TAMC's Mission:

To develop and support excellence in managing Michigan's Transportation assets by:

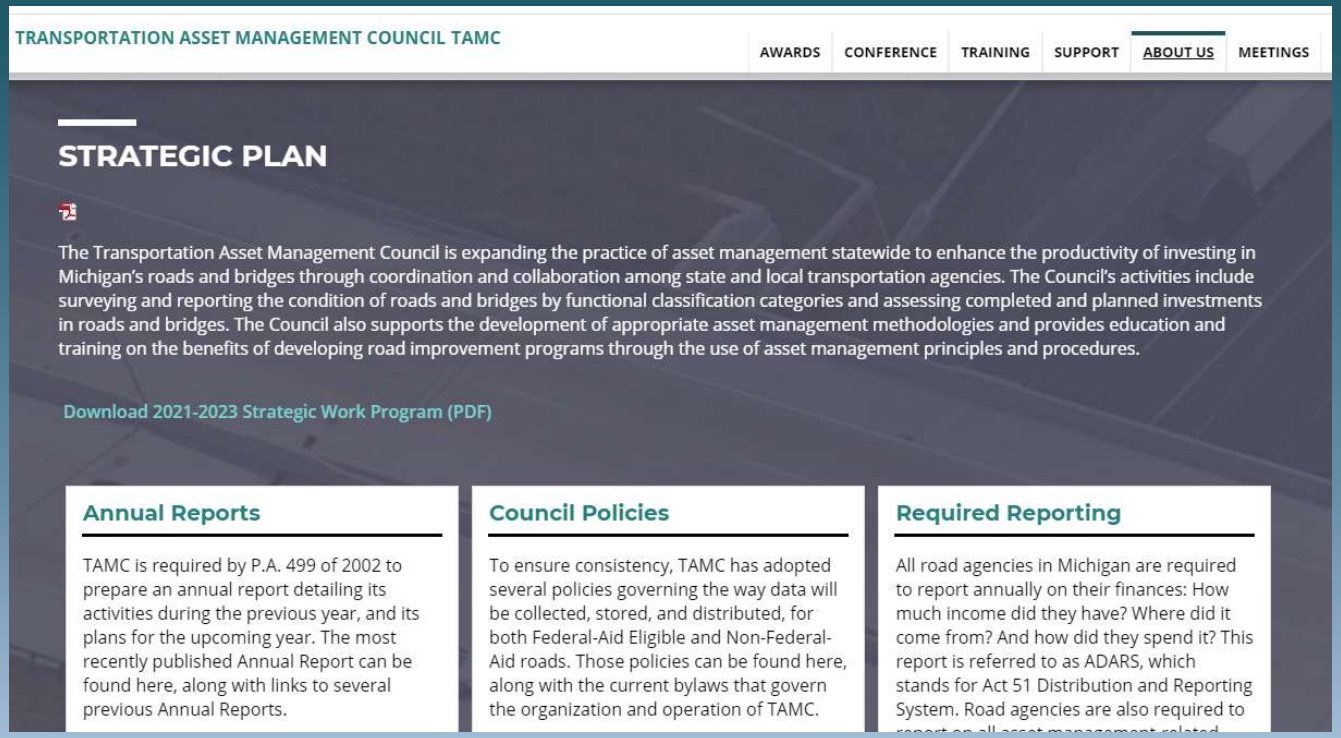
1. Advising the Legislature, State Transportation Commission (STC), Michigan Infrastructure Council (MIC), and Transportation Committees
2. Promoting Asset Management Principles
3. Providing tools and practices for road agencies
4. Collaborate and coordinate with Water Asset Management Council (WAMC) and other asset owners

Strategic Work Program

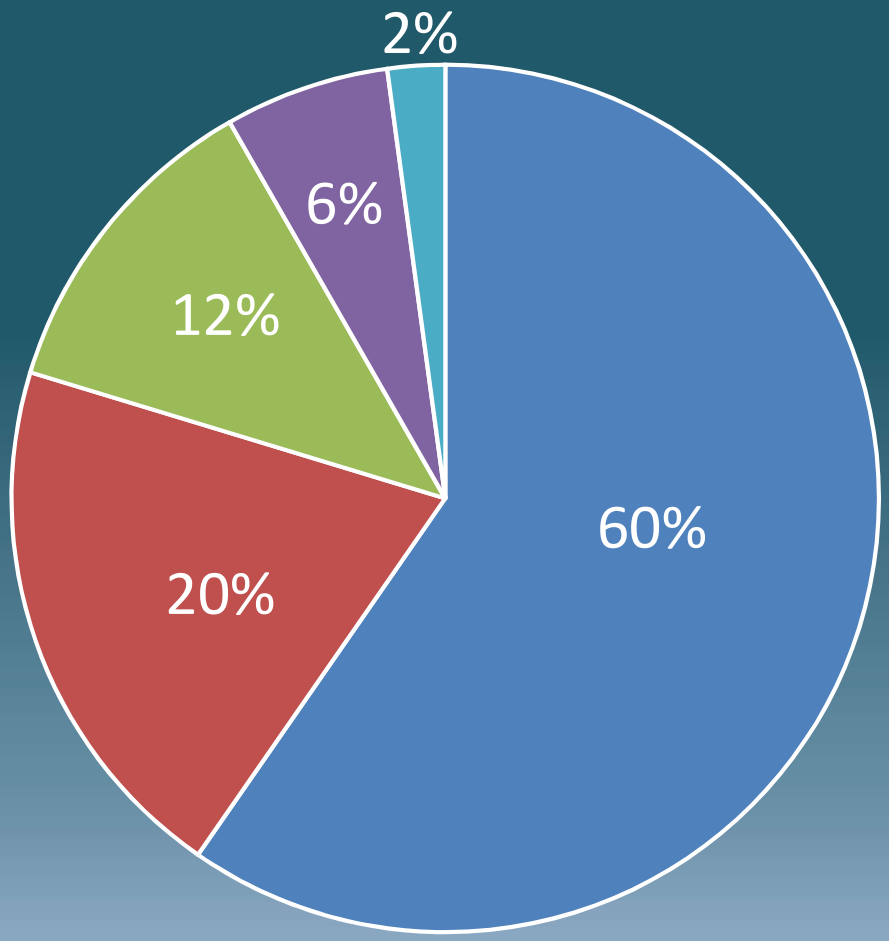
- An updated Three-Year Program Approved by TAMC on January 6, 2021
- Maintains Core Tenants of TAMC's Commitment to Data Collection, Training and Education through Critical Partnerships
- Continue Deployment of Asset Management Plan Administration
- Further Development and Implementation of Programs for Culverts and Traffic Signals

Strategic Work Program

- Where can I find the details of this Program?
- www.Michigan.gov/TAMC - About Us



Annual Budget Overview



TAMC Program – FY21/FY22

- Regional Program & Data Collection - $1,116,400
- Central Data Agency & Technology - $374,950
- Training & Education Program - $225,000
- Activities & Special Studies Program - $115,000
- Council & Conference Expenses - $40,000

