

Bridge Construction/Railroad Coordination

2019 Michigan Bridge Conference
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Bridge Construction/Railroad Coordination

Topics:

- **Introduction**
- **MDOT Office of Rail**
- **Michigan Railroad Network**
- **State of Michigan Owned Railroad Corridors**
- **Railroad Code**
- **Structure Agreements**
- **Railroad Coordination**
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MDOT Office of Rail

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MDOT Michigan Department of Transportation

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MDOT RAIL

Office of Rail

Michigan's rail system has approximately 3,600 miles of track, operated by 26 railroads. Four of the seven Class I railroads operate in Michigan. The system carries about 21% of all the state's freight tonnage and 23% of the commodities by value. This system also supports three intercity passenger-rail routes. The system is almost exclusively privately owned and financed by the railroad industry.

The Office of Rail works to ensure that Michigan's rail system meets the economic needs of the state and is safe for the motoring public, rail passengers and railroad employees. Responsibilities include:

- Intercity passenger rail operations
- Crossing and rail-worker safety regulation
- State safety oversight of light-rail systems (QLINE and People Mover)
- Crossing funding programs on local roads and state trunklines
- Grade separations involving trunklines and/or state-owned tracks
- State-owned rail line management
- Rail-related economic development programs
- International border crossings

Additional Information

- MI Rail Map (detail)
- MI Rail Map (print)
- MI Intercity Rail Map
- MI Rail History
- MI Railroad Code
- Commodity Flow Map
- Amtrak Michigan Services

Rail Resources

- Railroad Contacts
- Federal Railroad Administration
- Federal Transit Administration
- Michigan Railroads Association

Contact Us

Tweets by @MDOT_Rail

MDOT Rail Retweeted

The Henry Ford @thehenryford

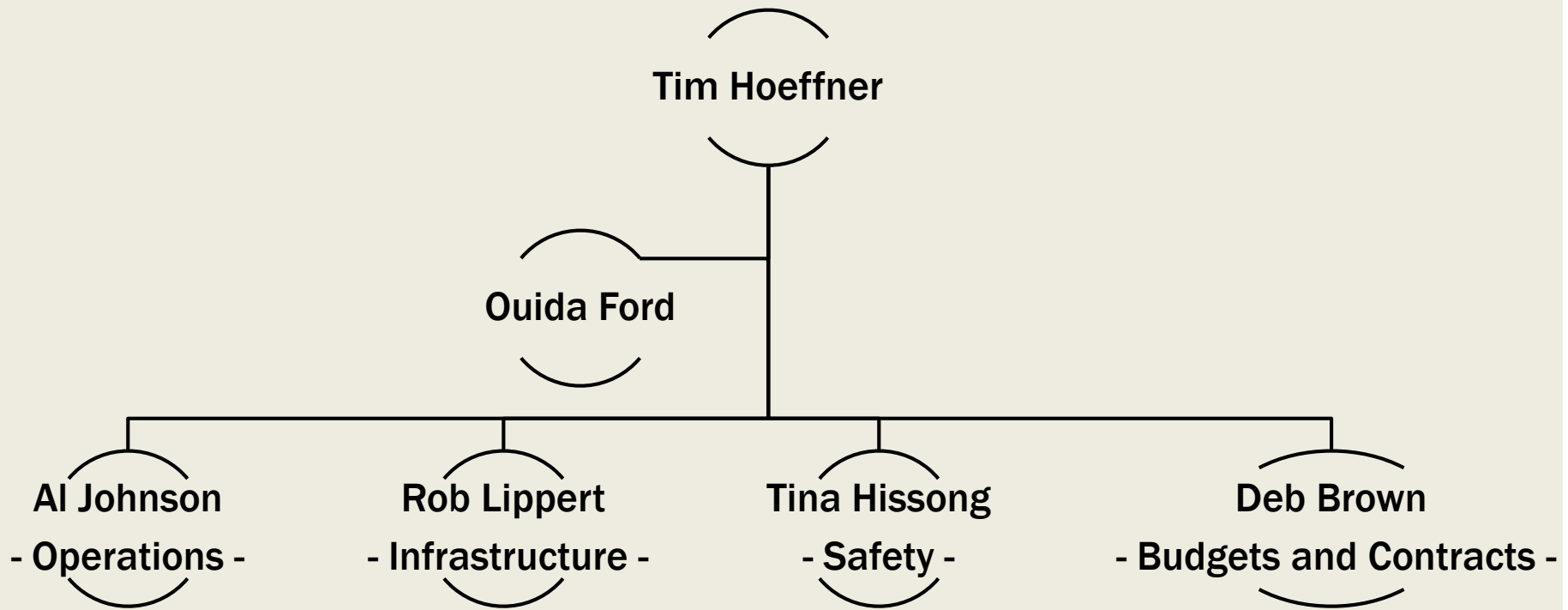
Join @MichiganDOT, @KetteringU, and @UM_Dearborn Feb. 22 for National Engineers Week from 10-2 in Henry Ford Museum of American Innovation: thehenryford.org/current-events...

