Preliminary plan drawings were submitted to MDOT; railroad meeting upcoming. Construct in 2017

2017 PROJECTS

ROBINSON ROAD: SPRING ARBOR ROAD TO KIBBY ROAD (STUL): Preliminary plans and SHPO application underway

EAST MICHIGAN AVENUE UNDER THE RAILROAD VIADUCT (STP-Rural): Preliminary plans underway

BERRY ROAD: RIVES EATON ROAD TO LANSING AVENUE (STP-Rural): Preliminary plans underway

RIVES EATON ROAD: PERRINE ROAD TO BERRY ROAD (STP-Rural): Preliminary plans underway

WEST MICHIGAN AVENUE: GLASGOW ROAD THROUGH PARMA VILLAGE (STP-Rural): No activity

RIVES JUNCTION ROAD NON-MOTORIZED TRAIL (Safety): Just received MDOT approval

PEDESTRIAN SIGNALS @ AIRPORT ROAD/SPRINGPORT ROAD/COUNTY FARM ROAD (Safety): Just received MDOT approval

*****NEW FY 2018 – 2020 TIP PROJECTS (PRELIMINARY)*****

2018 PROJECTS

WEST MICHIGAN AVENUE: M – 60 TO GLASGOW ROAD (STUL):

NORVELL ROAD: EAST MICHIGAN AVENUE TO PHAL ROAD (STP-Rural)

2019 PROJECTS

WEST MICHIGAN AVENUE: PARMA VILLAGE TO M - 99 (STP):

LAURENCE AVENUE: RR ROW TO WILDWOOD AVENUE (STUL):

LAURENCE AVENUE: WILDWOOD AVENUE TO WEST ARGYLE STREET (STUL):

2020 PROJECTS

O'NEILL DRIVE: AIRPORT ROAD TO THE DEAD END (STUL):

SPRINGPORT ROAD: COUNTY FARM ROAD TO RIVES JUNCTION ROAD (STUL)

NORVELL ROAD: PHAL ROAD TO RABY ROAD (STP-Rural):

Four Local Road Professionals
2400 North Elm Road, Jackson, Michigan 49201-7643
Telephone (517) 788-4230 * Fax: (517) 788-4237

<http://www.jerc-roads.org>



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
LANSING

KIRK T. STEUDLE
DIRECTOR

April 12, 2016

FY 2016

I-94 (OV Parma Rd, UN Gibbs Rd, OV Blackman Rd.) - Shallow and deep concrete overlays, full depth deck patches, concrete T-beam repairs, substructure repairs, bridge railing repairs, approach work, partial painting, thrie beam railing retrofit, concrete surface coating and traffic control. Project was let in December and will start in **early May**.

I-94 (M-99, Michigan Ave, EB & WB over Concord Road, Dearing Rd, Sandstone Rd, Airport Rd) - Deck patching, joint replacement, epoxy overlay, partial paint, steel and concrete beam repairs, steel beam high load hit repairs, substructure repairs, approach work, barrier rail patching and maintaining traffic. Project was let in December and will start in **early May**.

M-50 (Ganson to North and Michigan to Wildwood) – Full pavement reconstruction with drainage and other improvements. Project **was let in March project will begin April 18th**.

Lansing Ave over I-94-Bridge repair due to a high load hit this fall. Project is a partial deck replacement and beam repairs. Project was let in December and will start in in early June

M-60 (EB & WB OV I-94), (PE, SUB & ROW) – Bridge Replacement
Project scope is under development.

US-127 at Floyd – Offset SB Rt. Turn Lane & Overhead Flashing Signal
Project in design, all “M” funds.

M-50 at Murray Rd. – Tree Removal & HMA Shoulder Addition.
Tree removal complete. Shoulder design underway, all “M” funds.

FY 2017

I-94 BL/W. Michigan Ave. (Brown St. to Washington / Louis Glick) – Full concrete pavement roadway reconstruction with water main, lighting and sidewalk replacement. Also includes City of Jackson initiated two-way conversion of Louis Glick Hwy. and Washington. Continuing to work on plan development. Right-of-Way acquisition will begin this summer.

M-50 (Rives Junction to Pope Church Road) – Micro-surface of existing roadway pavement.

I-94 BL (Cooper Street to Dwight Street) – Single course mill and resurfacing with ADA sidewalk ramp improvements.

M-106 (Bunker Hill to East of Sayers Road) – Single course mill and resurfacing.