Michigan Transportation Asset Management Council

Representing All Levels of Government

Brad Wieferich
MDOT

Bill McEntee
Vice-Chair, CRA

Derek Bradshaw
MAR

Todd White
MDOT

Christopher Bolt
MAC

Rob Surber
Central Data Agency

MTPA
Michigan Transportation Planning Association

Photo Coming Soon

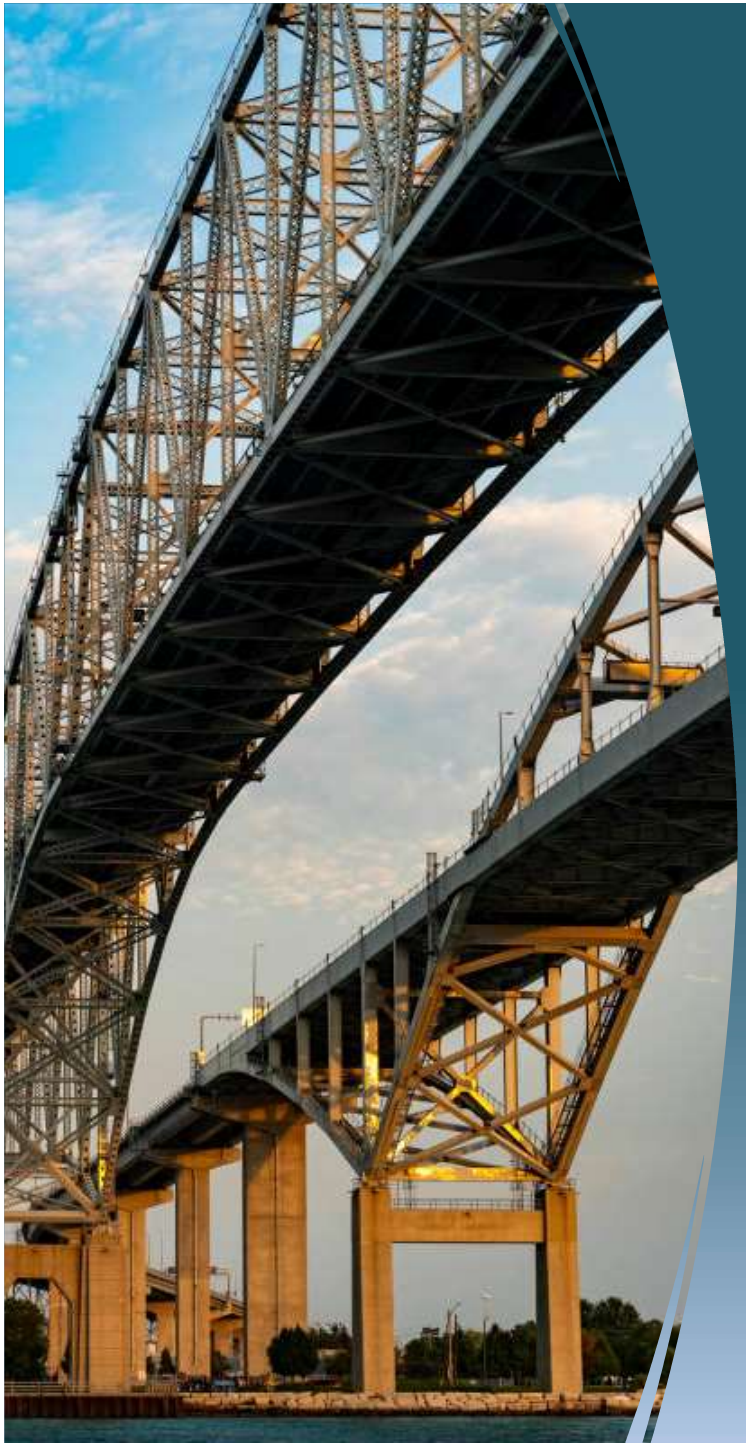
Ryan Buck
MTPA

Joanna Johnson
Chair, CRA

Bob Slattery
MML

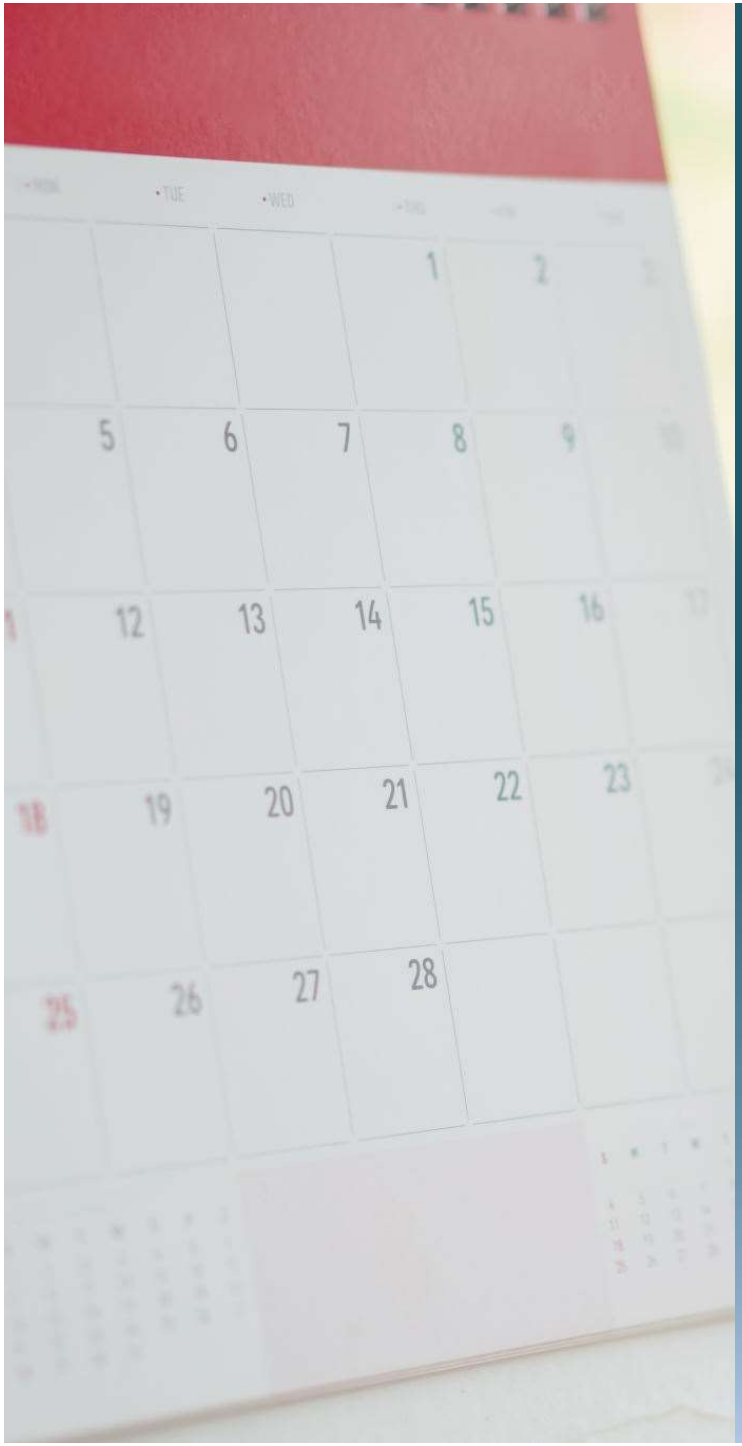
Gary Mekjian
MML

Jennifer Tubbs
MTA



Outcomes of TAMC's Program

- Agencies have tools to extract information from data
  - Current condition mapping
  - Reporting & analysis
  - Deterioration models
  - Treatment benefit study tool
  - Network level model – determine condition for given budget
- Asset Management Planning is an ongoing Business Practice
- We talk the same language! Even beyond transportation agencies!



