

A photograph of a concrete bridge spanning a river. The bridge has a white railing and is supported by concrete piers. The river is calm, reflecting the bridge and the surrounding landscape. On the right bank, there is a dense forest of trees with vibrant autumn foliage in shades of red, orange, and yellow. The left bank is a grassy slope with some rocks. The sky is overcast.

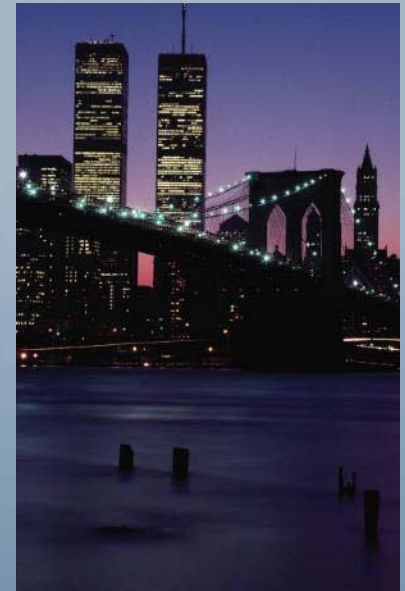
Local Agency Bridge Program 2014 Bridge Conference



Project Letting Summary

■ FY 2013

- 86 Local Bridge Projects Let to Contract: Total = \$59 million
- 87 Total Projects = \$60 million





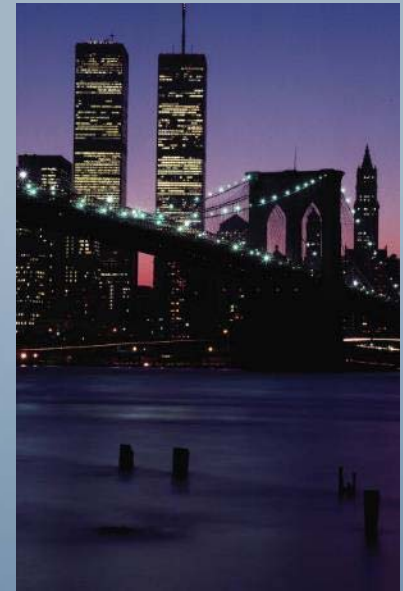
Project Letting Summary

■ FY 2013

- 86 Local Bridge Projects Let to Contract: Total = \$59 million
- 87 Total Projects = \$60 million

■ FY 2014 (As of March 1st)

- 22 Local Bridge Projects = \$14 million
- April Advertised Projects
 - 11 Local Bridge Projects = \$7.2 million





2014 Call For Applications

- Sent out February 6th to CRAM and MML
- **Deadline – May 1, 2014**



2014 Call For Applications

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- “Call For Projects” Location:
www.michigan.gov/mdot, Doing Business, Local Agency Program, Bridge Program, Call For Applications



Call For Applications

- 5 Application limit
 - Multiple PM's count as 1 Application
 - Bundle for cost effectiveness
 - Minimize Mob and Traffic Control costs
 - Good Estimate Range \$100k-400k
 - PM's selected by RBC consensus – Not by Points



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- Federal Sufficiency Rating (FSR) no longer used for project eligibility (MAP-21)



Call For Applications

- Application Estimates:
 - General Estimate: Replacements
 - Rural: \$200/sft of Proposed Deck Area
 - Urban: **\$280/sft of Proposed Deck Area**
 - Approach Costs: \$25k/Sta, \$100k minimum, Urban higher (\$300k to \$500k)
 - Rehabilitation and Preventative Maintenance –
Provide Detailed Estimate Worksheet of Costs



Call For Applications

■ **Application Changes**

- Inflation Factor is 3%, not 5%
- Do NOT include PE, CE and ROW costs
- FSR's not used for eligibility
- Encourage Asset Management Plan with App.



Call For Applications

- **Application Changes**
 - Inflation Factor is 3%, not 5%
 - Do NOT include PE, CE and ROW costs
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- Submit Applications Electronically
- Accurate Inspection and SI & A Information



Call For Applications

- Common Errors on SI & A
 - Incorrect/Outdated
 - ADT
 - Route Classification
 - Load Rating and Posting
 - SI&A Posted Loading not matching bridge site posting
 - Lack detail in element condition description
 - Lack work recommendations



Call For Applications

- Application Do's/Don'ts
 - Do include a complete Narrative
 - Do include current Resolution
 - Do include Public Utility relocation costs
 - Do proper Scoping of Work
 - Rehabilitation and PM projects



