

# MDOT Update

**Dave Juntunen, Bridge Development Engineer**  
**Matt Chynoweth, Engineer of Bridge Field Services**  
**Beckie Curtis, Bridge Management Engineer**

## Michigan Bridge Conference

Howel, March , 2012



# MDOT Reinvention



**MDOT  
Bridge Program**

**Bureau of  
Development**

**Bureau of  
Field Services**

**Regions**

# Bridge Development

Bridge Development  
Engineer  
Dave Juntunen

Bridge Design  
Steve Beck

- Four Bridge Design Units

Bridge Management  
Beckie Curtis

- Bridge Management Systems
- Bridge Load Rating
- Special Structures

# MDOT/LTU Pool Fund Study Partners – Minnesota, Iowa, Oregon, Wisconsin, FHWA, LTU

Decked I-beam  
structure

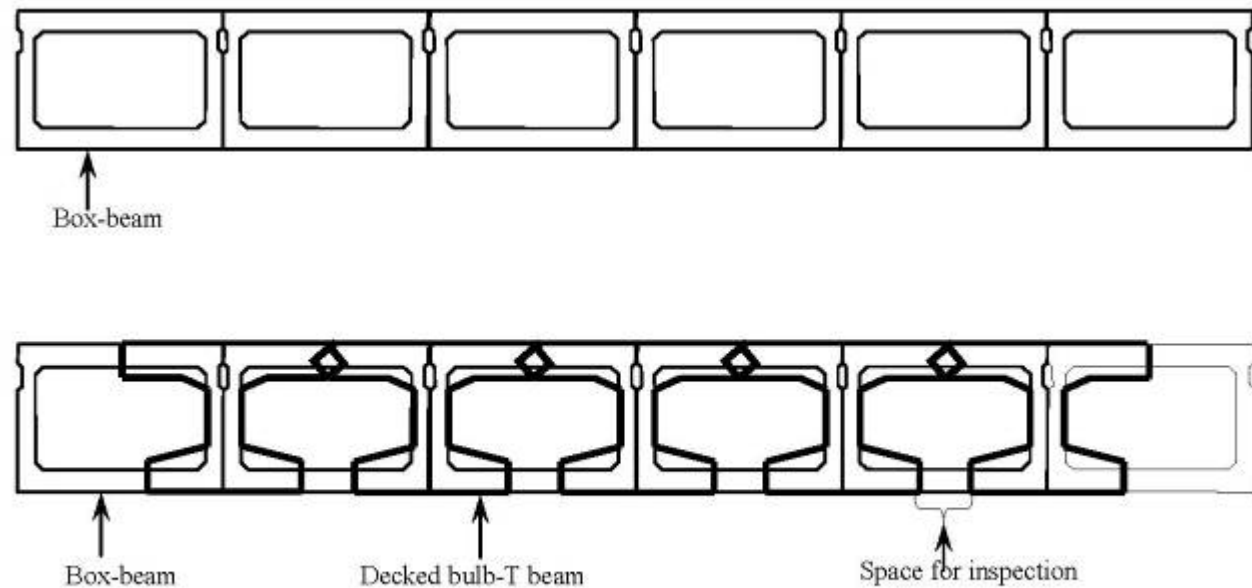
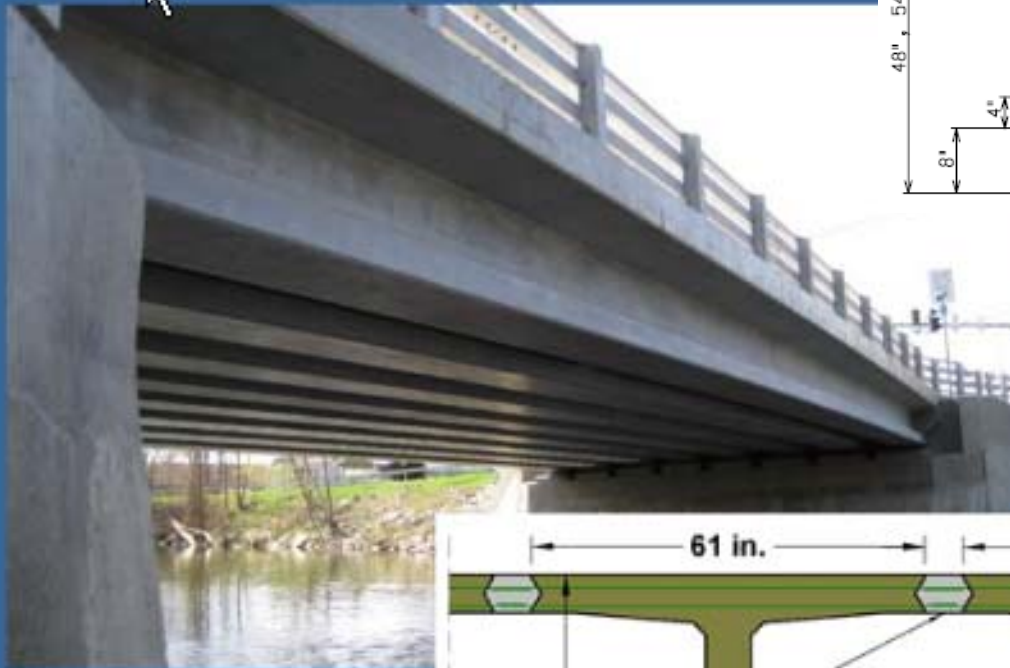
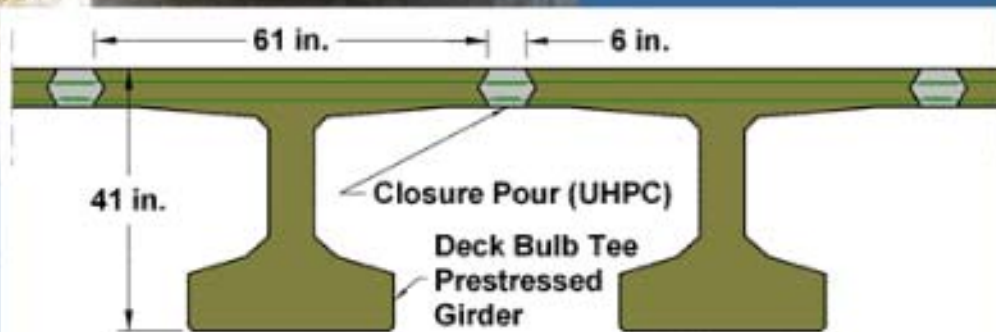
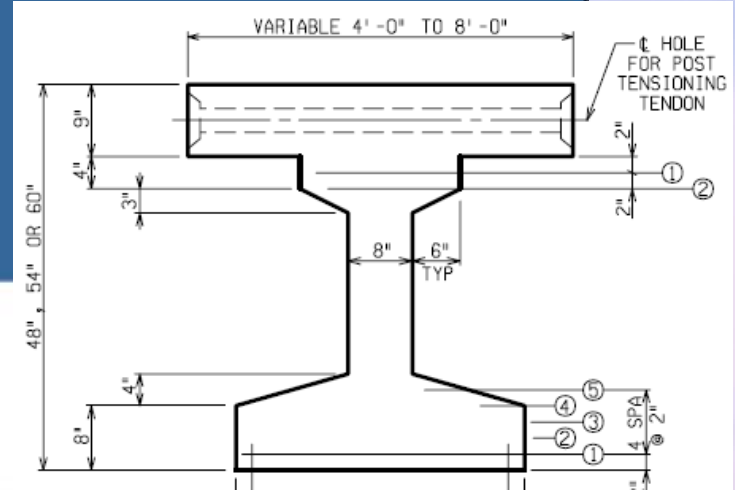