2021 Bridge Asset Management Training Schedule

Spring Training

- Introductory Webinar (parts 1 & 2)
- May 4 & 6

- Virtual Workshop
- May 11 & 12, 18 & 19

Fall Training (~in-person, Lansing area)

- Introductory Webinar (parts 1 & 2)
- Aug 31 & Sept 2

- Workshop
- September 8

2019 Annual Report Highlights
New Tech Items
Looking into 2021

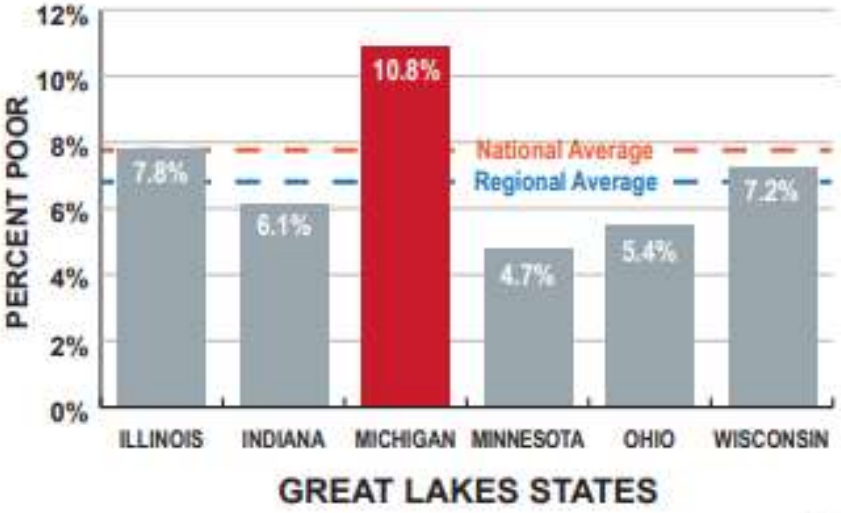
NBI Condition Ratings			
7-9	Good Condition		Routine maintenance candidate.
5-6	Fair Condition		Preventative maintenance or minor rehabilitation candidate.
4	Poor Condition		Major rehabilitation or replacement candidate.
2-3	Severe Condition	Serious or Critical Condition	Emergency repair, high priority major rehabilitation or replacement candidate. Unless closely monitored it may be necessary to close until corrective action can be taken.
0-1	Severe Condition	Imminent Failure or Failed	Major rehabilitation or replacement candidate. Bridge is closed to traffic.

Comparing Bridge Condition

Michigan lags behind its neighboring Great Lakes States in terms of bridge condition. As seen in Figure 11, Michigan has the highest percentage of poor bridges in the Great Lakes Region, and also has significantly more poor bridges than the national average. More concerning, when measuring the bridges in Severe Condition, or those requiring additional monitoring, immediate action, or at risk of closure, Michigan has double the percentage of bridges with NBI ratings of 3 or less.

2019 Percent Poor Bridges

NBI 4 or Less



2019 Percent Severe Bridges

NBI 3 or Less

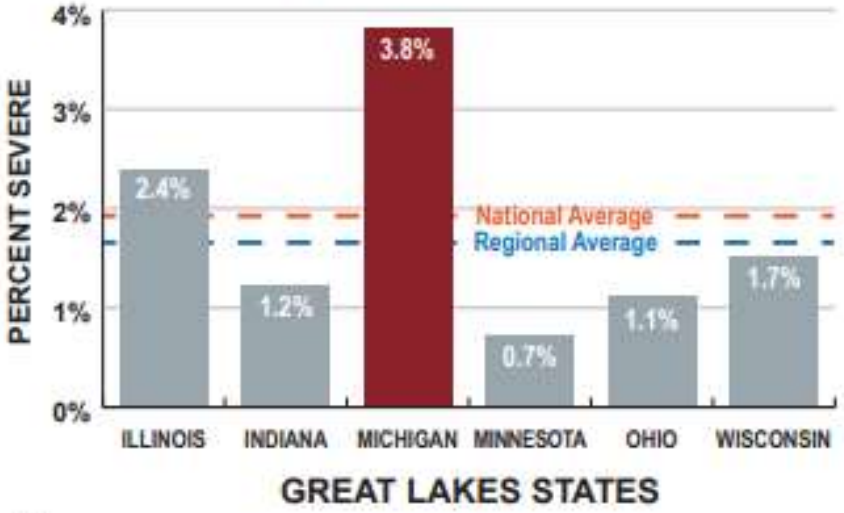


Figure 11

Source: 2019 National Bridge Inventory

Trunkline Bridges

Unlike roads, all bridges are considered federal-aid eligible. Figure 12 shows that MDOT has around 6% of its bridges in poor or severe condition and 67% of bridges are in fair condition. This large population of bridges in fair condition represents the previous investments in preservation. Until recently, MDOT has been able to maintain the number of bridges in fair condition before they reach the poor category, while increasing the number of bridges in good and fair condition. An aging infrastructure and rising costs along with stagnant funding or not enough existing revenue or lack of new revenue to maintain our aging bridges, have reversed some of that progress.

The number of bridges in fair condition has increased, and since 2017 the number of bridges in poor condition has increased as preservation needs exceed available revenues. Maintaining or improving the bridges rated in good or fair condition is imperative to prevent the number of bridges in the poor category from increasing further.

2019 Trunkline Bridge Condition

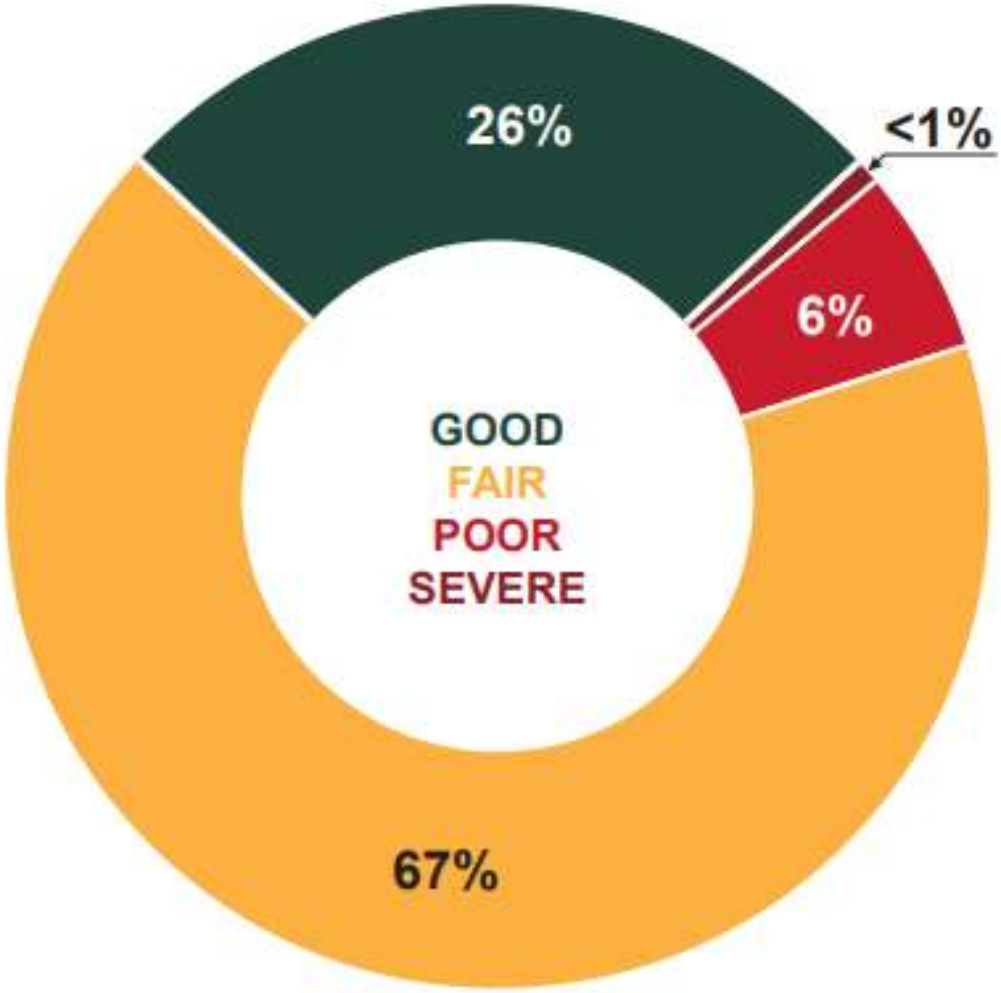


Figure 12

Source: 2019 National Bridge Inventory

Bridge Cycle of Life

Old ways

bridges change from between the good, fair, and poor ratings and is referenced as the