Call For Applications

- Application Do's/Don'ts
 - Don't Estimate too High or Low – Adversely affects Local Bridge Program
 - Don't underestimate the size of new bridge
 - Don't forget current Resolution
 - Don't forget due May 1, 2014

Application Scoping

Project Scoping Manual

Bridge Network Strategy Development

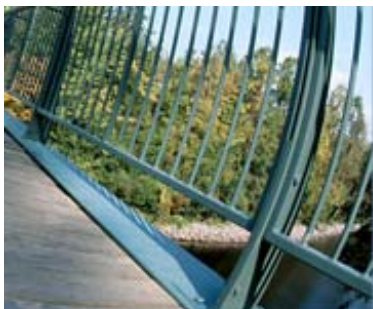
Rehabilitation and Replacement for Bridges

The purpose of the bridge program is to preserve MDOT's trunkline bridges. It is a balanced strategy made up of Replacement, Rehabilitation, CPM and Capital Scheduled Maintenance (CSM). The emphasis area of this program is to address the needs of all structures of critical concern, and maintain the freeway and non-freeway bridges in good or fair condition.

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revised JUNE 2013



Application Scoping

BRIDGE DECK PRESERVATION MATRIX

DECK CONDITION STATE				REPAIR OPTIONS	POTENTIAL RESULT TO DECK BSIR		NEXT ANTICIPATED EVALUATION
Top Surface		Bottom Surface			Top Surface BSIR #58a	Bottom Surface BSIR #58b	
BSIR #58a	Deficiencies % (a)	BSIR #58b	Deficiencies % (b)				
≥ 5	N/A	N/A	N/A	Hold (c) Seal Cracks/Healer Sealer (d)	No Change	No Change	1 to 8 years
	≤ 5%	> 5	≤ 2%	Epoxy Overlay	8, 9	No Change	10 to 15 years
	≤ 10%	≥ 4	≤ 25%	Deck Patch (e)	Up by 1 pt.	No Change	3 to 10 years
4 or 5	10% to 25%	5 or 6	≤ 10%	Deep Concrete Overlay (h)	8, 9	No Change	25 to 30 years
		4	10% to 25%	Shallow Concrete Overlay (h, i)	8, 9	No Change	10 to 15 years
				HMA Overlay with water-proofing membrane (f, h, i)	8, 9	No Change	8 to 10 years
		2 or 3	> 25%	HMA Cap (g, h, i)	8, 9	No Change	2 to 4 years
≤ 3	>25%	> 5	< 2%	Deep Concrete Overlay (h)	8, 9	No Change	20 to 25 years
		4 or 5	2% to 25%	Shallow Concrete Overlay (h, i)	8, 9	No Change	10 years
				HMA Overlay with water-proofing membrane (f, h, i)	8, 9	No Change	5 to 7 years
		2 or 3	>25%	HMA Cap (g, h, i)	8, 9	No Change	1 to 3 years
				Replace Deck	9	9	40+ years

(a) Percent of deck surface area that is spalled, delaminated, or patched with temporary patch material.

(b) Percent of deck underside area that is spalled, delaminated or map cracked.

(c) The "Hold" option implies that there is on-going maintenance of filling potholes with cold patch and sealing of incipient spalls.

(d) Seal cracks when cracks are easily visible and minimal map cracking. Apply healer sealer when crack density is too great to seal individually by hand. Sustains the current condition longer.

(e) Crack sealing can also be used to seal the perimeter of deck patches.

(f) Hot Mix Asphalt overlay with waterproofing membrane. Deck patching required prior to placement of waterproofing membrane.

(g) Hot Mix Asphalt cap without waterproofing membrane for ride quality improvement. Deck should be scheduled for replacement in the 5 year plan.

(h) If bridge crosses over traveled lanes and the deck contains slag aggregate, do deck replacement.

(i) When deck bottom surface is rated poor (or worse) and may have loose or delaminated concrete over traveled lanes, an in-depth inspection should be scheduled. Any loose or delaminated concrete should be scaled off and false decking should be placed over traveled lanes where there is potential for additional concrete to become loose.