Figure 7: Superposition of Decked Bulb-T Beams over Box-Beams in a Fictitious Bridge

# Field-Cast UHPC Joints b/w Deck-Bulb-Tee Girders



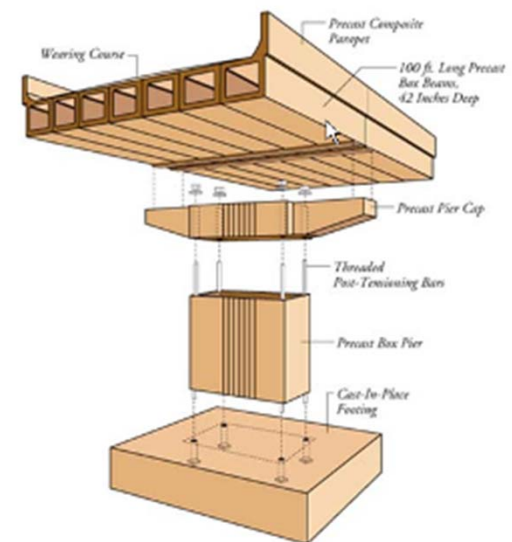
SR 31 over  
Canandaigua Outlet  
Lyons, New York



# Every Day Counts (EDC) and Accelerated Bridge Construction (ABC)

- Goal – By December 2012, 25% of bridges, constructed/reconstructed with Federal Aid to incorporate at least one Accelerated Bridge Construction (ABC) or major precast component.

Baldorioty de Castro Avenue Overpasses



# Recommended Activities

- Plan a program of projects instead of just completing one project. With a program of projects there is an opportunity to build momentum – a clear signal to the industry that the business model is changing.
- Get industry buy-in through the use of workshops and technical exchange conferences. Allow the contracting industry & materials suppliers enough time to become both comfortable and knowledgeable about using PBES.

# Accelerated Bridge Construction



## I-80 State to 1300 East Sequence



**UTDOT**  
CONNECTING COMMUNITIES



# Engineering feat makes swapping out bridges on I-15 a snap

Slide method — 'kind of an art' — makes its Nevada debut in Mesquite



# Bridge Management – Load Rating

- MDOT, partnering with CRAM and MML, and FHWA agreed upon action plan to achieve conditional compliance in Load Rating
  - Prioritization List
  - Bridge Advisories
  - MBIS Updates
  - Virtis Super Site License
  - MTU Center for Technology and Training Contract

# Bridge Management – MBRS

## Network Dashboard

Department of Transportation Michigan.gov

Welcome Mdot Executive Users MBRS - Michigan Bridge Reporting System Jurisdiction: Region - Statewide

Michigan.gov Home MBRS Home | Contact MBRS | Feedback | Help Sign Out

▼ Reports

- » Dashboard
- » Network Summary
- » Critical Structures
- » Good/Fair/Poor/Unrated Structures (SD/FO)
- » Deficient Structures (SD/FO)
- » Item 41 - Operational Status
- » HBP Eligible Structures
- » Inspection Schedule
- » Routine Inspections Due in 3 Months
- » Scour Critical Structures
- » Load Rating Needs
- » Network Elements
- » Work Recommendations
- » Call For Projects (CFP)
- » Ad-Hoc Report
- » False Decking