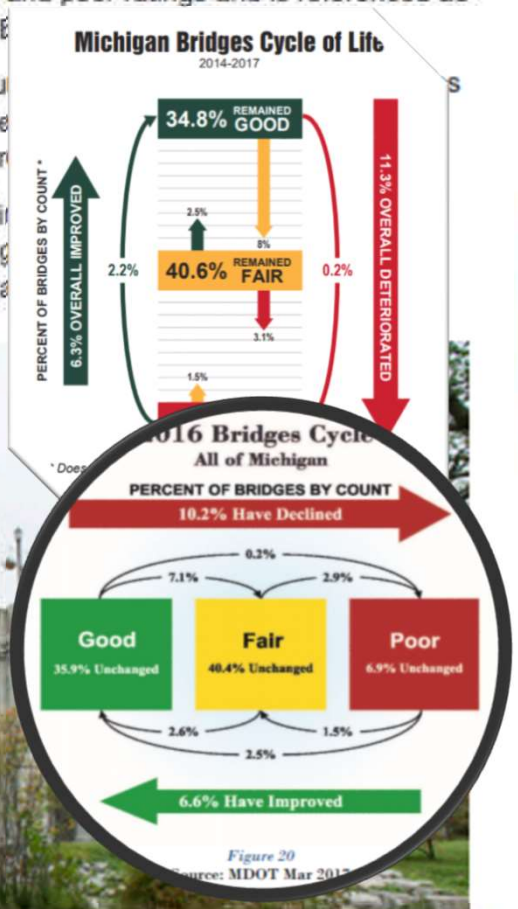
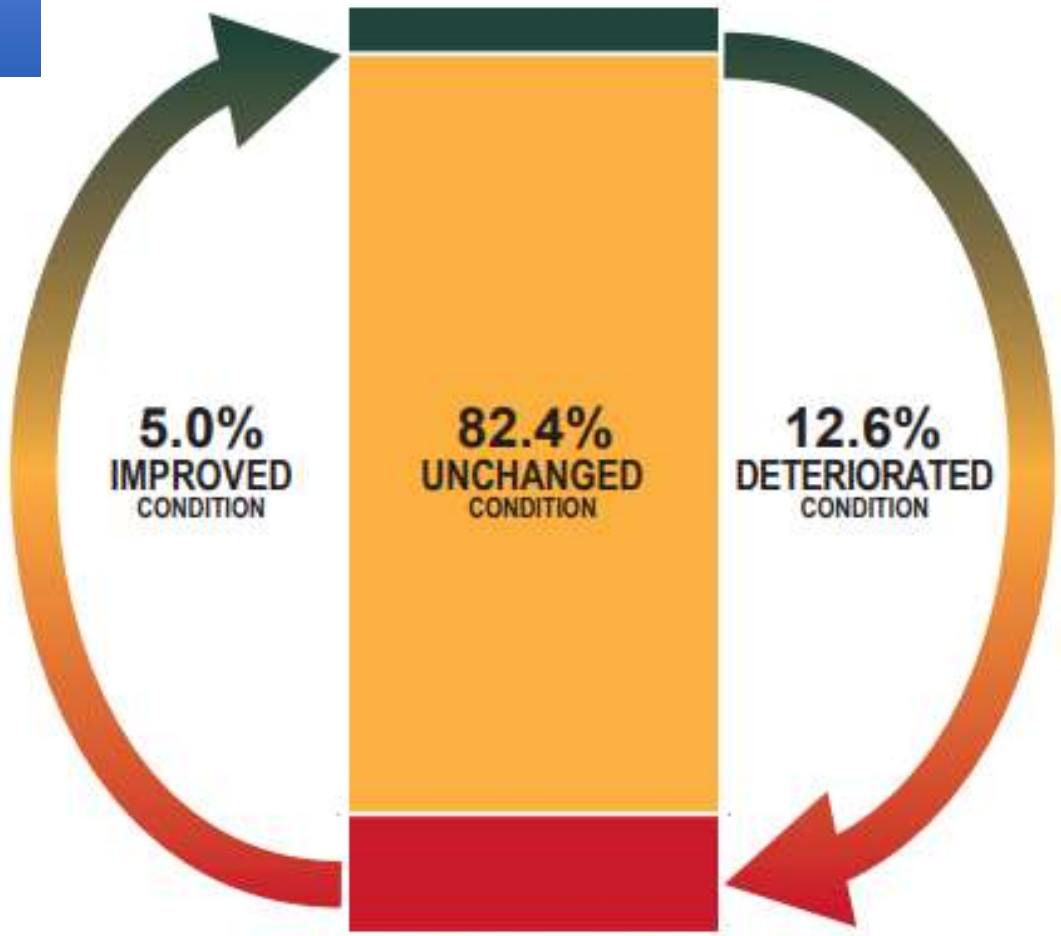


Figure 20

Bridge Cycle of Life

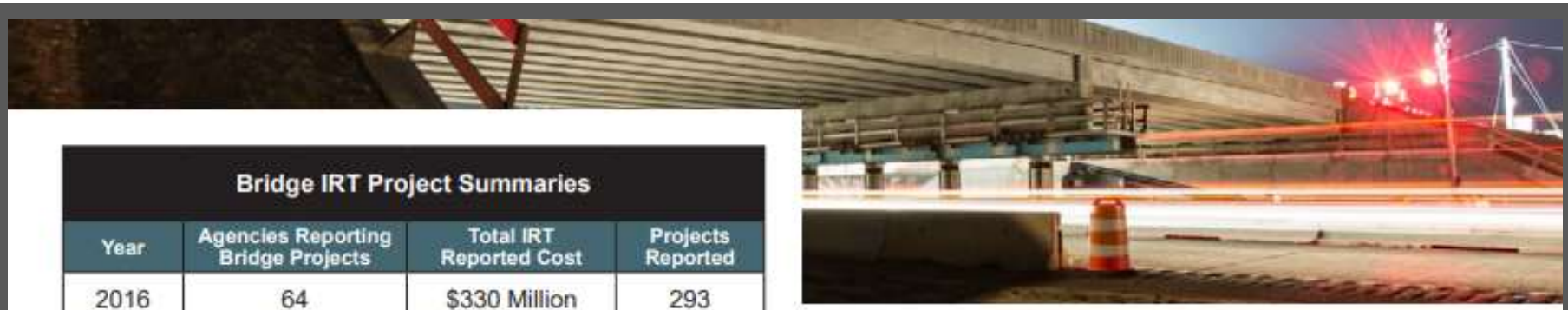
All Bridges 2016-2019



Bridges Declined 7.6%

Figure 14

Source: 2016-2019 Michigan Bridge Inventory



Bridge IRT Project Summaries			
Year	Agencies Reporting Bridge Projects	Total IRT Reported Cost	Projects Reported
2016	64	$330 Million	293
2017	61	$160 Million	244
2018	53	$375 Million	351
2019	41	$255 Million	352
	Total:	**$1.12 Billion**	**1240**

Figure 20
Source: 2016-2019 TAMC

Sample Replacement Costs

Small and Large Bridges

Figure 21
Source: 2016-2019 TAMC

Bridge Project Details

Figure 20 indicates that investment in bridge projects vary from year to year with a range of $160M to $375M. Roughly $1.12 billion was reported from 2016-2019.

Of Michigan's 617 road agencies, 352 own and maintain bridges. Of Michigan's 11,000 bridges, approximately half are owned by MDOT and half by local road agencies. Bridges can vary substantially in their length, deck area and other factors. However, replacing a bridge often greatly impacts the local economy as well as emergency services regardless of agency size.

Figure 21 shows a sample of IRT reported replacement bridge projects. An average "small bridge" could be a 60 foot one span crossing with 2 lanes of traffic where a "large bridge" may have additional lanes and spans to cross further distances and carry heavier commercial traffic.