Open Bridge Railings

- Elimination of Open Bridge Railings
 - Special Details
 - X-30D: Open Concrete Rail
 - X-31A: Open Guardrail
- Memo to CRAM and MML – Oct. 14, 2013
 - Elimination due to premature deterioration of fascia beams, deck, railing posts



Open Bridge Railings

Box Beam Fascia's





Open Bridge Railings

Steel Beam Fascia's



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Open Bridge Railings

Steel Beam, Slab Fascia and Abutment Deterioration





HMA Overlays

HMA Overlay – Joints,
Open Railings

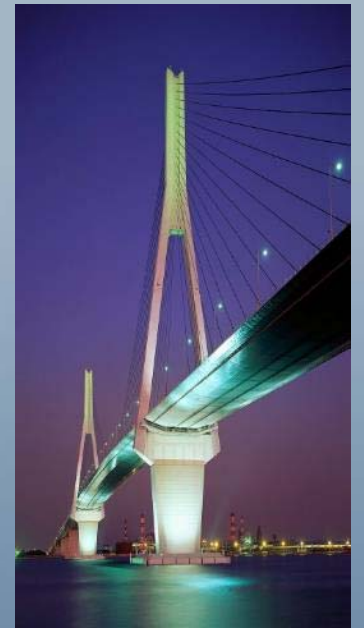


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On-Off System Funds (MAP-21)

- MAP-21 Federal Off-System Waiver
 - MAP-21 requires 15% of Fed Bridge funding be spent on Off-System bridges
 - MDOT gives all 15% Off-System funds to Local Bridge Program
 - Equates to $\frac{1}{2}$ of the Local Bridge Funds





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 - Equates to $\frac{1}{2}$ of the Local Bridge Funds
- Waiver based on Statewide system condition and goals
- Waiver allows for greater funding flexibility





On-Off System Funds (MAP-21)

- FHWA granted waiver for MAP-21 (2-Years)
- Seeking continuation of waiver if MAP-21 extended
- No extension of waiver – Will approve applications ½ On-System and ½ Off-System
- Ensure LBP uses all Federal Funds





2013 Bridge Applications

- 287 Bridge Applications Received
 - \$200 million in applications ~ \$46 million in funding
- 100 Projects selected for FY 2016
 - “Mix of Fixes” –30% Replacement – 70% Rehab/PM
 - 48% of total \$ selected are Rehab/PM



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- “Mix of Fixes” follows MDOT’s overall Asset Management Plan



Bridge Asset Management

- Transportation Asset Management Council (TAMC)
 - TAMC website
 - Redesigned Bridge Dashboard
 - Access data for each Region, County, City
 - Compare data with other Local Agencies
 - Region
 - County
 - City

Bridge Asset Management



Transportation Asset Management Council
MI Transportation Reporting Portal

Michigan.gov

The Official State
of Michigan Website

[Subscribe to TAMC Updates](#) [Login](#)

Bridge Comparison

Bridge

Bridge Comparison

Traffic

Safety

Maintenance

Finance

Bridge
Conditions

Bridge Conditions



Bridge
Conditions



Trend
Conditions



Forecasting

Regional Map



Year

2012

Geographic Area

State

Name

State of Michigan

Category

All Bridges

☒ Number of Bridges

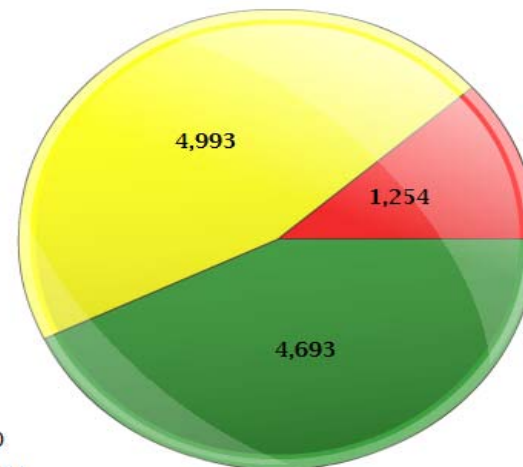
☐ Total Deck Area (in sq. ft)