Standard Reports

Jurisdiction: ----- Default ----- Change

Structure Inventory Summary		Count	Structure Condition Summary		Count	SD/FO Summary		Count
Total No. of Structures		5,801	Good/Fair (5 or Greater)		5,402	*Structurally Deficient		231
Highway (NBI) Structures greater than 20'		4,396	Highway included in NBI		4,099	*Functionally Obsolete		803
Highway Structures less than 20'		1,083	Non NBI Structures (<20, RR, Ped, etc.)		1,303	*Non-Deficient Structures		3,305
Rail Road Structures (X)		123	Poor (4)		296	*No Current SD/FO Rating		57
Pedestrian Structures (P)		172	Highway included in NBI		225	NBI Condition - Goals Summary		Pct.
Other Non-Highway Structures (V, Plaza)		27	Non NBI Structures (<20, RR, Ped, etc.)		71	*Good/Fair (5 or Greater)		93.3%
Additional Bridge Inventory Information			Serious/Critical (3 or less)		95	Freeway		93.5%
Posted Structures		8	Highway included in NBI		70	Non-Freeway		92.7%
Closed Structures		2	Non NBI Structures (<20, RR, Ped, etc.)		25	*Poor/Serious/Critical (4 or Less)		6.7%
Fracture Critical Structures		62	Unrated Structures		8	Freeway		6.5%
Scour Critical Structures		384	Highway included in NBI		2	Non-Freeway		7.3%
Scheduled/Under Construction (S, G)		98	Non NBI Structures (<20, RR, Ped, etc.)		6	*Applies ONLY to Highway Structures > 20'		

Structure Inventory Summary

Docs [ ] [ ] [ ] Submit

Select	Struct. Nbr.▲	Bridge ID	Facility Carried	Features Intersected	Fwy	Insp. Date	Item 41	Deck Rtg	Deck Botm Rtg	Super Str Rtg	Sub-Str Rtg	Culv. Rtg	Paint Rtg	Suff Rate	Truck Type	MI Oper. Rtg	NBI Rtg	SD FO
<input type="checkbox"/>	1	01101011000C010	M-65	BRYANT CREEK	N	09/28/2010	A	N	8	N	N	8		100	9	77	N	
<input type="checkbox"/>	2	01101012000C010	M-65	MCGINN CREEK	N	09/28/2010	A	N	8	N	N	7		100	9	77	N	
<input type="checkbox"/>	3	01101023000C010	M-72	BACKUS CREEK	N	09/09/2010	A	N	8	N	N	7		100	9	77	N	
<input type="checkbox"/>	4	01101023000C020	M-72	E BR PINE RIVER	N	09/08/2010	A	N	N	N	N	6		100	9	77	N	
<input type="checkbox"/>	5	01101024000C010	M-72	VAN ETEN CREEK	N	09/08/2010	A	N	N	N	N	6		100	9	77	N	
<input type="checkbox"/>	6	01101024000C020	M-72	EATON CREEK	N	09/08/2010	A	N	6	N	N	5		89	9	77	N	
<input type="checkbox"/>	7	01101052000B010	US-23	BLACK RIVER	N	09/22/2010	A	7	6	7	7	N	N	92.4	9	151	0	
<input type="checkbox"/>	8	01101052000C010	US-23	MILL CREEK	N	09/22/2010	A	N	8	N	N	7		100	9	77	N	
<input type="checkbox"/>	32	02102011000B010	US-41	W BR WHITEFISH R	N	05/04/2011	A	5	5	7	5	N	6	73.4	9	91	0	
<input type="checkbox"/>	33	02102011000B020	US-41	W BR WHITEFISH R	N	05/24/2011	A	5	5	7	6	N	6	91.4	9	91	0	
<input type="checkbox"/>	34	02102011000B030	US-41	HUBER CREEK	N	05/04/2011	A	8	N	8	7	N		87.8	9	131	0	
<input type="checkbox"/>	35	02102021000B010	M-94	SLAPNECK CREEK	N	05/16/2011	A	5	6	6	7	N		92	9	117	0	
<input type="checkbox"/>	36	02102021000B020	M-94	AU TRAIN RIVER	N	05/16/2011	A	7	7	7	6	N		73.9	9	77	0	

Export Data to EXCEL

Total number of pages: 59 Enter Page #: Goto

# Bridge Management – MBRS

## Bridge Lists and Filtering

**MBRS - Michigan Bridge Reporting System**      **Jurisdiction: Bridge Operations - C and T**

Jurisdiction:

Structure Inventory Summary		Count	Structure Condition Summary		Count	SD/FO Summary		Count
Total No. of Structures		5,801	<b>Good/Fair (5 or Greater)</b>		<b>5,407</b>	*Structurally Deficient		231
Highway (NBI) Structures greater than 20'		4,396	Highway included in NBI		4,104	*Functionally Obsolete		800
Highway Structures less than 20'		1,083	Non NBI Structures (<20, RR, Ped, etc.)		1,303	*Non-Deficient Structures		3,298
Rail Road Structures (X)		123	<b>Poor (4)</b>		<b>292</b>	*No Current SD/FO Rating		67
Pedestrian Structures (P)		172	Highway included in NBI		221	<b>NBI Condition - Goals Summary</b>		<b>Pct.</b>
Other Non-Highway Structures (V, Plaza)		27	Non NBI Structures (<20, RR, Ped, etc.)		71	*Good/Fair (5 or Greater)		93.4%
<b>Additional Bridge Inventory Information</b>			<b>Serious/Critical (3 or less)</b>		<b>94</b>	Freeway		93.7%
Posted Structures		8	Highway included in NBI		69	Non-Freeway		92.7%
Closed Structures		2	Non NBI Structures (<20, RR, Ped, etc.)		25	*Poor/Serious/Critical (4 or Less)		6.6%
Fracture Critical Structures		62	<b>Unrated Structures</b>		<b>8</b>	Freeway		6.3%
Scour Critical Structures		384	Highway included in NBI		2	Non-Freeway		7.3%
Scheduled/Under Construction (S, G)		98	Non NBI Structures (<20, RR, Ped, etc.)		6	*Applies ONLY to Highway Structures > 20'		

**Structure Inventory Summary**

Docs:

**Filter Criteria**

- Find all structures on CS 25132  
(Enter 25132, Click Submit)
- Find Poor Structures on CS 25122  
(Enter 25132, Click Submit, then click Poor Above)
- Find a Specific Structure S01-25132  
(Enter 25132000S01, Click Submit)

Select	Struct. Nbr.▲	Bridge ID	Facility Carried	Intersected	Fwy	Insp. Date	Item 41	Deck Rtg	Deck Botm Rtg	Super Str Rtg	Sub-Str Rtg	Culv. Rtg	Paint Rtg	Suff Rate	Truck Type	MI Oper. Rtg	NBI Rtg	SD FO
<input type="checkbox"/>	2636	25125132000B010	I-475			07/29/2010	A	5	6	7	6	N	4	86	9	85	0	
<input type="checkbox"/>	2637	25125132000B050	I-475			07/29/2010	A	5	6	7	7	N	8	96	9	140	0	
<input type="checkbox"/>	2638	25125132000C010	I-475	GIBSON DRAIN	Y	07/29/2010	A	N	6	N	N	6	N	83	9	77	N	
<input type="checkbox"/>	2639	25125132000C020	I-475			07/29/2010	A	N	6	N	N	7	N	63.6	9	77	2	FO
<input type="checkbox"/>	2640	25125132000C030	I-475			07/29/2010	A	N	6	N	N	6	N	98	9	77	0	
<input type="checkbox"/>	2641	25125132000P010	AVON ST WALK	I-475		07/14/2010	A	7	6	6	7	N	N		8	0		
<input type="checkbox"/>	2642	25125132000P020	GEORGE ST PE	I-475	Y	07/15/2010	A	6	6	6	7	N	N		8	0		
<input type="checkbox"/>	2643	25125132000P030	HARVARD ST W	I-475	Y	07/29/2010	A	6	6	6	8	N	4		8	0		
<input type="checkbox"/>	2644	25125132000P060	LINDSAY BLVD	I-475	Y	07/08/2010	A	7	7	7	7	N	5		8	0		
<input type="checkbox"/>	2645	25125132000R010	I-475	CSX RR & NB SERV	Y	04/13/2010	A	5	4	7	7	N	5	87.1	9	100	2	FO
<input type="checkbox"/>	2646	25125132000R027	GTW RR SERV	I-475	Y	07/14/2010	A	6	6	7	7	N	4	91	9	93	2	FO
<input type="checkbox"/>	2647	25125132000R030	I-475	CSX RR AND PIERS	Y	04/13/2010	A	6	7	6	7	N	7	91	9	144	0	
<input type="checkbox"/>	2648	25125132000S010	I-475 SB	I-75 NB	Y	01/19/2011	A	6	5	6	7	N	8	87.6	9	86	2	FO

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# Bridge Management – MBRS

## Viewing/Printing Reports

MBRS - Michigan Bridge Reporting System Jurisdiction: Region - Statewide

Jurisdiction: ----- De https://wastest.mdot.state.mi.us/ - MDOT - MBIS - Print Reports (Web) - Windows Internet Explorer

Structure Inventory S  
Total No. of Structu  
Highway (ABI) S  
Highway Structu  
Rail Road Struc  
Pedestrian Stru  
Other Non-High

Additional Bridge I  
Pointed Structur  
Closed Structur  
Fracture Critical  
Scour Critical St  
Scheduled/Und

Structure Inventory  
Docs 251

Select Struct. Nbr. ▲

<input type="checkbox"/>	2636	251:
<input checked="" type="checkbox"/>	2637	251:
<input checked="" type="checkbox"/>	2638	251:
<input checked="" type="checkbox"/>	2639	251:
<input checked="" type="checkbox"/>	2640	251:
<input type="checkbox"/>	2641	251:
<input checked="" type="checkbox"/>	2642	251:
<input checked="" type="checkbox"/>	2643	251:
<input type="checkbox"/>	2644	251:
<input type="checkbox"/>	2645	251:
<input type="checkbox"/>	2646	251:
<input type="checkbox"/>	2647	25125132000R030 I-475 CSX RR AND PIERE Y 04/13/2010 A 6 7 6 7 N 7 91 9 144 0
<input type="checkbox"/>	2648	25125132000S010 I-475 SB I-75 NB Y 01/19/2011 A 6 5 6 7 N 8 87.6 9 86 2 FO