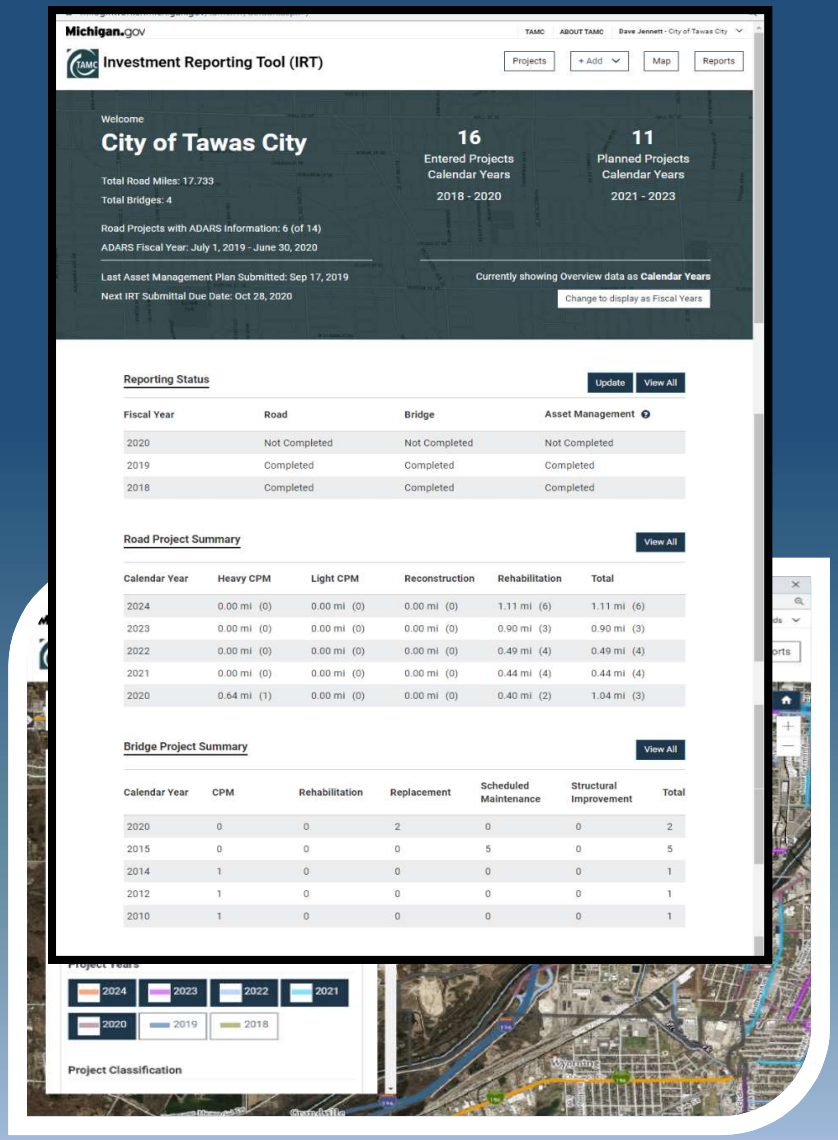
Sustained funding and preventive maintenance are even more critical for a bridge. The cost to replace a bridge for a small road agency may be more expensive than maintaining all the roads they own.

Note: The Rouge River Bridge, Zilwaukee Bridge and other large bridges are not included in statewide totals, since the high cost of this type of project would significantly shift totals and averages.

New Tech Items

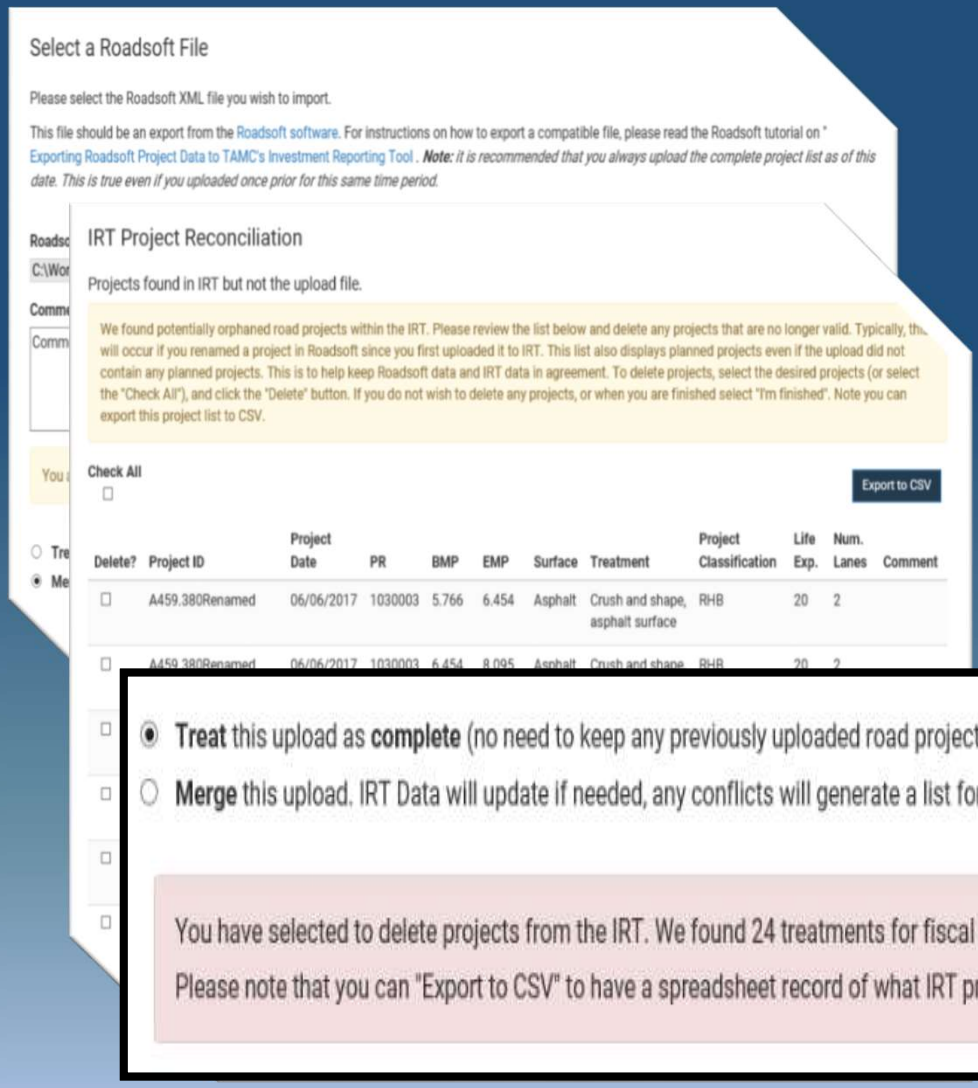
- IRT – New options with planned projects:
  - IRT Roadsoft Project Uploads “Clean Slate”
  - JobNet/STIP Projects Import
- Dashboards – added Culverts “Provisional” Data
- Interactive Map – new layout and added Culverts

IRT (Investment Reporting Tool)



