Transportation Asset Management Council
Bridge Committee Meeting Agenda
Wednesday, August 21, 2019 9:30 AM
Aeronautics Building- 2nd Floor Small Conference Room
2700 Port Lansing Road
Lansing, Michigan

Meeting Telephone Conference Line: 1-877-873-8018   Access Code: 3327994#

Web Meeting Access Link: http://michigandot.adobeconnect.com/rhmmflbr45l4/

1. **Welcome - Call to Order – Introduction**

2. **Public Comments on Non-Agenda Items**

3. **Additions or Deletions of Agenda Items**

4. **Consent Agenda** *(Action Item)*
   4.1. Approval of the 7-25-19 Meeting Minutes *(Attachment 1)*
   4.2. TAMC Fall Conference – Save the Date: 10-30-19, Marquette *(Attachment 2)*

5. **Update Items**
   5.1. TAMC Asset Management Plan Template Update – *Belknap/Colling*
   5.2. Draft Work Program Review for Bridge Committee Goals/Objectives – *Belknap*
        (Memo, Action - Attachment 3)
   5.3. Bridge Forecast and Statewide Bridge Investment Strategy *(Memo)*
   5.4. TAMC Culvert Pilot Project *(Memo – Attachment 4)*
      5.4.1. Culvert Subgroup Update – *Belknap*
      5.4.2. Incorporating Culvert Data from Other Sources into TAMC IMAP-IRT
      5.4.3. Training and Activities for Michigan Technological University & Center
             for Shared Solutions FY2020 TAMC Budgets and Work Programs
   5.5. 2019 TAMC Annual Report Update – *Jennett*

6. **Public Comments**

7. **Member Comments**

8. **Adjournment**

The next TAMC Bridge Committee Meeting is scheduled for 11:00 AM-1:00 PM
September 25, 2019 at the Horatio Earle Learning Center, 7575 Crowner Drive,
Dimondale, Michigan 48821

Committee Members: Chair: Rebecca Curtis, MDOT - Vice Chair: Keith Cooper, MDOT
Christopher Bolt, MAC - Al Halbeisen, ACEC - Wayne Harrall, CRA
Brian Vilmont, Subject Matter Expert - Brad Wieferich, MDOT

MINUTES
TRANSPORTATION ASSET MANAGEMENT COUNCIL
BRIDGE COMMITTEE MEETING
July 25, 2019 at 2:00 p.m.
Aeronautics Building, 2nd Floor, Commission Conference Room
2700 Port Lansing Road
Lansing, Michigan

** Frequently Used Acronyms List attached.

Committee Member:

Christopher Bolt, MAC   Keith Cooper, MDOT – Vice-Chair
Rebecca Curtis, MDOT – Chair   Al Halbeisen, OHM Advisers
Wayne Harrall, KCRC, via Telephone   Brian Vilmont, Prein & Newhof

Support Staff:

Niles Annelin, MDOT   Roger Belknap, MDOT
Tim Colling, MTU, via Telephone   Christopher Gilbertson, MTU, via Telephone
Dave Jennett, MDOT   Bill McEntee, CRA, via Telephone
Gloria Strong, MDOT

Members Absent:
Brad Wieferich, MDOT

Public Present:
None

1. Welcome - Call-To-Order - Introductions:
The meeting was called-to-order at 2:08 p.m.. Everyone was welcomed to the meeting.

2. Public Comments on Non-Agenda Items:
None

3. Additions or Deletions of Agenda Items:
None

4. Consent Agenda (Action Item):
    4.1. - Approval of the April 25, 2019 Meeting Minutes (Attachment 1)

    Motion: B. Vilmont made a motion to approve the April 25, 2019 meeting minutes;
    A. Halbeisen seconded the motion. The motion was approved by all members present.

5. Update Items:

5.1. – Draft TAMC Asset Management Plan Template – T. Colling – *Action Item* (Attachment 2)

T. Colling provided a copy and reviewed the Draft TAMC Asset Management Plan Template created by MTU. The template will create an automated plan for the agency that works with Excel and pulls data from the IRT and Roadsoft using a data import functionality. The template is more for pavement but has a page for bridges, culverts, and signals. Because of the way the mechanics work within Roadsoft, MTU felt adding an appendix for bridges, culverts, and traffic signals would simplify the merging of the pavement and bridges asset management plans, and assure that Public Act 325 requirements are met. Bridges are shown as more project level and pavement is shown as more network level. The Bridge Committee would like more network level information included in the Bridge asset management plan portion of the template. More information needs to be pulled from MiBridge.