Export Data to EXCEL Total number of pages: 1 Enter Page #: Goto

Department of Transportation Michigan

Type Selection

<b>For Bridge File</b>	<b>For Bridge Site use</b>
<input type="checkbox"/> BSIR/CSIR Report	<input type="checkbox"/> BSIR/CSIR Report
<input type="checkbox"/> SIA Report	<input type="checkbox"/> SIA Report
<input type="checkbox"/> CoRe Element/Work Recommendation Report	<input type="checkbox"/> CoRe Element/Work Recommendation Report
<input type="checkbox"/> FCIR	<input type="checkbox"/> FCIR
<input type="checkbox"/> FSIR	<input type="checkbox"/> FSIR
<input type="checkbox"/> UWIR	<input type="checkbox"/> UWIR
<input type="checkbox"/> OSIR	<input type="checkbox"/> OSIR
<input type="checkbox"/> SAP	<input type="checkbox"/> SAP
<input type="checkbox"/> Load Rating Assumption	<input type="checkbox"/> Load Rating Assumption
<input type="checkbox"/> Load Rating Summary	<input type="checkbox"/> Load Rating Summary
<input type="checkbox"/> All	<input type="checkbox"/> All

Submit

# Bridge Management – MBRS

## Exporting Structure Lists and Data to Excel

MBRS - Michigan Bridge Reporting System Jurisdiction: Region - Statewide

Jurisdiction: MDOT Region Region: Metro Change

Structure Inventory Summary	Count	Structure Condition Summary	Count	SD/FO Summary	Count
Total No. of Structures	1,483	Good/Fair (5 or Greater)	1,344	*Structurally Deficient	66
Highway (NBI) Structures greater than 20'	1,185	Highway included in NBI	1,086	*Functionally Obsolete	358
Highway Structures less than 20'	85	Non NBI Structures (<20, RR, Ped, etc.)	258	*Non-Deficient Structures	743
Rail Road Structures (X)	72	Poor (4)	87	*No Current SD/FO Rating	18
Pedestrian Structures (P)	123	Highway included in NBI	82	NBI Condition - Goals Summary	Pct.
Other Non-Highway Structures (V, Plaza)	18	Non NBI Structures (<20, RR, Ped, etc.)	25	*Good/Fair (5 or Greater)	94.6%

**Poor (4) Structures**

Select	Struct. Libr.▲	Bridge ID	Facility Carried
<input type="checkbox"/>	7793	63163022000R014	I-96 WB
<input type="checkbox"/>	7797	63163022000S023	I-96EB
<input type="checkbox"/>	7798	63163022000S024	I-96WB
<input type="checkbox"/>	7857	63163051000C030	M-1
<input type="checkbox"/>	7866	63163053000B010	US-24
<input type="checkbox"/>	7869	63163071000C010	M-15
<input type="checkbox"/>	8058	63163174000S031	I-75 NB
<input type="checkbox"/>	8059	63163174000S032	I-75 SB
<input type="checkbox"/>	8059	63163174000S062	I-75 SB
<input type="checkbox"/>	8091	63163174000S220	MYERS RD
<input type="checkbox"/>	8095	63163174000S260	NINE MI RD TURN
<input type="checkbox"/>	8097	63163174000S280	WOODWARD HT
<input type="checkbox"/>	9899	77177011000C020	M-19

[Export Data to EXCEL](#)

Windows Internet Explorer: http://162.108.33.23:9080/mbrsdev/exportStructureConditionDashboard.jsp

File Edit View Insert Format Tools Data Go To Favorites Help

Structure Condition Dashboard Bridges


Structure Number	Bridge ID	Year Built	Facility Carried	Rating
7793	63163022000R014	1958	I-96 WB	4
7797	63163022000S023	1957	I-96EB	4
7798	63163022000S024	1957	I-96WB	4
7857	63163051000C030	1900	M-1	N
7866	63163053000B010	1925	US-24	4
7869	63163071000C010	1900	M-15	N
8058	63163174000S031	1963	I-75 NB	7
8059	63163174000S032	1963	I-75 SB	7
8059	63163174000S062	1964	I-75 SB	4
8091	63163174000S220	1966	MYERS RD	4
8095	63163174000S260	1966	NINE MI RD TURN	4
8097	63163174000S280	1971	WOODWARD HTS	4
9899	77177011000C020	1900	M-19	N
9938	77177023000S040	1964	MICHIGAN RD	4
9983	77177111000B014	2009	I-94 WB	4
10014	77177111000S170	1966	I-69 WB	4
11112	82182022000S030	1962	I-94 WB	6
11120	82182022000S100	1962	I-94 WB	4
11168	82182023000P050	1955	BROOKLYN AV W	4
11182	82182023000S138	1953	I-94 TO W GR BLV	5
11193	82182023000S250	1953	I-94EB RMP TO M-10	4
11199	82182023000X010	1948	CSX RR	N
11200	82182023000X020	1955	CONRAIL	N
11201	82182023000X028	1955	GTW & CONRAIL	N


Save As dialog box: Save as type: Microsoft Office Excel Workbook (\*.xls)