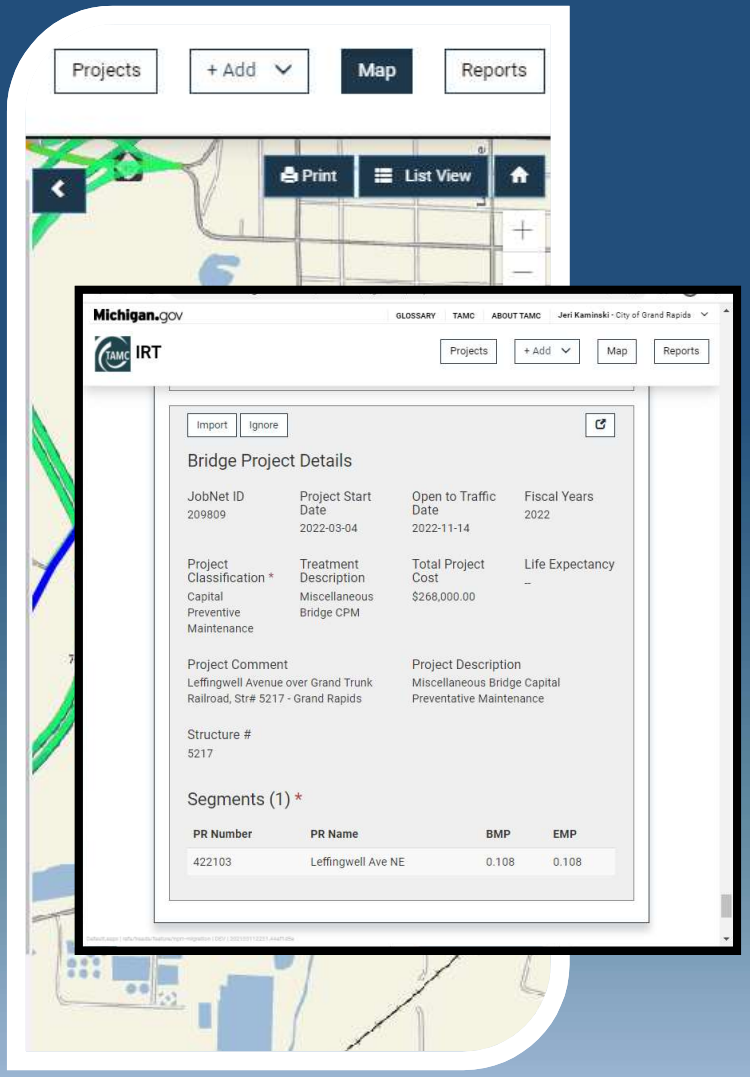
- IRT is a tool created by TAMC to meet ACT 51 reporting requirements:
  - MiLogin secure access
  - Online and free to agencies
  - Custom reports and maps
  - Supports Roadsoft uploads
- Agencies report annually their Road & Bridge Projects:
  - Current year
  - Next 3 years - Planed projects
  - *MIC "Dig Once" Project Portal* will include IRT projects

“Clean Slate” Roadsoft to IRT Planned Project Uploads



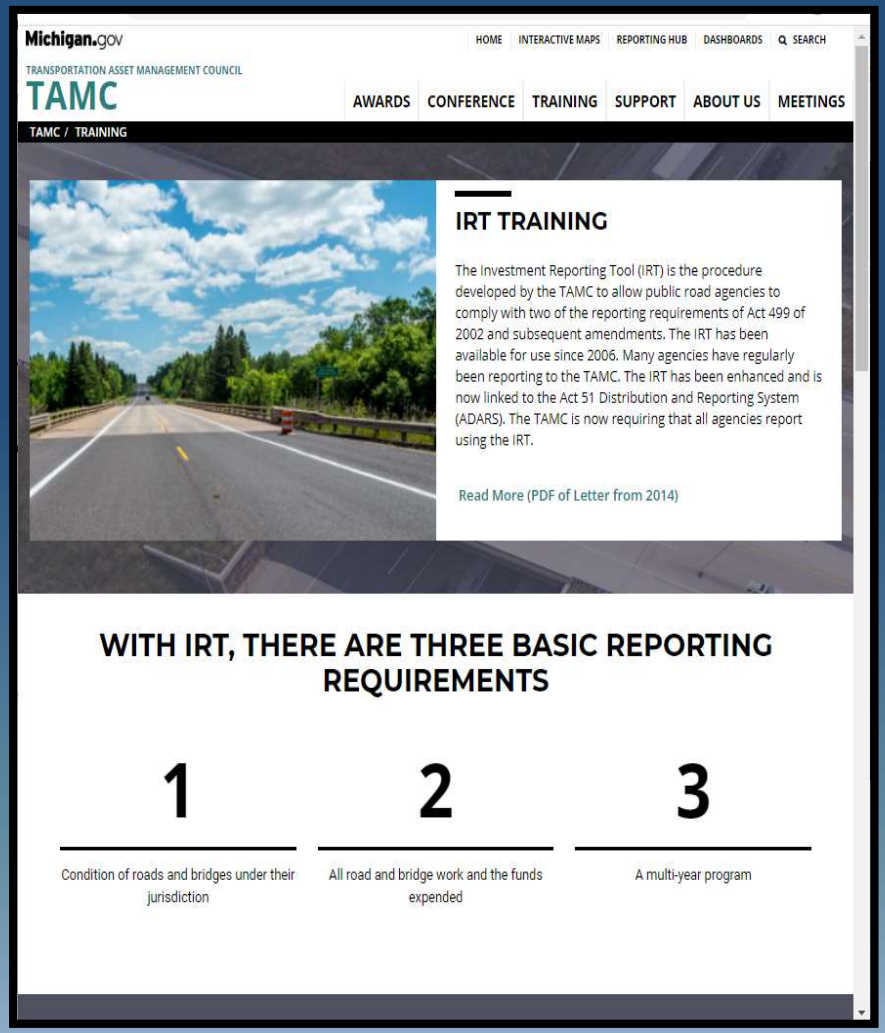
- Helps Roadsoft using agencies clean out previously entered IRT planned projects that may have been abandoned or modified.
- Improves overall TAMC IRT data set for analysis and collaboration efforts.

IRT - JobNet Import (STIP Projects)



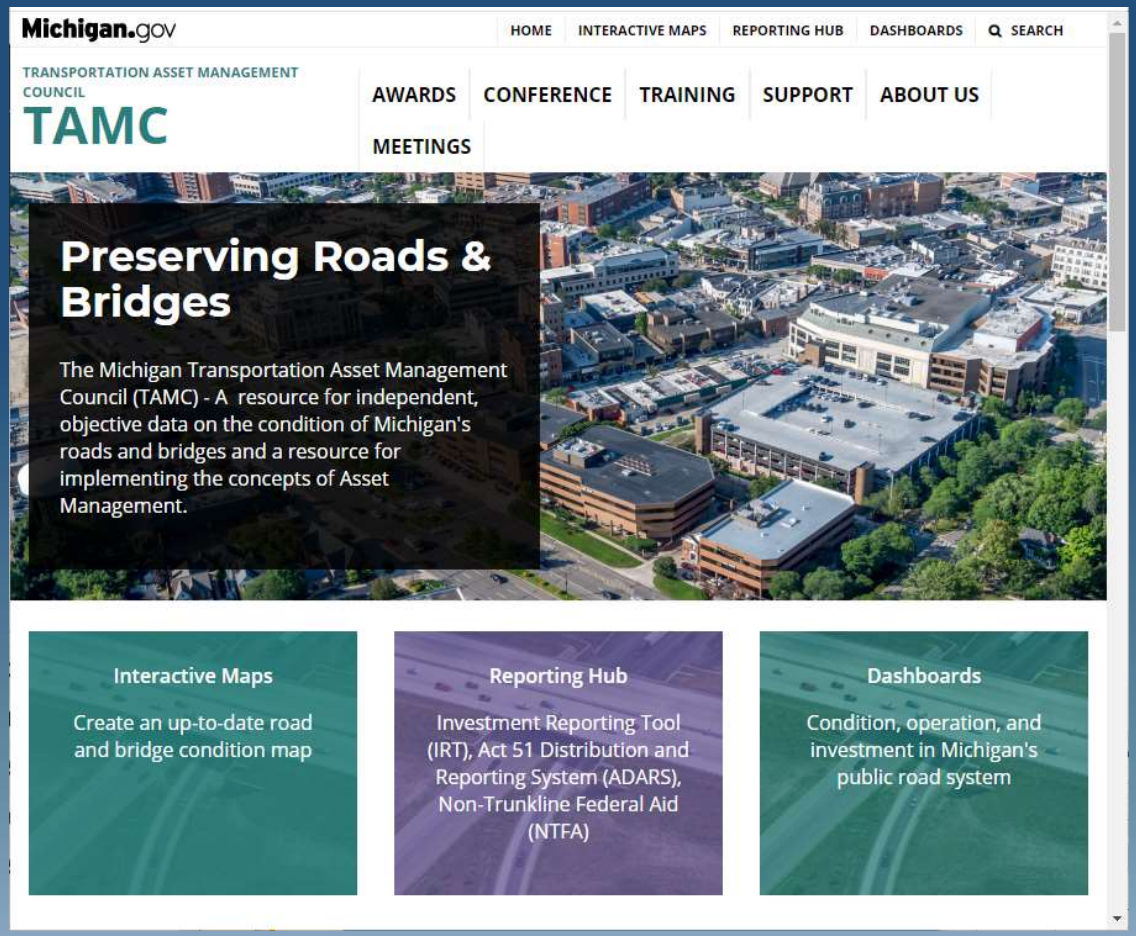
- Provides option to import planned STIP projects already entered by their MPOs in a similar system called JobNet.
- Saves time and effort for agencies using the IRT and removes duplication of work.
- Increases number of planned projects reported in the IRT for analysis and consistency in collaboration efforts.
- Expected release - April 2021