The template seemed to be very pavement centric. Discussions was had to either add more detail for other assets, such as bridges and culverts, or push all the details into appendices for each asset.

Both TAMC ACE and Data Committee have recommended the draft TAMC Template as presented by MTU. Bridge Committee would like to recommend to the full Council that a more detailed Bridge template be developed. In 2010/2011, the Bridge Committee worked with MTU in creating the current Bridge Asset Management Template, Asset Management Guide for Local Agency Bridges (dated May 2011), being sure to include the elements that were needed. Much of that content was not included in the new draft template. The Committee feels the entire bridge asset management template needs to be used in order to meet the required law. Individual risk proposed by the specific bridges must be in the plan. The Committee feels MTU should demote pavement to an appendix and use the current bridge asset management plan template. This will make a shorter document with high level detail that may simplify the plan for everyone.

Based upon Public Act 325, TAMC must have a written template by October 1, 2019. The mechanical part of the template does not need to be done by that due date. Because of time constraints, R. Belknap has been asked to set up a teleconference with the Bridge Committee chair and vice chair, TAMC Chairperson, and all TAMC committee chairs and vice chairs, to discuss the template and the Bridge Committee concerns.

Action Item: R. Belknap will set up a teleconference as soon as possible with the TAMC chair and all committee chairs and vice chairs, to discuss the template and Bridge Committee's concerns.

Action Item: R. Curtis will provide super structure and sub structure information to T. Colling.

Motion: B. Vilmont made a motion that the template would include a bridge and a pavement asset management plan as appendices and those asset management plans will provide high level summaries for the main body of the Transportation Asset Management

Plan Template, which will include coordination efforts with all asset classes/types; W. Harrall seconded the motion The motion was approved by all members present.

5.2. – Draft Work Program Review for Bridge Committee Goals and Objectives – R. Belknap – Action Item (Attachment 3)

This item was tabled until the next meeting in August.

5.3. – TAMC Culvert Pilot Project – R. Curtis
      5.3.1. - Culvert Subgroup Update – R. Belknap
      5.3.2. - Incorporating Culvert Data from Other Sources into TAMC IMAP-IRT (Attachment 4)
      5.3.3. - Training and Activities for Michigan Technological University and Center for Shared Solutions FY 2020 TAMC Budgets and Work Programs

The agenda items under 5.3 were tabled until the next meeting in August.

5.4. – 2019 TAMC Road and Bridges Annual Report Update – D. Jennett

This item was tabled until the next meeting in August.

5.5. – Need for August and September TAMC Bridge Committee Meetings – R. Belknap – *Action Item*
The Bridge Committee members elected to have August and September committee meetings. August 21, 2019 at 9:30am and September 25, 2019 at 11:00am (lunch will be served) were dates selected by the committee. Meeting locations will be determined once G. Strong checks on conference room availability.

Action Item: G. Strong will add the meetings to the Committee's calendars and locate conference rooms to hold the meetings.

Action Item: G. Strong will order boxed lunches for the September 2019 meeting.

Motion: A. Halbeisen made a motion to add August 21, 2019 and September 25, 2019 to the 2019 Bridge Committee meetings schedule; K. Cooper seconded the motion. The motion was approved by all members present.

6. Public Comments:
None

7. Member Comments:
None

8. Adjournment:
The meeting adjourned at 4:05 p.m. The next meeting will be held August 21, 2019, at 9:30 a.m., MDOT Aeronautics Building, 2nd Floor Commission Conference Room, Lansing.