# Bridge Management – MBRS

## Bridge Dashboard

STR 880
Information Summary and Current Status
B01-11053



<b>Facility</b> M-63	<b>Latitude / Longitude</b> 42.111753 / -86.478398	<b>MDOT Structure ID</b> 111110530008010	<b>Structure Condition</b> Fair Condition(6)
<b>Feature</b> ST JOSEPH RIVER	<b>Length / Width</b> 712.89 / 57.74	<b>TSC / Owner</b> Coloma(SA) / MDOT Region - C and T	
<b>Location</b> IN ST JOSEPH	<b>Built / Recon. / Paint / Ovly.</b> 1949 / 2007 / 1990 / 2008	<b>Maint Resp.</b> State Highway Agency	
<b>Region / County</b> Southwest(5) / Antrim(11)	<b>Material / Design</b> 3 Steel / 16 Movable-Bascule	<b>Last NBI Inspection</b> 07/26/2011 / PZSY	<b>Operational Status</b> Open, no restriction(A)
			<b>Scour Evaluation</b> 7 Countermeasures

[Inventory & Appraisal](#)

[Inspections](#)

[Load Ratings](#)

[Work Recommendations](#)

[Work History](#)

[Documents](#)

**Inspection Data**

- Routine
  - 07/26/2011
    - BSB
  - 12/17/2008
  - 12/17/2006
  - 12/17/2004
- CoRe Element
- Fracture Critical
- Fatigue Sensitive
- Underwater
- Other Special
- Damage
- Scour Action Plan

Michigan Department of Transportation  
Form P2502

**Bridge Safety Inspection Report**

Page 1  
B01-11053

Facility	Federal Structure ID	Inspector Name	Agency/Consultant	Inspection Date	Legend		
M-63	111110530008010	Louis Taylor	MDOT Bridge Ops.	07/26/2011	9 New		
Feature	Latitude	Longitude	Struc Num	Insp Freq	Insp Key		
ST JOSEPH RIVER	42 8' 45.97"	86 28' 39.25"	880	15	PZSY		
Location	Length	Width	Year Built	Year Recon	Br Type	Scour Eval	No.Pins
IN ST JOSEPH	712.9	57.74	1949	2007	3	18	7

**NBI INSPECTION**

1. Surface SIA-58A	7	7	7	Epoxy overlay has minor hairline transverse cracks in north approach Span ( 11) Year 10- Epoxy overlay has minor HL transv cracks in N. Approach Span ( 10) Epoxy overlay has minor HL transv cracks in N. Approach Span ( 09)
2. Expansion Jts	8	8	8	Some dirt in joints ( 11) ( 10) ( 09)
3. Other Joints	7	7	7	( 11) ( 10) ( 09)
4. Railings	7	7	7	Few sections of spalling w/ exposed rebar on E Railing, Span 25. Several rust stained cracks and delamination along concrete rail sections near base. ( 11) Year 10 - Few sections of spalling w/ exposed rebar on E Railing, Span 25. Several rust stained cracks and delamination along concrete rail sections near base. ( 10) Few sections of spalling w/ exposed rebar on E Railing, Span 25. Several rust stained cracks and delamination along concrete rail sections near base. ( 09)
5. Sidewalks or curbs	7	7	7	West Curb, Span 25, Small Spall on curb w/ exposed rebar ( 11) Year 10 - West Curb, Span 25, Small Spall on curb w/ exposed rebar ( 10) West Curb, Span 25, Small Spall on curb w/ exposed rebar ( 09)
6. Deck Surface SIA-58B	6	6	6	Several wet leaching transverse cracks on soffit. Light spalling along center construction joint and a few top flanges. Also a few rusty cracks along the decks fascia soffit. ( 11) Year 10 - Several wet leaching transverse cracks on soffit. Light spalling along center construction joint and a few top flanges. Also a few rusty cracks along the decks fascia soffit. ( 10)

# Bridge Management – MBRS

## Mapping Functionality

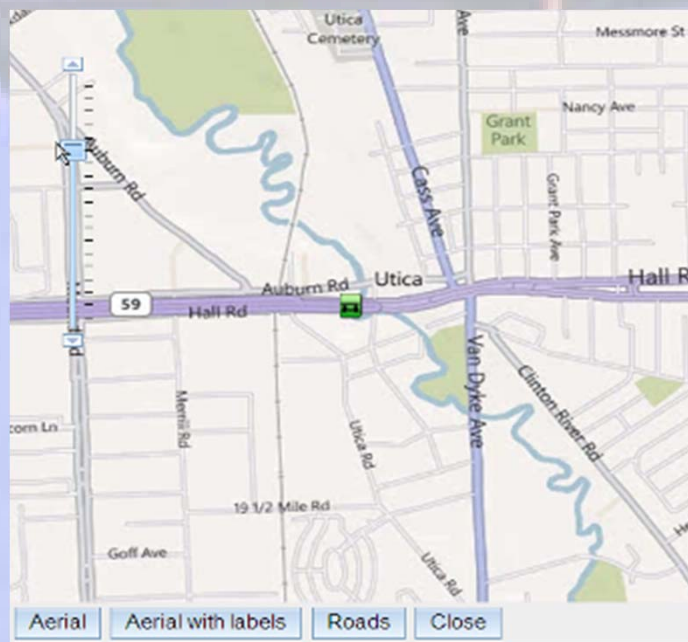
STR 6043 B01-50021

Information Summary and Current Status



Click on Map

<b>Facility</b> M-59	<b>Latitude / Longitude</b> 42.62487 / -83.038179	<b>MDOT Structure ID</b> 50150021000B010	<b>Structure Condition</b> Fair Condition(6) 
<b>Feature</b> CLINTON RIVER	<b>Length / Width</b> 85 / 155.18	<b>TSC / Owner</b> Macomb TSC(7C) / Metro	
<b>Location</b> IN UTICA	<b>Built / Recon. / Paint / Ovly.</b> 1994 / / /	<b>Maint Resp.</b> State Highway Agency	<b>Operational Status</b> Open, no restriction(A)
<b>Region / County</b> Metro(7) / Baraga(50)	<b>Material / Design</b> 5 Prestressed Concrete / 02 Stringer/Girder	<b>Last NBI Inspection</b> 04/02/2010 / XRPI	<b>Scour Evaluation</b> 5 Stable w/in footing