Training and Resources Available



1. Webinars
2. YouTube Videos
3. Training Manual
4. Helpdesk

TAMC Website
Interactive Map & Dashboards

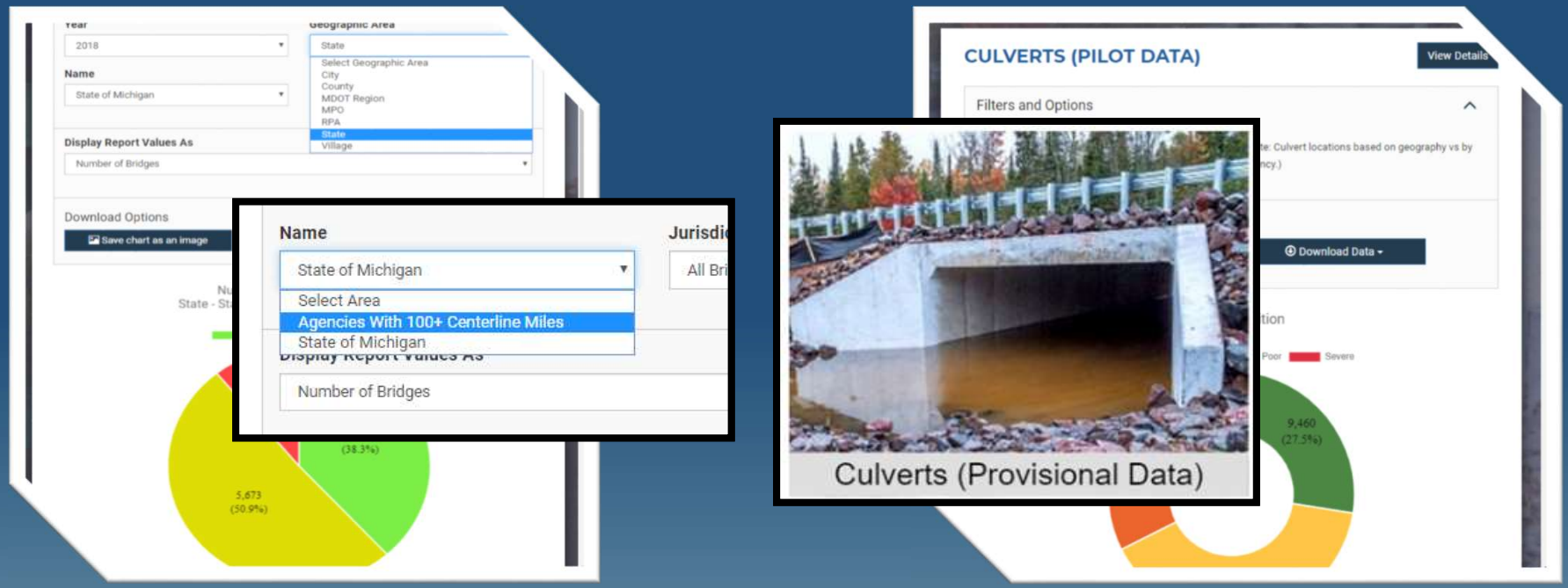


1. Public Website
- Mobile ready – phones & tablets

2. Updated Annually
- Road and Bridge conditions in May
- Other data sets in the Fall

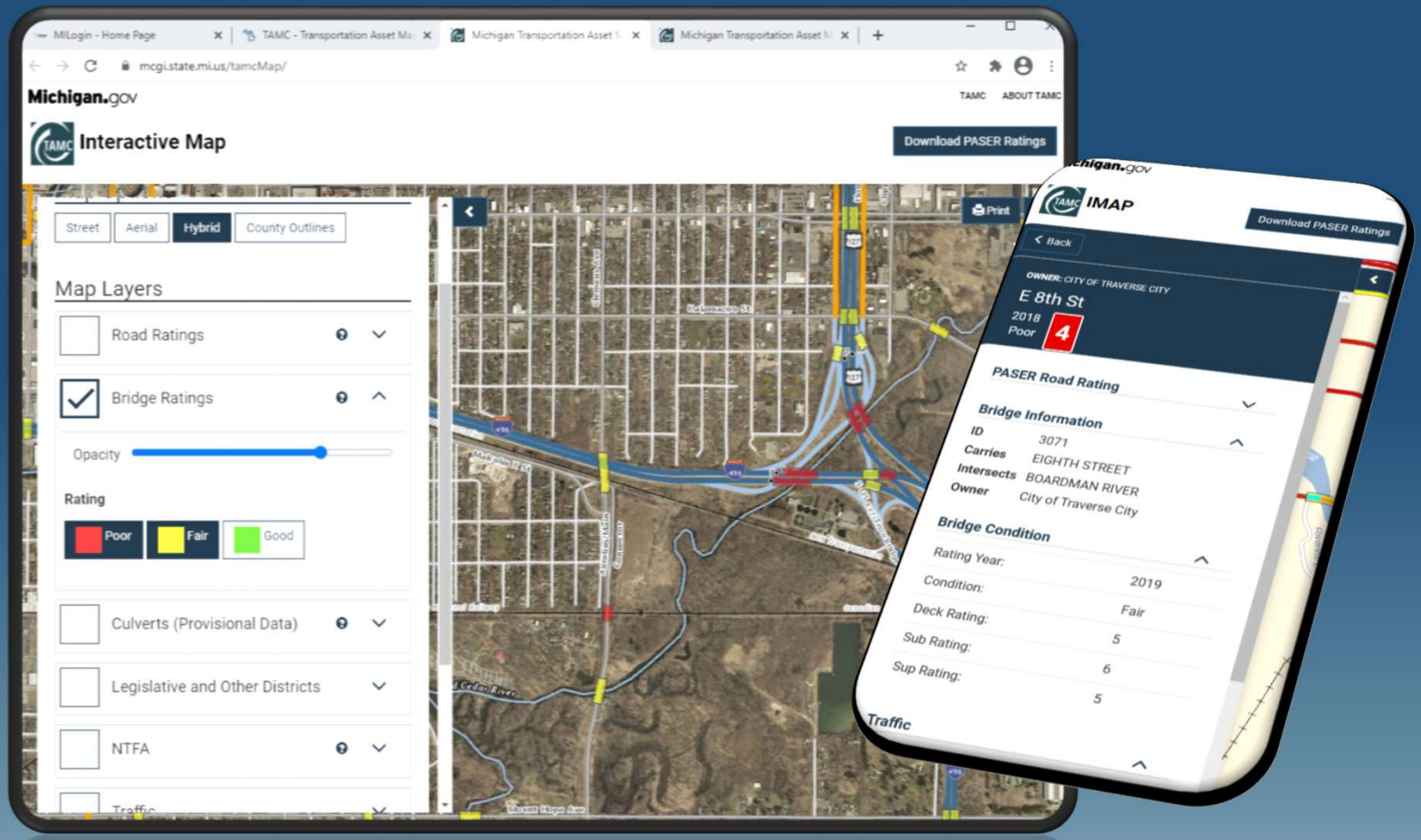
TAMC Dashboards

TAMC Dashboard New Options



1. Added more geographic areas
2. Roll-ups by agencies with 100+ centerline miles
3. *Culverts provisional data set*

TAMC Interactive Map



TAMC Happenings in 2021

- Michigan's Roads & Bridges Annual Report 2020 Report Due May 2, 2021
- TAMC Strategic Planning
- Culvert Efforts Continue
- Traffic Signals
- Transportation Asset Management Plans

Looking into 2021 - Culverts 2.0

2021 ramps up the culvert discussion as the below items are all in the works:

- Official collection policies
- Guidance manuals
- New training that will incorporate national standards, and lessons learned from the 2018 Culvert Inventory Pilot

Looking into 2021 - Culverts 2.0

- Major updates to Roadsoft and Investment Reporting Tool
- Create new features for the standardization, workflow and improved integrity of the data sets.
- This standardized culvert data set will then be housed by TAMC's Central Data Agency, CSS.
- Will feed the different transparency efforts as shown in their provisional format for the Interactive Map and Dashboard.