M-50/US-127 BR (North Street to Boardman) – Longitudinal joint repair with asphalt mastic and micro-surface materials.

M-99 (Railroad St. to Jackson/Eaton County Line) – Fiber mat placement with single course micro-surface.

FY 2018

M-60 (Emerson to Renfrew) – HMA cold milling and 2 course overlay with joint repairs, intermittent curb and gutter replacement, minor drainage improvements and intersection improvements. Project design began fall 2015.

M-60 (Chapel Rd to Emerson Rd) - Rehabilitation and intermittent reconstruction including widening for center left-turn lane between Chapel Road and Dearing Road; drainage improvements, sidewalk upgrades and possible non-motorized work. Project design began fall 2015.



Jackson County Airport – Reynolds Field

Flying Jackson Forward!

Kent L. Maurer, Airport Manager

JACTS Airport Report April 2016

- Phase I Runway 7-25 Construction project to start April 4, 2016
- Move Airport Road-Argyle Street curve to begin early on
- Continue landfill excavation is the top priority
- Coordination with FAA for moving FAA navigational aids to new Runway 7-25 locations is on going



JACTS Travel Demand Forecast Model Proposed Development Schedule	Lead Agency	2016										2017												2018					
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Develop model road network for Base Year	MDOT																												
Develop model Travel Analysis Zones (TAZs) for Base Year	MDOT																												
Collect and process State and local road agency traffic count data	MDOT																												
Develop Base Year Socioeconomic (SE) data and Special Generators	MDOT																												
MPO review of Base Year Socioeconomic (SE) data	MPO																												
MPO approval of Base Year Socioeconomic (SE) data	MPO																												
Model calibration/validation for Base Year	MDOT																												
Develop Future Years Socioeconomic (SE) data and Special Generators	MDOT																												
MPO review of Future Years Socioeconomic (SE) data	MPO																												
MPO approval of Future Years Socioeconomic (SE) data	MPO																												
Identify capacity deficiencies for Base Year and Future Years	MDOT																												
Select and prepare preliminary capacity project lists to test	MPO																												
Evaluate alternative capacity project lists	MDOT																												
MPO approval of "recommended" project list	MPO																												
Draft modeling and Socioeconomic (SE) chapters for LRTP document	MDOT																												
MPO review of modeling and Socioeconomic (SE) chapters	MPO																												
MPO approval of modeling chapters for LRTP document	MPO																												

Jackson Area Comprehensive Transportation Study (JACTS) Travel Demand Model Development Overview and Key Dates

The development of the JACTS travel demand model is underway and a development schedule has been agreed upon by MPO and MDOT staff; please refer to the model development timeline. The base year of the model will be 2014 with a horizon forecast year of 2045 and interim forecast year's analysis of 2025 and 2035. Socio-economic (SE) Data, including population, household and employment data, are used to calculate the type and number of trips produced or attracted to each Traffic Analysis Zone (TAZ) within the model. These trips are assigned to the model road network which connects all of the TAZs.

JACTS staff and local agencies play an important role in the model development by providing local knowledge to ensure the accuracy of model inputs and review of the model outputs. MDOT will submit data to MPO staff who will work with the local agencies to review the data. The Technical committee will work directly with MDOT staff to review model outputs and develop projects to test in development of the final Metropolitan Transportation Plan (MTP). Key dates of model development involving MPO committee and local agency input are listed below and correspond to the model development timeline.

April 15, 2016	MDOT staff Submit Network to MPO staff for review
May 31, 2016	MPO staff submit Network comments to MDOT staff
July 1, 2016	MDOT staff submit base year SE-Data to MPO staff for local review
September 16, 2016	MPO staff submit reviewed SE-Data to MDOT staff
October 2016	MPO committee approval of base year SE-Data
December 9, 2016	MDOT staff submit forecast years SE-Data to MPO staff for review
March 17, 2017	MPO staff submit reviewed forecast SE-Data to MDOT staff
April 2017	MPO committee approval of forecast years Se-Data
June 2017	Capacity deficiencies, model results presented at TAC meeting
July – Sept. 2017	Evaluate alternative capacity projects
October 2017	MPO approval of recommended project list for MTP
November 2017	MDOT submit draft of modeling chapter for MTP
December 2017	MPO committee approval of modeling chapter for MTP



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
LANSING

KIRK T. STEUDLE
DIRECTOR

March 22, 2016

Ms. Denise Donohue, Director
County Road Association of Michigan
417 Seymour Avenue, Suite 1
Lansing, Michigan 48933-1143