TAMC FREQUENTLY USED ACRONYMS:

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ACE	ADMINISTRATION, COMMUNICATION, AND EDUCATION (TAMC COMMITTEE)
ACT-51	PUBLIC ACT 51 OF 1951-DEFINITION: A CLASSIFICATION SYTEM DESIGNED TO DISTRIBUTE MICHIGAN'S ACT 51 FUNDS. A ROADWAY MUST BE CLASSIFIED ON THE ACT 51 LIST TO RECEIVE STATE MONEY.
ADA	ADULTS WITH DISABILITIES ACT
ADARS	ACT 51 DISTRIBUTION AND REPORTING SYSTEM
BTP	BUREAU OF TRANSPORTATION PLANNING (MDOT)
CFM	COUNCIL ON FUTURE MOBILITY
CPM	CAPITAL PREVENTATIVE MAINTENANCE
CRA	COUNTY ROAD ASSOCIATION (OF MICHIGAN)
CSD	CONTRACT SERVICES DIVISION (MDOT)
CSS	CENTER FOR SHARED SOLUTIONS
DI	DISTRESS INDEX
ESC	EXTENDED SERVICE LIFE
FAST	FIXING AMERICA'S SURFACE TRANSPORTATION ACT
FHWA	FEDERAL HIGHWAY ADMINISTRATION
FOD	FINANCIAL OPERATIONS DIVISION (MDOT)
FY	FISCAL YEAR
GLS REGION V	GENESEE-LAPEER-SHIAWASSEE REGION V PLANNING AND DEVELOPMENT COMMISSION
GVMC	GRAND VALLEY METRO COUNCIL
HPMS	HIGHWAY PERFORMANCE MONITORING SYSTEM
IBR	INVENTORY BASED RATING
IRI	INTERNATIONAL ROUGHNESS INDEX
IRT	INVESTMENT REPORTING TOOL
KATS	KALAMAZOO AREA TRANSPORTATION STUDY

KCRC	KENT COUNTY ROAD COMMISSION
LDC	LAPTOP DATA COLLECTORS
LTAP	LOCAL TECHNICAL ASSISTANCE PROGRAM
MAC	MICHIGAN ASSOCIATION OF COUNTIES
MAP-21	MOVING AHEAD FOR PROGRESS IN THE 21ST CENTURY (ACT)
MAR	MICHIGAN ASSOCIATION OF REGIONS
MDOT	MICHIGAN DEPARTMENT OF TRANSPORTATION
MDTMB	MICHIGAN DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
MIC	MICHIGAN INFRASTRUCTURE COMMISSION
MITA	MICHIGAN INFRASTRUCTURE AND TRANSPORTATION ASSOCIATION
MML	MICHIGAN MUNICIPAL LEAGUE
MPO	METROPOLITAN PLANNING ORGANIZATION
MTA	MICHIGAN TOWNSHIPS ASSOCIATION
MTF	MICHIGAN TRANSPORTATION FUNDS
MTPA	MICHIGAN TRANSPORTATION PLANNING ASSOCIATION
MTU	MICHIGAN TECHNOLOGICAL UNIVERSITY
NBI	NATIONAL BRIDGE INVENTORY
NBIS	NATIONAL BRIDGE INSPECTION STANDARDS
NFA	NON-FEDERAL AID
NFC	NATIONAL FUNCTIONAL CLASSIFICATION
NHS	NATIONAL HIGHWAY SYSTEM
PASER	PAVEMENT SURFACE EVALUATION AND RATING
PNFA	PAVED NON-FEDERAL AID
PWA	PUBLIC WORKS ASSOCIATION
QA/QC	QUALITY ASSURANCE/QUALITY CONTROL
RBI	ROAD BASED INVENTORY
RCKC	ROAD COMMISSION OF KALAMAZOO COUNTY

ROW	RIGHT-OF-WAY
RPA	REGIONAL PLANNING AGENCY
RPO	REGIONAL PLANNING ORGANIZATION
SEMCOG	SOUTHEAST MICHIGAN COUNCIL OF GOVERNMENTS
STC	STATE TRANSPORTATION COMMISSION
STP	STATE TRANSPORTATION PROGRAM
TAMC	TRANSPORTATION ASSET MANAGEMENT COUNCIL
TAMCSD	TRANSPORTATION ASSET MANAGEMENT COUNCIL SUPPORT DIVISION
TAMP	TRANSPORTATION ASSET MANAGEMENT PLAN
TPM	TRANSPORTATION PERFORMANCE MEASURES
UWP	UNIFIED WORK PROGRAM

S:/GLORIASTRONG/TAMC FREQUENTLY USED ACRONYMS.11.27.2018.GMS

DRAFT

Memo

To: TAMC Bridge Committee

From: Roger Belknap, TAMC Coordinator

Date: August 16, 2019

Re: Draft Work Program Review for Bridge Committee Goals/Objectives

Recommendation for the TAMC Bridge Committee
Consideration of approving the TAMC Bridge Committee Goals and Objectives as written in the 2020-2022 TAMC Strategic Work Program DRAFT 2 document found on pages 13 and 14.