☐ Structurally Deficient (SD) Deck Area



MICHIGAN TRANSPORTATION
ASSET MANAGEMENT COUNCIL

■ Bridges Good
■ Bridges Fair
■ Bridges Poor



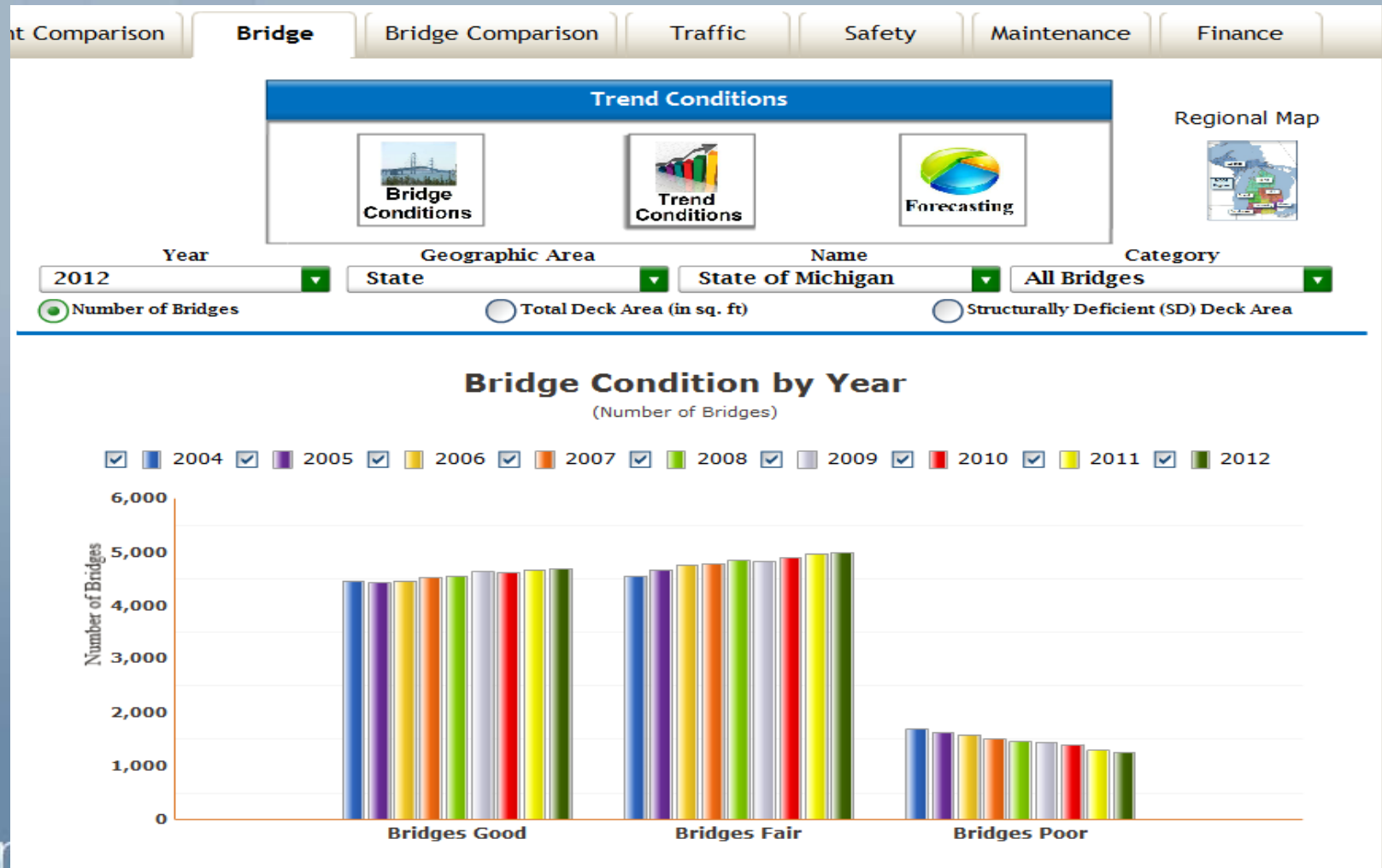
Number of Bridges	10,940
Total Bridge Deck Area (in sq. ft)	67,423,801
Structurally Deficient Deck Area (in sq. ft)	5,829,583