Mr. John LaMacchia II, Legislative Associate
Michigan Municipal League
208 North Capitol Avenue, 1st Floor
Lansing, Michigan 48933-1354

Dear Ms. Donohue and Mr. LaMacchia:

Fiscal Year 2017 Federal High Risk Rural Roads Program

The Michigan Department of Transportation (MDOT) is pleased to announce the solicitation of applications for the fiscal year (FY) 2017 High Risk Rural Road (HRRR) program. Federal funds for the HRRR program are derived from the HRRR Special Rule under Title 23 U.S. Code Section 148(g)(1). The FY 2017 federal budget for this program is estimated to be \$2,000,000. This amount may be subject to revisions. We are asking the County Road Association of Michigan and the Michigan Municipal League to distribute this notice to their member agencies.

Local agencies are allowed to submit more than one project for consideration. Federal safety funds shall not exceed \$600,000 per project or a maximum amount of \$2,000,000 per local agency for the fiscal year (including previously selected FY 2017 Highway Safety Improvement Program (HSIP) projects). Selected HRRR projects are to be obligated in FY 2017; the local agency will not be allowed to delay a selected HRRR to a different fiscal year.

A HRRR is defined as: 1) any roadway functionally classified as rural major or minor collector or a rural local road that the crash rate for fatalities and incapacitating injuries exceeds the statewide average for those functional classes of roadway, or 2) any roadway functionally classified as rural major or minor collector or a rural local road that will likely have increases in traffic volumes that are likely to create a crash rate for fatalities and incapacitating injuries that exceeds the statewide average for those functional classes of roadway.

MDOT has used the following data to determine the required statewide average crash rate:

74,531	Total miles of roadway functionally classified as rural major or minor collector or rural local road.
7,094	Total number of fatalities or incapacitating injuries, located on roadways classified as described above, for the time period 2010 – 2014.
0.10	Statewide average frequency of such crashes per mile of such roadway over a five year time period.

Applications are to be electronically submitted or postmarked by Friday, April 29, 2015.

Refer to Attachment A for information regarding submitting candidate Safety Project Applications.

FY 2017 Project Eligibility Requirements:

1. The roadway is functionally classified as rural major collector, rural minor collector or rural local road.
2. Within the most recent five year time period of available crash data, **at least one intersection crash, resulting in fatalities (K) or incapacitating (A) injuries has occurred; or one such serious crash has occurred within a 10.0 mile (1/0.10) long segment of such roadway.** With the most recent five year period of time, all UD-10 forms having 'K' or 'A' injuries and any other UD-10 forms of lesser degree of severity, that support the scope of project work, shall be included with the project's application. Proposed projects with higher crash concentrations of 'K' and/or 'A' crashes may receive a higher priority than other projects.

FY 2017, Selected Safety Projects General Information:

- Projects will be funded at 90 percent federal funds and 10 percent local funds.
- Portion eligible for federal aid:
 - Project's Construction Phase ('A' Phase.)
 - Preliminary Engineering, **ONLY** if criteria of Preliminary Engineering Section outlined below is met.
- Portion not eligible for federal aid:
 - Right-of-way costs.
 - Preliminary engineering, unless criteria of Preliminary Engineering Section outlined below is met.
 - Construction engineering.
 - Decorative items, not safety related in nature.
- Selected projects will be 'Lump Summed' at the lesser of the original estimate plus \$20,000, or the original estimate plus 20 percent. Projects may, at MDOT's discretion, be funded by a "Pro-Rata" method.
- Let by MDOT or performed by Local Force Account, as approved by MDOT's Local Agency Program (LAP) office: information found at www.michigan.gov/mdot ~ Doing Business ~ Local Agency Program ~ Force Account and Local Agency Reimbursement System (LARS) Information.
- All social, economic and environmental impacts within the project limits impacts must be mitigated before federal funds can be appropriated and obligated. Project applications which are expected to have significant public controversy and/or require an environmental assessment will not be considered until these outstanding issues have been resolved.
- Local agencies within Metropolitan Planning Organization (MPO) areas must coordinate with their MPO to ensure inclusion of their project in the area's Transportation Improvement Program for the fiscal year for which the project was selected. LAP will supply a list of selected projects to the MDOT Planning Group, but it is the local agency's responsibility to ensure these projects are included in the State Transportation Improvement Program.