# Bridge Field Services

**Engineer of Bridge Field Services**  
Matt Chynoweth

## **Bridge Construction**

Corey Rogers  
Scott Hobner

## **Structural Section**

Pete Jansson  
•Structural Fabrication  
•Experimental Studies

## **Structure Management**

Eric Burns  
•Bridge Inspection  
•Bridge Maintenance  
•Statewide Bridge Crews

# Bridge Field Services

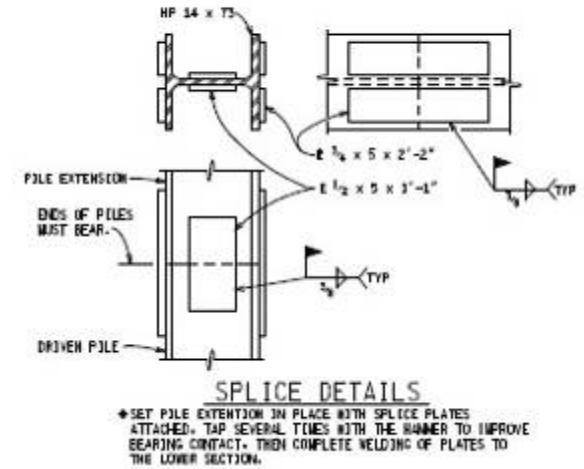
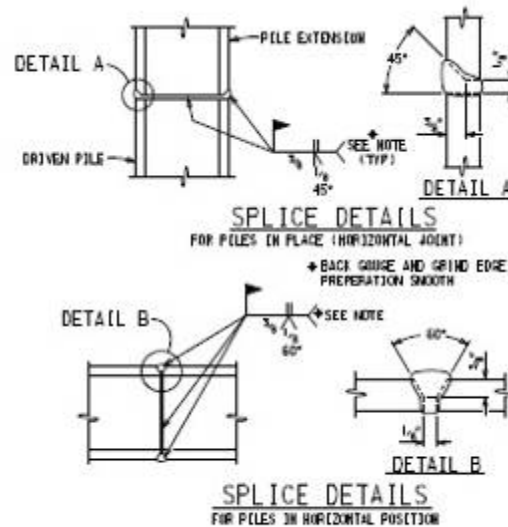
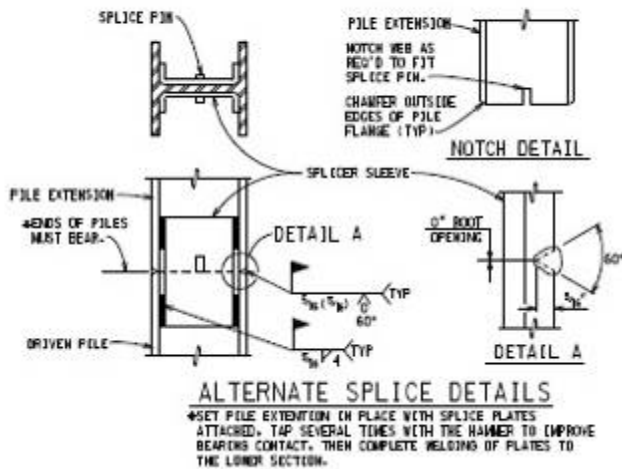
- Strategic goals:
  - Day to day operations of Bridge Field Services
  - Create and maintain alignment on all bridge field related issues
  - Support Region and TSC field offices on all aspects of bridge construction, maintenance & operations, inspection, testing

# Bridge Field Services

- Recent Bridge Painting Issues
  - DEQ visiting projects in Lansing and Davison TSC's
  - Issued violations for the following items:
    - Gondolas and roll off boxes not properly labeled
    - Containers exposed to rain, pooled water on tarps
    - Materials not properly characterized
    - Inspection logs contained incorrect generator information
    - Personnel training records not on site
    - Contingency plans not on site
    - Hazardous waste (spent blast) was not properly contained

# Bridge Field Services

- Welded Pile Splices



# Bridge Field Services

- Welded Pile Splices
  - current issues:



# Bridge Field Services

- **Welded Pile Splices**
  - Issues with quality on field full penetration butt welds, and fillet welds on pile splicers
  - Shop structural welds have not been a problem
  - Issues with visual acceptance vs. ultrasonic thickness (UT) testing of the welds
  - Contractors have issues with UT test results and corrective action
  - Improper joint preparation, not back gouging
  - Improper storage and handling of electrodes
  - Improper preheat and interpass temperatures

# Bridge Field Services

- **Welded Pile Splices**
  - Bridge Field Services staff working with MITA on solution, to include:
    - Field Weld Inspection Manual
    - Foundation Welding Special Provision, and 2012 Standard Specifications for Construction clean up
    - Weld procedure form
    - Contractor Weld QC Plan

# Bridge Field Services

- Sign Replacement Projects
  - MDOT Bridge Committee does not recommend core drilling into concrete beams to remove existing connection bolts and inserts
  - Draft special provision going through review:
    - Removal of bolt flush with the surface of the concrete
    - Coating of the exposed cut bolt with epoxy, or zinc rich primer