- Established in 2011
- Overall responsibility for rail-related activities at MDOT
- Serves as a resource for local agencies, consultants, and other third parties on rail-related matters
- 33 employees

Website:

<https://www.michigan.gov/mdot/0,4616,7-151-22444--,00.html>

MDOT Office of Rail - Organization Chart -



Michigan Railroad Network



- Part of a multi-modal transportation system
- Diverse mix of facilities in both public & private ownership
- 3,600 miles of track
- 26 operators (4 of the 7 Class I Railroads)
- Carries 21% of state's freight tonnage
- 800,000 passengers

State of Michigan Owned Railroad Corridors



- 665 miles of rail line
- Operated by 5 railroads under contract with MDOT and provide the only rail access to businesses in certain areas of the state
- Over 80 shippers
- 15,000 carloads
- Provides access to national network for companies with limited transportation options

State of Michigan Owned Railroad Corridors



Michigan Accelerated Rail Corridor

- MDOT acquired 135 miles between Kalamazoo and Dearborn in December 2012 from Norfolk Southern Railway (NSR)
- The accelerated rail program will enhance this segment of the corridor for accelerated speeds up to 110 mph for passenger service
- Amtrak operates and maintain the line; NSR provides freight service

State of Michigan Owned Railroad Corridors



Freight Service Corridors

- 530 miles across the lower peninsula
- Operated by:
 - Great Lakes Central Railroad
 - 338 miles
 - Lake State Railway
 - 105 miles
 - Huron & Eastern Railway
 - 45 miles
 - Indiana Northeastern Railroad
 - 42 miles

Railroad Code

RAILROAD CODE OF 1993 Act 354 of 1993

AN ACT to revise, consolidate, and codify the laws relating to railroads and their employees; to prescribe powers and duties of certain state and local agencies and officials; to prescribe fees; to create certain funds; to provide for the disposition of certain money; to provide remedies and penalties; and to repeal certain acts and parts of acts.

History: 1993, Act 354, Imd. Eff. Jan. 14, 1994.

The People of the State of Michigan enact:

462.101 Short title.

Sec. 101. This act shall be known and may be cited as the "railroad code of 1993".

History: 1993, Act 354, Imd. Eff. Jan. 14, 1994.

462.103 Meanings of words and phrases.

Sec. 103. The words and phrases in sections 105 to 109 shall have the meanings respectively ascribed to them in those sections.

History: 1993, Act 354, Imd. Eff. Jan. 14, 1994.

462.105 Definitions; A to G.

Sec. 105. (1) "Active traffic control devices" means those traffic control devices located at or in advance of grade crossings, activated by the approach or presence of a train, such as flashing light signals, automatic gates and similar devices, manually operated devices, and a crossing watchperson, all of which display to operators of approaching vehicles positive warning of the approach or presence of a train.