FY 2017, Selected Safety Project Design Requirements:

- The proposed projects must demonstrate a direct correlation to correct an area related to the fatal or incapacitating injury crashes. The proposed project limits must be relevant to the roadway features attributable to the crashes, and are subject to approval by MDOT.
- Meet current standards and warrants, current Americans with Disabilities Act and Buy America requirements.
- Designed in accordance with 3R, 4R, American Association of State Highway and Transportation Officials (AASHTO) Geometric Design of Highways and Streets, or the AASHTO Guidelines for Geometric Design of Very Low-Volume Local Roads Standards. Use of the Capital Preventative Maintenance guidelines and fixes will not be permitted.
- Traffic signal upgrade projects shall include the installation of signal back plates with reflectorized strips.
- High friction surface projects shall use or follow the intent/material requirements of the most current MDOT Special Provision.
- Corridor (or local agency-wide) permanent signing or pavement marking projects must be of a higher standard than the minimums required by the Michigan Manual of Uniform Traffic Control Devices and/or standards. These type projects shall include additional signing improvements beyond upgrading sign reflectivity requirements; i.e., adding reflective sheeting to sign posts, larger signs, etc., and permanent pavement markings shall include improvements such as being recessed or high quality 'durable' markings.

Preliminary Engineering (up to 10 percent of the estimated eligible construction costs)

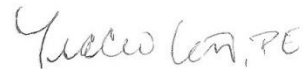
Preliminary engineering for selected safety projects may be programmed for one or more of the following:

- Transparency (five percent) location (funded at 90 percent federal funds/10 percent local funds)
 - Identified in the 2009 through 2013 Transparency (5%) Reports.
 - Proposed scope of work must address the noted location deficiencies.
 - Projects that are on the Transparency (5%) Report must be clearly identified.
- MDOT Local Safety Initiative (LSI) identified location (funded at 50 percent federal funds/50 percent local funds)
 - Proposed scope of work must address the noted location deficiencies reviewed and identified by the LSI Program.
 - A copy of the MDOT LSI written suggestion list must be included with application.
- Traffic Signal Optimization
 - Funded at 80 percent federal funds/20 percent local funds.
 - Must complete and implement traffic signal optimization study to analyze and adjust timing of signal controllers.
 - Signals should be studied to allow for a minimum of one second all red phase, and the yellow change interval phase evaluated to meet current guidelines.

- Maximum of \$5,000 total cost will be allowed per signal location for the analysis and adjustment of signal controllers.
- Signal component upgrades are not permitted under this category.
- It is anticipated that this work would be done via force account work by the local agency. Physical adjustments of timing will be programmed under an 'A' Phase.

Our goal is to maintain a fiscally constrained program while maximizing the use of available federal funds. If you have any questions, please feel free to contact Pamela Blazo at (517) 335-2224 or at blazop@michigan.gov.

Sincerely,



Tracie Leix, P.E.
Local Agency Programs Engineer
Development Services Division

Enclosure

cc: Dave Morena, FHWA
Matt DeLong, MDOT
Pam Boyd, MDOT
Mark Harbison, MDOT
Pamela R. Blazo, MDOT
Steve Shaughnessy, MDOT
MDOT Region Engineers
MDOT TSC Managers
MDOT LAP Listserv Members
Metropolitan Planning Organizations
Rural Task Forces



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
LANSING

KIRK T. STEUDLE
DIRECTOR

March 17, 2016

Attachment A - Submitting Candidate Safety Project Applications

Applications submitted electronically must be received no later than **Friday, April 29, 2016**.

- The Local Safety Program Call for Applications Funding Year 2017 Electronic Submittal Form located at www.michigan.gov/mdot ~ Doing Business ~ Local Agency Program ~ Safety Program ~ FY 2017 HRRR Call for Safety Electronic Submittal.
- Electronic submittals are limited to 15MB.

Applications sent hardcopy must be postmarked no later than **Friday, April 29, 2016**.

- Projects postmarked after Friday, April 29, 2016, at MDOT's discretion, may or may not be reviewed for selection.
- It is recommended that your application be submitted by certified mail or other traceable delivery service.