# Bridge Field Services

- Limiting vibration and settlement SP's
  - SP's used for part width and staged construction on bridges with spread footings, utility concerns, adjacent or historic property concerns.
  - Industry has issues with current SP's; too much risk on contractor
  - Working on revised SP's containing more guidance, and other stepped mitigation techniques considering the type of work, and extent of exceeding thresholds

# Bridge Field Services

- Bridge Construction – BOHIM 2007-02
  - Covers procedures and documentation
  - Covers the forms needed
  - Includes a Bridge Deck Construction Inspection checklist
    - Metal deck forms
    - Shear developers/reinforcement
    - Pour sequence
    - Concrete QA
    - Placing/finishing/texturing
  - Needs to be updated – Contact Corey Rogers as opposed to Eric Burns

# Bridge Field Services

- Post Construction Inspections on Bridge Projects

- 23 CFR 650.315 states:

(c) For existing bridge modifications that alter previously recorded data and for new bridges, enter the SI&A data into the State or Federal agency inventory within **90 days** after the completion of the work for State or Federal agency bridges and within **180 days** after the completion of the work for all other bridges.

# Bridge Field Services

- Post Construction Inspections on Bridge Projects
- Form 1120 – Final Inspection/Acceptance and Certification Report

Michigan Department Of Transportation 1120 (11/11)		FINAL INSPECTION/ACCEPTANCE and CERTIFICATION REPORT			FILE 108
<b>FINAL INSPECTION/ACCEPTANCE:</b>		<b>DISTRIBUTION INSTRUCTIONS:</b> ORIGINAL – Contract Services. COPIES – Associate Region Engineer-Construction, Construction Project Engineer, Financial Operations – Project Accounting, When applicable: Lansing Real Estate – Local Agency Programs Unit, Traffic & Safety, Multi-Modal – Freight Services; Lansing CFSO – Bridge Operations Engineer.			
<b>PROJECT CERTIFICATION:</b>		After Region Engineer/Representative signs Certification form, send a copy of Certification to: FHWA, Financial Operations – Project Accounting, Associate Region Engineer-Construction, Construction Project Engineer.			
FINAL INSPECTION/ACCEPTANCE REPORT					
CONTROL SECTION/JOB NUMBERS		FEDERAL PROJECT NO.	FEDERAL ITEM NO.	DATE	
CONTRACTOR NAME			START DATE	ACTUAL COMPLETION DATE	
TYPE OF ACTION		<input type="checkbox"/> Final Inspection/Acceptance <input type="checkbox"/> Project Certification		FHWA OVERSIGHT PROJECT ON NHS <input type="checkbox"/> MDOT OVERSIGHT PROJECT ON NHS <input type="checkbox"/>	
INSPECTED BY					
NAME:				DATE	
SIGNATURE					
TYPE OF WORK (As per proposal)					
RECOMMENDATIONS/CONCLUSIONS/REMARKS					
IS PROJECT WARRANTED? <input type="checkbox"/> YES <input type="checkbox"/> NO		WARRANTY DOCUMENTS ON FILE	WARRANTY TYPE	DURATION	EXPIRATION DATE
DATE NPDES NOTICE OF TERMINATION SUBMITTED	DATE SITE ID NUMBER IS DEACTIVATED		STRUCTURE CLEARANCE MEASUREMENTS FORM 1190? YES <input type="checkbox"/> NO <input type="checkbox"/>		
ITEM NOTED ABOVE HAVE BEEN RESOLVED.		CONSTRUCTION/PROJECT ENGINEER		DATE	
COMMENTS:					
BRIDGE WORK: <input type="checkbox"/> YES <input type="checkbox"/> NO		BRIDGE INSPECTION:	DATE REQUESTED	DATE COMPLETED	
ACCEPTANCE RECOMMENDED BY					
CONSTRUCTION/PROJECT ENGINEER					
CITY/COUNTY AUTHORIZED SIGNATURE			TITLE	DATE	
I hereby certify that the construction on this project substantially conforms to the plans and specifications.			TSC MANAGER (Signature)		DATE
The project will be submitted for final certification if it has FHWA oversight on the NHS and the items checked below have been completed.					
<input type="checkbox"/> Traffic Control Devices		<input type="checkbox"/> Railroad Affidavit		<input type="checkbox"/> Material Exceptions (See Attached)	
<input type="checkbox"/> Other (Specify)					
PROJECT CERTIFICATION (FHWA Oversight Projects on NHS Only)					
I hereby certify that the construction work on this project and materials incorporated in this project are in conformity with approved plans and specifications, and that the independent assurance tests have been performed. The items checked on the Final Inspection/Acceptance Report have been completed.					
REGION ENGINEER/REPRESENTATIVE (Signature)				DATE	
NOTED BY F.H.W.A.				DATE	

# Bridge Field Services

- Bridge Construction Efforts
  - MDOT Paint School
  - MDOT Bridge Deck Construction Course
  - MDOT/MITA Bridge Operations Committee
  - Member of AASHTO Subcommittee on Bridges and Structures, Technical Committee T-4 – Bridge Construction
  - Expand available training
  - Provide field support on complex projects ,staging issues, deck pours, excessive haunches, large overhangs, field bolting and welding issues, etc.
- Let us know how we can help...

# Thank You

## Questions?