(2) "Alcoholic liquor" means that term as defined in section 105 of the Michigan liquor control code, 1998 PA 58, MCL 436.1105.

(3) "Bridge" means a structure including supports erected over a depression or an obstruction, such as water, a highway, or a railway, having a track or passageway for carrying traffic or other moving loads, and having an opening measured along the center of the roadway of more than 20 feet between undercopings of abutments or spring lines of arches, or extreme ends of openings for multiple boxes where the clear distance between openings is less than half of the smaller contiguous opening.

(4) "Bridge carrying railroad traffic" means any bridge carrying a railroad track on which locomotives, railroad cars, or railroad maintenance machinery may be operated or moved. Bridge carrying railroad traffic includes unloading pits, turntables, and ferry aprons which meet the physical criteria for the definition of a bridge.

(5) "Department" means the Michigan department of transportation.

(6) "Diagnostic study team" means a group of knowledgeable individuals from the department, road authorities, railroads, and others who meet and, using crossing safety management principles, evaluate conditions at proposed or existing crossings and assist the department in making determinations concerning safety needs.

(7) "Flagger" means a person, other than a railroad employee, clearly visible to approaching traffic at all times, who controls highway traffic through work areas using a hand-held paddle sign during daylight hours and approved lights and reflectorized paddle signs at night.

(8) "Grade crossing" means the point at which any railroad intersects with any public street or highway, or a nonmotorized trail.

(9) "Grade separation" means an intersection of a railroad and a highway at different levels with either the railroad above or below the highway.

History: 1993, Act 354, Imd. Eff. Jan. 14, 1994;—Am. 2002, Act 658, Eff. Apr. 1, 2003.

462.107 Definitions; H to P.

Sec. 107. (1) "High speed rail corridor" means any railroad line having been formally designated by the United States department of transportation as a high speed rail corridor.

(2) "Nonmotorized trail" means a public or privately owned or operated traveled way, the use of which is restricted to pedestrians or nonmotorized conveyances including, but not limited to, bicycles and horses.

(3) "Notice" means the written expression of the department's findings that certain conditions observed at a crossing are not in compliance with state law, and that these conditions must be corrected.

- A consolidation of laws relating to railroads
- Section 319: Very important!
- All highway/railroad separation structures are required to have a bridge agreement

Website:

https://www.michigan.gov/documents/mcoles/mcl-Act-354-of-1993_253582_7.pdf

Structure Agreements

- Written agreement required by law
- Between all affected railroads and the road authority
- Defines:
 - Roles
 - Responsibilities
 - Access
 - Cost share
 - Approved property rights
 - Etc.
- Agreement in full force and affect for the life of structure

FILED
JAN 24 1948
SECRETARY'S OFFICE

XL of 38-1-14

THIS AGREEMENT, made this 16th day of December A. D.

1947, Between the MICHIGAN STATE HIGHWAY DEPARTMENT, acting through Charles M. Ziegler, as State Highway Commissioner of the State of Michigan, hereinafter called the HIGHWAY DEPARTMENT; the GRAND TRUNK WESTERN RAILROAD COMPANY, a consolidated corporation organized and existing under the laws of the State of Michigan and Indiana, hereinafter called the GRAND TRUNK; THE MICHIGAN CENTRAL RAILROAD COMPANY, a corporation organized and existing under the laws of the State of Michigan; and THE NEW YORK CENTRAL RAILROAD COMPANY, a consolidated corporation organized and existing under the laws of the State of Michigan and other states, lessee of the Michigan Central Railroad, hereinafter collectively called the NEW YORK CENTRAL; all of said Railroad Companies being hereinafter referred to collectively as the RAILROADS.