Applications are reviewed by a committee and selected based on criteria which include:

1. Cover Letter
 - Provide a brief overview discussion as to the proposed project, crash pattern that has been experienced and how the proposed scope of work will remedy the past crash history.
2. MDOT Form 1627
 - Located at www.michigan.gov/mdot ~ Doing Business ~ Forms. At drop-down menu, select Local Government ~ 1627 - Safety Project Submittal Form.
3. MDOT Time of Return (TOR) Analysis*
 - Only the MDOT TOR spreadsheet will be accepted*. A copy of the data input page and results page must be included in the application submittal.
 - Guardrail oriented projects and independent RSA submittals do not require a TOR analysis.
 - Crash Reduction factors are listed in the TOR Spreadsheet located at: www.michigan.gov/mdot ~ Doing Business ~ Local Agency Program ~ Safety Program ~ Time of Return (TOR) Calculation Spreadsheet.
4. UD-10s
 - Include for all crashes that are used to compile the TOR or Highway Safety Manual analysis/computation. Note: The HSM requires all crashes to be input, including animal crashes. Animal crashes are NOT to be submitted with the application.
 - Use most current 3 to 5 year period of available data (2010-2012 through current availability).
 - Include only those UD-10 crash reports that relate to the proposed scope of work.

5. Detailed cost estimate or Michigan Engineers Resource Library estimate.
6. Map showing project location(s).

Applications, to provide additional support, may also include:

- Crash analysis to determine the proposed project's scope.
- Crash concentration maps in the proposed project's limits.
- MDOT LSI written suggestion list (required if requesting participation for Preliminary Engineering)
- Photos of existing project site conditions.
- Preliminary proposed plan view, cross-sections, and/or profiles.
- Ability to deliver a construction package for obligation within this fiscal year.
- Project coordination with other construction projects.
- Highway Safety Manual Analysis*

*Highway Safety Manual Analysis

A Highway Safety Analysis may replace or supplement the TOR Analysis. Guardrail oriented projects or independently submitted RSA locations do not require a Highway Safety Manual (HSM) analysis. For locations where little to no crash history exists, proposed systemic safety improvement or where additional support of the TOR is desired, Local Agencies are encouraged to utilize the HSM.

FY 2017, HSM Analysis Requirements:

- Use the MDOT HSM spreadsheet located at www.michigan.gov/mdot ~ Doing Business ~ Local Agency Program ~ Safety Program ~ Highway Safety Manual (HSM) Analysis Spreadsheet.
- An electronic copy of the analysis or screenshots of the input and output tabs must be included with the application submittal.
- Calibration factors for use as part of HSM analysis have been compiled by MDOT and are included in the spreadsheet. Local Agencies performing hand calculations will need to refer to the www.michigan.gov/highwaysafety website (see below) for calibration factors and distribution values.
- For any questions an agency might have regarding the HSM Calibration factors, please contact Dean Kanitz, MDOT Traffic and Safety Unit, at 517-335-2855.

Additional information for application development:

- Visit www.michigan.gov/highwaysafety or link to it from the MDOT Local Agency Safety Program Website
 - Traffic Crash Data (Maps) per Region (Traffic Crash Data)
 - HSM Calibration Factors/Distribution Values (Safety Links, Traffic Standards and Typicals, Safety Programs, Highway Safety Manual)
 - Safety Guides (Safety Links, Traffic Standards and Typicals, Safety Programs, Safety Guides)

Please send all eligible projects and supporting information by **Friday, April 29, 2016**, to the following:

Mrs. Pamela R. Blazo, P.E.
Safety Engineer, Local Agency Programs
Development Services Division
425 W. Ottawa Street, P.O. Box 30050
Lansing, Michigan 48909-7550

Project Application Examples

- Systemic Safety Improvements such as corridor/area wide shoulder and center line rumble strips, improved permanent signing (such as chevrons on curves or intersection signing), pavement markings (such as the addition of edge line markings), clear vision corners or reflectorized backplates
- High Friction Surface applications at spot locations
- Elimination, replacement or installation of guardrail/Removal of fixed objects
- Traffic and pedestrian signal optimization, installation, and upgrades
- Access management
- Intersection safety improvements (Lighting, Stopping Sight Distance, Clear Vision Corners)
- Horizontal and vertical curve modifications
- Sight distance and drainage improvements
- Bridge railing replacement or retrofit
- Mid-block pedestrian crossings; improvements to school zones

This list is not all inclusive and other types of safety improvement projects can be submitted for consideration.

Fast Facts 2016

OVERVIEW The Michigan Department of Transportation (MDOT) has jurisdiction over:

9,668

 route miles (M, US and I routes)
32,043 lane miles
(including ramps)

4,755

 highway, railroad and
pedestrian bridges

665

 miles of
state-owned
railroad

4

 state-owned airports
(Linden, Plymouth,
Houghton Lake Heights, Romeo)

85

roadside parks

78

rest areas

MDOT also provides financial and/or technical assistance for portions of the transportation system owned and operated by others, including local transit systems, airports, intercity bus, trails, etc.