Asset Management Plan: Act 51 Mandate

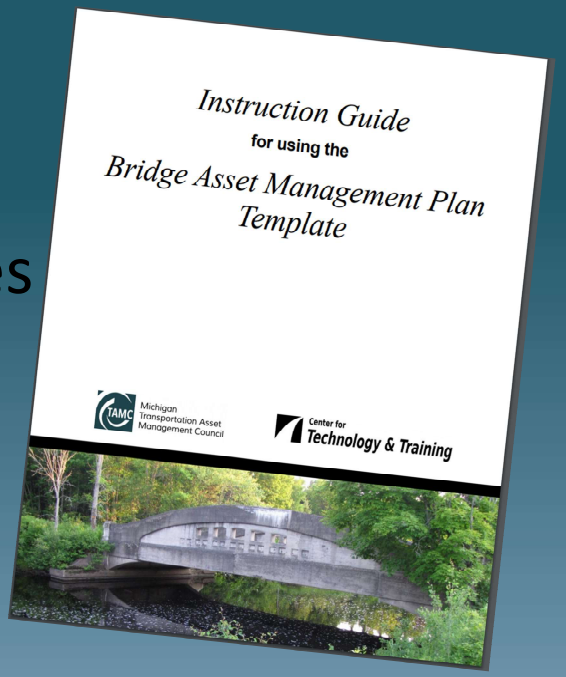
- Transportation Asset Management Plan (TAMP)

- Public Act 325 of 2018
  - Defines 7 elements of Asset Management Plan
  - Required by agencies w/ 100+ miles
  - TAMC charged with establishing schedule of du dates, TAMP Template, & Training

- TAMP Template
  - Pavement Plan + Bridge Plan + Compliance Plan
  - Pulls Data from MiBRIDGE & Roadsoft
  - Customizable, Word-format
  - Bridge & Pavement Plan Workshops

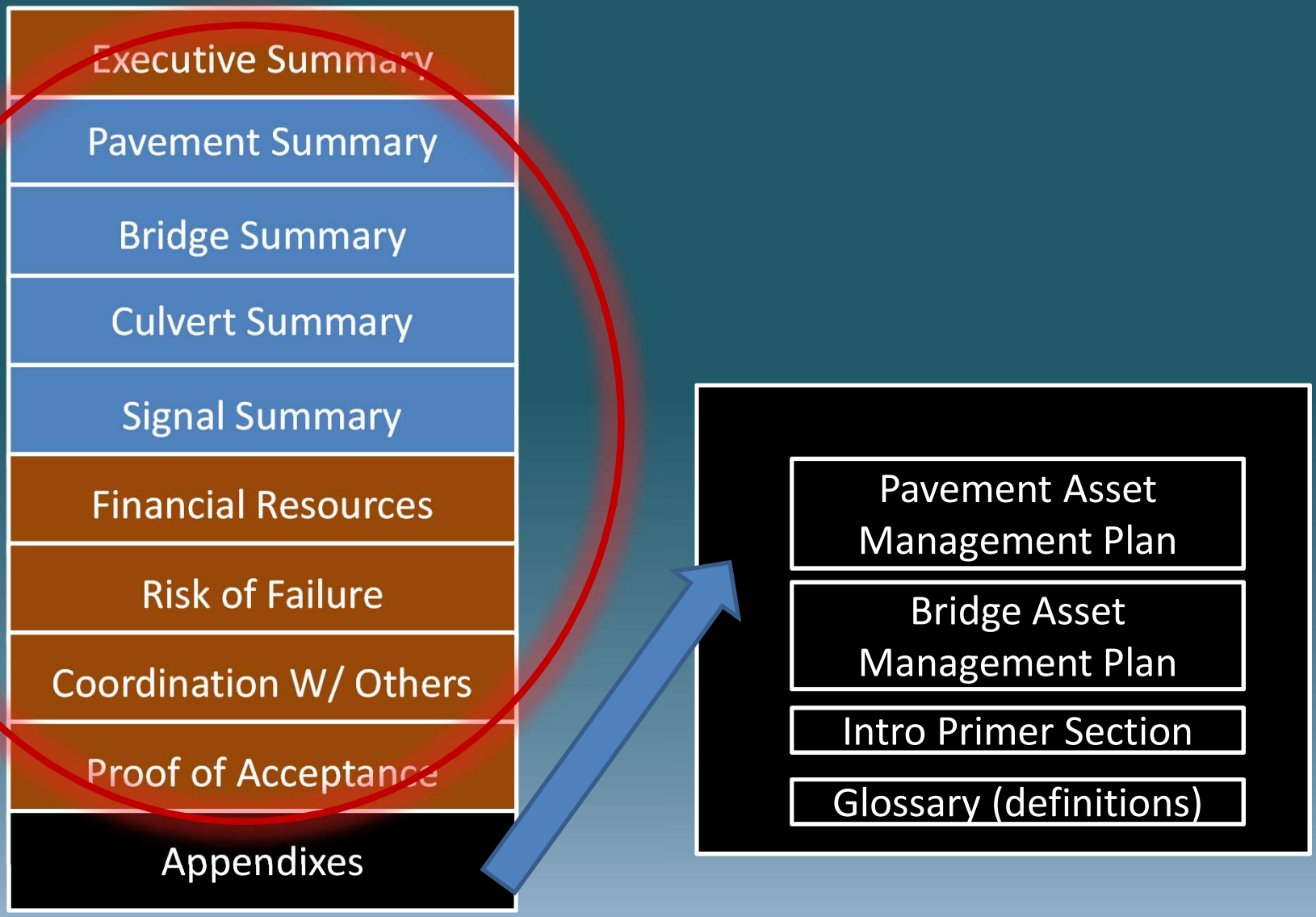
TAMP Template Required Elements

1. Asset Inventory
2. Performance Goals
3. Risk of Failure Analysis - NEW
4. Anticipated Revenue and Expenditures
5. Performance Outcomes
6. Coordination Clause - NEW
7. Proof of Adoption by Governing



TAMC TAMP Template

Compliance Plan



TAMP– 3 Year Schedule

- Certify 100 miles of road
- All 83 county road agencies
- 39 of Michigan's largest cities

- Training Opportunities
- TAMC TAMP Template

Resources

Website:
www.Michigan.gov/TAMC

TAMC Help Desk:

(517) 335-3741

Roger Belknap, MDOT, TAMC Coordinator

(517) 230-8192

belknapr@michigan.gov

Questions?

CRA
DTMB
Technology, Management & Budget
michigan municipal league
MAC
MICHIGAN ASSOCIATION OF COUNTIES
MTPA
Michigan Transportation Planning Association
MTA
MICHIGAN TOWNSHIPS ASSOCIATION
TAMC
Michigan Transportation Asset Management Council
MAR
MDOT
Michigan Department of Transportation