WITNESSETH:

WHEREAS, the proposed relocation of Michigan State Trunk Line Highway No. US-12 crosses the right of way and tracks of the RAILROADS in Section 27, T.2 S., R.1 W., Blackman Township, Jackson County; and

WHEREAS, the separation of railroad and highway grades at that location by means of a highway overpass structure, as a matter of public safety and convenience, has been approved by the Federal Works Agency, Public Roads Administration, as a Project for construction through the use of funds provided by the United States Government for the Post War Construction of Highways and Bridges and to eliminate hazards at railroad grade crossings, as provided in the Federal Aid Highway Act of 1944; and

WHEREAS, the parties hereto have reached an understanding with each other respecting said crossing and the construction of said highway overpass structure, including the preparation and approval of plans and specifications, and the incidental work made necessary by such highway overpass construction, all hereinafter from time to time referred to as the Project, and the payment of the cost thereof; and desire to set forth their understanding in the form of a written agreement:

Railroad Coordination

How to Be Successful During Development

- Contact Office of Rail and the railroad early and often.
- Define design criteria early. Railroad standards vary by company.
- Get permit to enter, even for surveys. Assume minimum 30 working days.
- Do not put railroad projects in special programs.
- Make sure you have correct special provisions in your construction contract. Office of Rail can provide upon request.
- Allow adequate time in your development schedule.

Railroad Coordination

How to Be Successful During Development

- MDOT Standard Railroad Coordination Durations:

Activity Type	Duration (Working Days)
Reconstruction	480
Rehabilitation	260 - 480
Widening	260
Capital Preventive Maintenance	170

- Plan accordingly

Railroad Coordination

How to Be Successful During Construction

- Budget accordingly. Railroad flagging, inspection and protection.
- Bundle work activities on railroad properties. Minimize time and footprint within the railroad property.
- Permits are needed for anybody within railroad right-of-way.
- Talk with the railroads. Define project needs early.
- Manage and mitigate impacts to railroad operations.

Railroad Coordination

How to Be Successful During Construction

- MDOT Average Railroad Pay Items Range:

<u>Pay Item</u>	<u>Cost</u>
Railroad, Protection	\$2,000 - \$100,000
Railroad Flagging and Inspection	\$1,000 - \$1,500/Working Day

Note: Railroad Flagging and Inspection cost is assuming 8 hours, no OT/weekend

- Budget accordingly!

Railroad Coordination

How to Be Successful During Inspection

- Contact Office of Rail and railroad early and often.
- Review the associated bridge agreement. Typically defines access procedures.
- Get permit to enter, even for inspections. Assume minimum 30 working days.
- Railroad property is dangerous, and access is highly regulated by the Federal Railroad Administration (FRA). **Do not take the risk!**
- FRA can assess fines to both company and individuals.