	Route Miles	Lane Miles
Interstate	1,240	6,046
Freeway	1,944	9,037
Non-Freeway Trunkline	7,723	18,411
National Highway System (NHS)	6,475	25,032
Non-Trunkline NHS	1,210	4,829
Federal Aid Highways	36,489	98,117

Sources: MDOT Sufficiency, Highway Performance Management System (HPMS), Michigan Geographic Framework (MGF) Query.



HIGHWAYS and ROADS

Although the state trunkline system (M, US or I routes) accounts for only 8 percent of centerline miles, it carries 53 percent of all traffic and approximately 66 percent of commercial truck traffic.

- There were 97.1 billion annual vehicle miles of travel (AVMT) for all roads (2014).
 - 51.1 billion AVMT on trunkline roads.
 - 46 billion AVMT on non-trunkline roads.

As noted in the 2016-2020 Five-Year Program, MDOT will invest \$1.22 billion in its highway program, supporting 13,123 jobs during 2016.

- Michigan's system of more than 122,000 miles of public roads is:
 - 9th largest in the nation.
 - 28th largest state highway system.
- Michigan's local roads are the nation's:
 - 4th largest county road system.
(89,444 route miles as of 2013 FHWA statistics)
 - 20th largest city street system.
(21,198 route miles as of 2013 FHWA statistics)



LOCAL TRANSIT SYSTEMS

MDOT provides a portion of the funding for the local bus transit system, which consists of 78 agencies ranging from city and county-level bus systems to multi-county authorities and one fixed guide-way system. There are 38 specialized transportation service providers operating in Michigan.

- About 30 percent of the cost of operating local transit comes from state transportation funds.

- Overall, local public transit provided more than an estimated 81 million passenger trips in urban areas and 8.2 million trips in non-urban areas in 2015.
- Local transit services contributed nearly \$739 million in economic and other benefits to Michigan communities (based on 2010 data).

PASSENGER RAIL



- A total of 742,051 passengers traveled on three Amtrak routes in Michigan in FY 2015. Ridership has increased more than 21 percent in the last 10 years. Passenger rail is expected to generate between \$1 billion and \$1.5 billion in net economic benefit annually.
- Revenue from the three routes totaled \$28.3 million in FY 2015.
- There are 22 active passenger stations in Michigan, 12 of which are multi-modal, serving passenger rail as well as intercity bus and transit.
- Amtrak operates three intercity passenger rail routes in Michigan:
 - **The Wolverine:** operates three daily round-trips between Pontiac, Mich., and Chicago, Ill.
 - **The Blue Water:** operates a single daily round-trip between Port Huron, Mich., and Chicago, Ill.
 - **The Pere Marquette:** operates a single daily round-trip between Grand Rapids, Mich., and Chicago, Ill.
- Amtrak Thruway Bus services provide bus connections between Michigan Amtrak routes and communities around the state. There also is a Thruway Bus link between the *Blue Water* and *Wolverine* services that connects in Toledo, Ohio, with Amtrak long-distance routes to the east coast.

Fast Facts

2016

FREIGHT

The most recent comprehensive federal freight data (from 2013) shows that Michigan's transportation infrastructure moved 505.5 million tons of freight, valued at roughly \$761.1 billion at that time.

- Trucking accounted for 67 percent of the tonnage moved.
- Rail accounted for 20 percent of the tonnage moved. MDOT assists 27 railroads carrying more than 90 million tons of freight per year. Four of the 27 are major freight railroads.
- Water accounted for 13 percent of the tonnage moved. MDOT assists 39 commercial ports, handling 70-90 million tons per year.
- Air accounted for less than 1 percent of the tonnage moved.

TRAILS and BICYCLE LANES

Michigan currently leads the nation in miles of open nonmotorized trails according to the Rails to Trails Conservancy.

- There are approximately 178 open trails totaling 2,754 miles.
 - There are 24 proposed trail projects totaling 228 additional miles.
- Michigan also is home to an extensive bicycle network.
- Three officially designated U.S. Bicycle Routes with a total length of more than 1,000 miles.
 - As of 2014, MDOT had 44 miles of marked bicycle lanes in more than 20 locations statewide.
 - 43 miles of unmarked striped shoulders at 50 locations of MDOT trunkline.
 - Thirty-three percent of trunkline, or 3,168 miles, have paved shoulders up to 4-foot-wide suitable for bicyclists and connecting rural communities.