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Bridge Asset Management

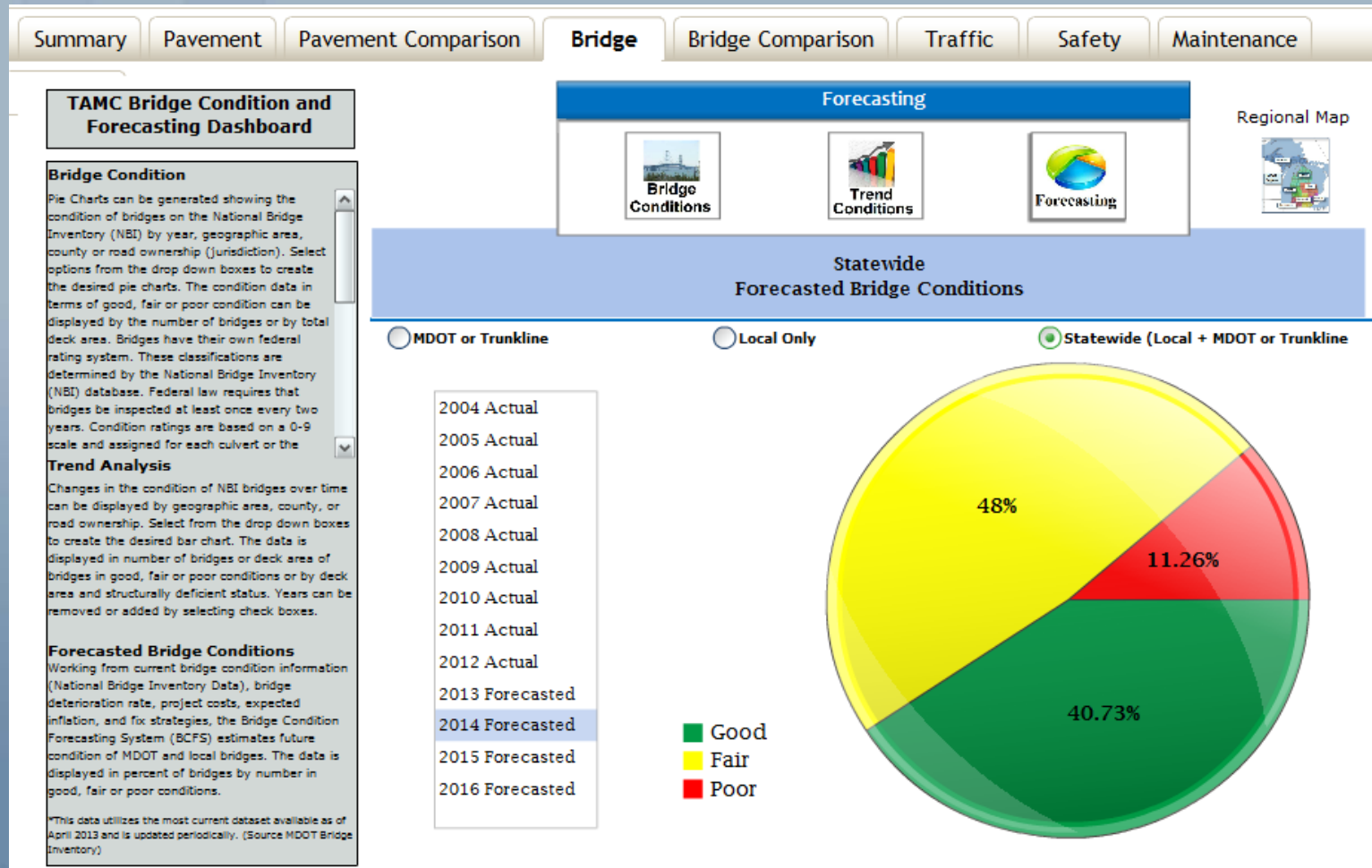
Trend Conditions





Bridge Asset Management

Forecasting





Bridge Asset Management

Asset Management Guide Training

Training course for Local Bridge Asset Management

Date: April 24, 2014 in Marquette, MI
(Broadcast as a Webinar)

Contact: Brian Sanada, Asset Management Coordinator (517)373-2220



Bridge Asset Management

■ Workshop Outline

- Introduction to Bridge Asset Management
- Bridge Condition – Assessing Needs
- Maintenance Options – Replace, Rehab, PM
- Cost Estimating
- Optimizing Bridge Preservation – “Mix of Fixes”
- Developing a Local Bridge Preservation Plan



Local Bridge Program Website

- www.Michigan.gov/mdot
 - Click: Doing Business
 - Click: Local Agency Program
 - Click: Bridge Program
 - Details of the Local Bridge Program
 - 3-Year Plan – Selected Projects
 - Reference Guides, Manuals & Special Details



Regional Bridge Council Meetings

Financial and Program Update

Bay Region: May 5th @ 10:00am, City of Midland

Grand Region: May 12th @ 10:00am, Ottawa CRC

Metro Region: May 14th @ 10:00am, St. Clair CRC

North Region: April 24th @ 10:00am, MDOT Gaylord Office

Southwest Region: April 30th @ 10:00am, Van Buren CRC

Superior Region: April 25th @ 8:30am, Marquette CRC

University Region: May 7th @ 9:00am, Ingham CRC



Bridge Unit Staff

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Local Bridge Program

"Michigan's infrastructure is living on borrowed time, we must reinvest in it if we are to successfully reinvent our economy."

-Governor Snyder

Questions?