Railroad Coordination

How to Be Successful During Inspection

- Don't put yourself in a dangerous situation



Railroad Coordination

Recent “Success” Stories So Far

- City of Ann Arbor – Allen Creek Berm Opening under Amtrak

Railroad Coordination Timeline

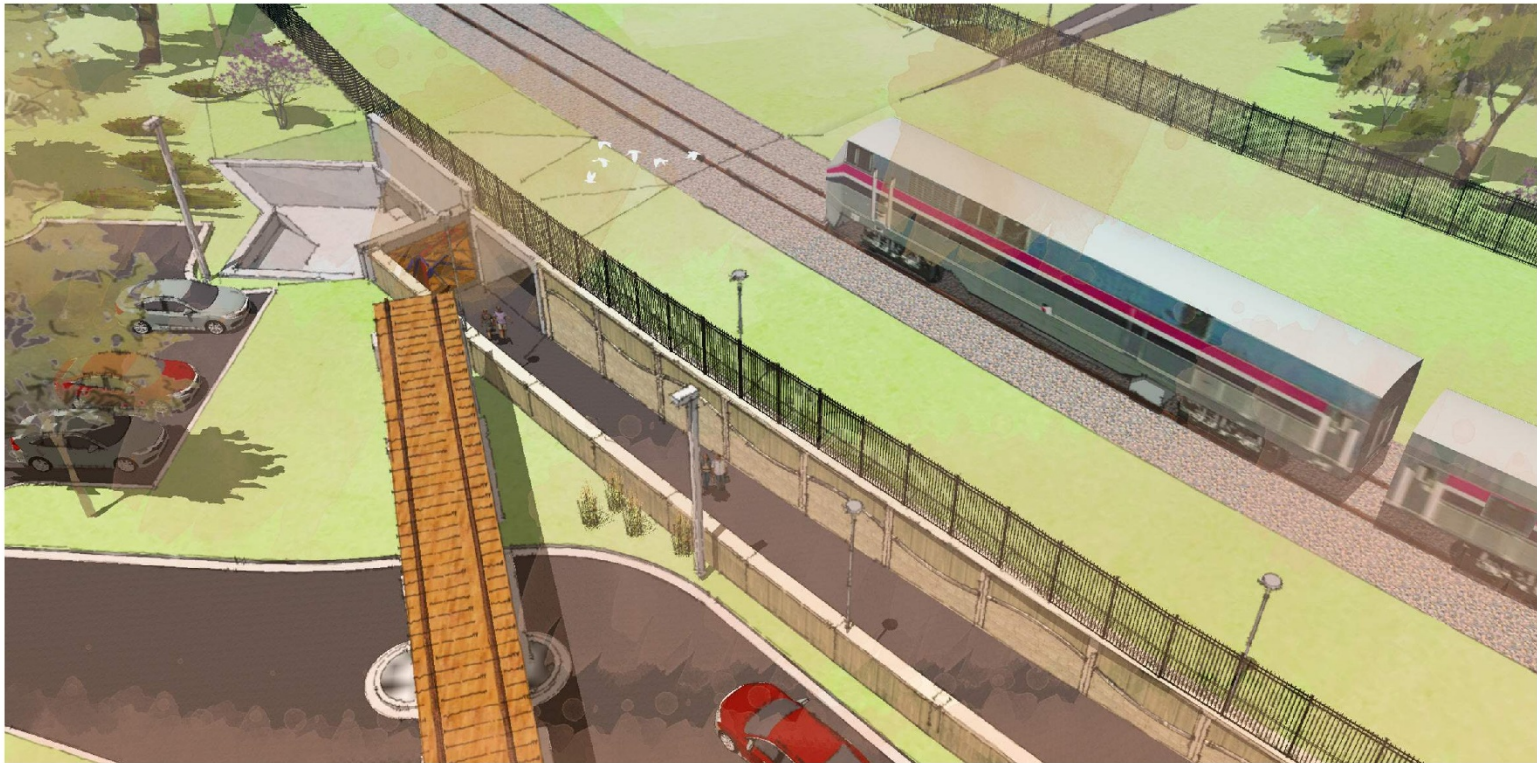
- Office of Rail Engagement – June 2013
 - Amtrak Engagement – January 2017
 - Railroad Permit Issued – February 2018
 - Railroad Design Agreement Executed – July 2017
 - Preliminary Railroad Plan Submittal – October 2017
 - Railroad Issued Letter of No Exception – May 2018
 - Bridge Agreement Executed – February 2019
 - Anticipated Letting – May 2019
- 
- 335
Working
Days

Railroad Coordination



View 5

Railroad Coordination



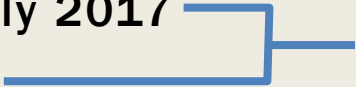
View 6

Railroad Coordination

Recent “Success” Stories So Far

- University Region – I-94 modernization over JAIL RR, NSR

Railroad Coordination Timeline

- Office of Rail Engagement – June 2013
 - Railroad Engagement – June 2016
 - Railroad PE Force Account Executed – April 2017
 - Preliminary Railroad Plan Submittal – July 2017
 - Bridge Agreement Executed – May 2018
 - Let – June 2018
 - Under Construction
- 216 Working Days
- 

Railroad Coordination



Railroad Coordination



Railroad Coordination



Questions?

Annual Michigan Rail Conference

- Location: Lansing, MI
- Time: August 7-9, 2019
 - For further details: <http://www.rail.mtu.edu/MRC2019>

Contact Information:

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Engineer

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