BRIDGE FARES

Mackinac Bridge:

- Passenger vehicle - \$2 per axle or \$4 per car
- All others - \$5 per axle

Blue Water Bridge:

- Cars - \$3, extra axles - \$3
- Trucks and buses - \$3.25 per axle

International Bridge:

- Cars - \$3.50 ■ All others vary

AIRPORTS

Aviation contributes more than \$10 billion annually to the Michigan economy according to data provided by the Federal Aviation Administration (FAA).

- There are 235 airports across the state (including 17 commercial airports).
- MDOT administers funds used for capital projects at the 94 highest priority airports.
- Overall, scheduled airlines transported more than 38 million passengers in calendar year 2015.
- Nationwide, Detroit Metropolitan Airport was ranked 17th in total passengers for 2014.



STATE REVENUE

The Michigan Transportation Fund receives road-user fees (vehicle and fuel taxes), which are restricted by the state Constitution to road and transit use. Beginning in calendar year 2017, MTF revenues will be increased to approximately these annual amounts:

Approximate Annual MTF Revenues (FY 2017)

Vehicle registration taxes . . .	\$1,181 million
Gasoline taxes	\$1,076 million
Diesel fuel taxes	\$216 million
Other	<u>\$42 million</u>
Total revenue.	\$2,515 million

Plus 4.65 percent of automotive-related sales tax revenue for the Comprehensive Transportation Fund (CTF) of around \$95 million.

Effective Act 51 Distribution

A formula in Act 51 distributes the MTF among 697 transportation agencies:

State Trunkline Fund	36 percent
County road commissions	35 percent
City and villages	20 percent
Comprehensive Transportation Fund	9 percent

After "off the top" deductions for the cost of revenue collection:

- Secretary of State: \$20 million interdepartmental grant from MTF; plus approximately \$43 million in license plate fees; plus General Fund money, as appropriated.
- Treasury: approximately \$8 million annually, as appropriated.

REGISTRATION FEES

- Approximately half of MTF revenue comes from vehicle registration fees: approximately \$1 billion in 2016, rising to \$1.181 billion in 2017, when the fee on most cars and trucks will rise by 20 percent.
- Cars and light truck fees are based on their original list price: half a percent for a new car, declining to about a third of a percent for a 4-year-old car. Fees for cars older than 1984 and trucks weighing more than 10,000 pounds are based on weight. Registration fees for interstate trucks are apportioned among the states in which each truck travels.
- The registration fee for a car of median value is about \$100 per year in 2016, and the fee for a standard 80,000-pound semi-truck is \$1,660. These fees will rise by 20 percent in 2017. Permanent trailer registrations are \$75 to \$300. Beginning on Jan. 1, 2017, an annual \$30 surtax will be charged for plug-in hybrid cars and \$100 for pure electric cars.

Vehicles registered in Michigan (2012 figures):

Cars, light trucks newer than 1983	7,105,424	(includes motor homes)
Cars, light trucks 1983 and older	59,227	
Manufacturer and dealer plates	91,472	(discounted)
Historic vehicles	111,873	(discounted)
Weight-based trucks	79,865	
Farm, log, and milk trucks	47,078	(discounted)
Trailers	approx. 1,100,000	(permanent plates, exact number unknown)
Motorcycles	246,256	
Mopeds	44,017	
Total	approx. 8,885,212	

The Secretary of State deducts \$5.75 from the registration fee on most vehicles to pay for the cost of license plate administration, and receives a \$20 million interdepartmental grant from MTF. Another \$2.25 fee is added to most registrations for the Michigan State Police.

Aircraft Registration Fees:

- Aircraft registration is 1 cent per pound of maximum gross weight.

FUEL TAXES

Michigan Gasoline Tax:

Nominally 19 cents per gallon in 2016, rising to 26.3 cents on Jan. 1, 2017, and increasing with the Consumer Price Index beginning in 2022. The actual gasoline tax is 98.5 percent of the nominal rate after deducting the "cost of collecting the tax," making the true tax rate 18.715 cents now and 25.9055 cents in 2017. The Recreation Improvement Fund receives 2 percent of all gasoline tax, representing the gasoline burned in boats and snowmobiles.

Michigan Diesel-fuel Tax:

15 cents per gallon in 2016, rising to 26.3 cents on Jan. 1, 2017, the same rate as on gasoline.

Michigan LPG (Propane) Tax:

The same as on diesel fuel, presently 15 cents per gallon, rising to 26.3 cents on Jan. 1, 2017.

Michigan Natural Gas Tax:

Fuel tax will be collected on road use of compressed natural gas (CNG) and liquefied natural gas (LNG) beginning on Jan. 1, 2017. Rates will be the same as on diesel fuel, at gasoline-gallon equivalents for CNG and diesel-gallon equivalents for LNG.

Federal Gasoline Tax:

18.4 cents per gallon, includes 15.44 cents for the Highway Account, 2.86 cents per gallon for the Transit Account, and 0.1 cent per gallon for the Leaking Underground Storage Tank (LUST) fund.

Federal Diesel Fuel Tax:

24.4 cents per gallon, includes 21.44 cents for the Highway Account, 2.86 cents per gallon for the Transit Account, and 0.1 cent per gallon for the LUST fund.

Federal Gasohol Tax:

13.2 cents per gallon, includes 7.74 cents for the Highway Account, 2.5 cents for the U.S. General Fund, 2.86 cents for the Transit Account, and 0.1 cent for the LUST fund.

Federal LPG Tax:

13.6 cents per gallon, with 11.47 cents for the Highway Account and 2.13 cents for the Transit Account.

Federal CNG Tax:

4.3 cents per gallon, with 3.44 cents for the Highway Account and 0.86 cents for the Transit Account.

CARPOOL LOTS

- There are 245 carpool parking lots located across the state, 20 of which are public-private partnerships. MDOT has partnered with Meijer Corp. to establish 17 public-private partnerships that provide carpool parking spaces in Meijer parking lots located near the highway.
- MDOT continues its efforts to provide bike racks at carpool lots, and to attract transit service to lots where appropriate.

COST OF ROAD CONSTRUCTION

Roadway construction costs are typically based on standard design characteristics, materials, and the type of work performed. General estimates are provided for the average cost per lane mile of major work by roadway type, and material costs.

Average Cost Per Lane Mile by Major Work Type for Various Networks (2016)

	Work Type		
	Reconstruction	Rehabilitation	Average R&R
Combined Statewide	\$1,793,810	\$710,206	\$1,026,706
Freeway	\$2,910,851	\$1,008,780	\$1,347,586
Non-Freeway	\$1,537,863	\$468,915	\$722,206
Statewide Urban	\$1,899,886	\$776,457	\$1,129,836
Statewide Rural	\$1,161,289	\$495,579	\$633,763

Material Cost for Construction (2016 Year-to-Date)

Material	Cost
Hot Mix Asphalt (HMA) per Ton	\$64.60
Concrete per Square Yard	\$64.07
Structural Steel per Pound	\$1.28
Reinforcement Steel per Pound	\$1.01

2015 MICHIGAN STATE REVENUE PACKAGE

State Transportation Funding Package

On Nov. 10, Gov. Snyder signed a package of transportation bills approved by the Legislature. In the short term, the legislation will:

- Provide \$410 million in additional fuel tax revenues, beginning in January 2017. The tax on gasoline and diesel fuel will rise to 26.3 cents at that time, as the legislation also provides for diesel parity.
- Provide \$190 million from a 20 percent increase in vehicle registration fees, also beginning in January 2017.

This \$600 million in new revenue will be distributed to MDOT, county road commissions, cities and villages, and the Comprehensive Transportation Fund through the existing Act 51 formula, providing a roughly 30 percent increase by 2018.

The new revenue is expected to generate an average of more than 4,000 jobs per year in the first two years. It will also help address the need to repair and maintain Michigan's existing transportation systems.

Beginning in 2019, the Legislature intends to appropriate income tax revenue to roads agencies, according to the Act 51 formula, excluding the Comprehensive Transportation Fund, in these amounts:

- 2019.....\$150 million
- 2020.....\$325 million
- 2021 and thereafter.....\$600 million

Beginning in 2016, the legislation will add transparency and accountability:

- Administrative Expenses:** MDOT administrative expenses, previously capped at 10 percent, are now limited to 8 percent of its budget.
- Pavement Warranties:** Road agencies are required to buy pavement warranties, where appropriate, for projects costing more than \$2 million.
- Competitive Bidding:** To reduce project costs, all agencies are required to competitively bid out projects costing more than \$100,000.
- Longer-lived Pavements:** MDOT will be required to prepare a report on the potential for constructing longer-lived pavements and report to the Legislature by June 2016.