Background
TAMC will be considering adoption of the 2020-2022 TAMC Strategic Work Program at the September 4, 2019 TAMC meeting. Prior to this adoption, each TAMC committee has been asked to establish the Goals and Objectives for their respective committees.

In order to plan for the FY2021 TAMC Budget and for TAMC-related contracts, TAMC should have an approved Strategic Work Program in place prior to the start of FY2020, which starts October 1, 2019. The language of the Goals and Objectives was developed after a series of discussions from January 2019 through the TAMC Strategic Planning Session from June 2019 as well as moving previous TAMC Work Plan items forward.

Attachments with Agenda Packet
Attachment 3 is Draft 2 of the 2020-2022 TAMC Strategic Work Program; pages 13-14 contain the Bridge Committee Goals and Objectives.

DRAFT 2

Strategic Work Program

Michigan Transportation Asset Management Council

Chair: Joanna Johnson, CRA: Vice-Chair: Bill McEntee, CRA: Gary Mekjian, MML:
Bob Slattery, MML: Jon Start, MTPA: Todd White, MDOT: Brad Wieferich, MDOT:
Christopher Bolt, MAC: Derek Bradshaw, MAR: Jennifer Tubbs, MTA: Rob Surber, MCSS

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TAMC Overview

The Transportation Asset Management Council (TAMC) is expanding the practice of asset management statewide to enhance the productivity of investing in Michigan's roads and bridges through coordination and collaboration among state and local transportation agencies. The Council's activities include surveying and reporting the condition of roads, bridges, and surface transportation system by functional classification categories and assessing completed and planned investments in roads and bridges. TAMC also supports the development of appropriate asset management methodologies and provides education and training on the benefits of developing road improvement programs using asset management principles and procedures. A key component for the TAMC is providing value to transportation agencies fortraining, education, reporting and analysis.

TAMC is comprised of professionals from county road agencies, cities, township officials, regional and metropolitan planning organizations, and state transportation department personnel. The Council reports directly to the Michigan Infrastructure Council and is a resource for the State Transportation Commission and the Michigan Legislature. Council members are appointed to 3-year terms. The Center for Shared Solutions (CSS) is the central data storage agency of the Council and serves as a non-voting member. The activities of the Council are supported by the TAMC Coordinator and Michigan Department of Transportation (MDOT).

Vision: A national leader, promoting asset management principles and practices, to guide investment decisions among Michigan's Transportation Agencies

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

1. Advising the Legislature, the State Transportation Commission (STC), the Michigan Infrastructure Council (MIC), Transportation Committees, and others
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

Purpose

The purpose of this work program is to provide guidance on the strategies, financial and tactical tasks associated with carrying out the TAMC program as required under Michigan law. The work program also provides tactical objectives directing the various committees, contractors, support staff and program partners for the timeframe of –2020-2022.

TAMC Legislation and Public Act 51

TAMC was formed under Public Act (PA) 499 of 2002 followed by several amendments, including PA 338 of 2006, PA 199 of 2007, PA 257 of 2010, PA 298 of 2012, PA 506 of 2012, PA 323 and PA 325 of 2018. PA 499 of 2002 established TAMC as an organization with membership and staffing within MDOT and created the responsibility to prepare an annual report detailing its activities during the previous year and plans for upcoming years. Initially, under PA 499 TAMC was accountable to the State Transportation Commission; in 2018 this changed under PA 323, where the Michigan Infrastructure Council would have oversight responsibility of TAMC as well as the Water Asset Management Council (WAMC).

The TAMC's current list of statutory responsibilities includes:
- Advising the State Transportation Commission (STC) on a statewide asset management strategy (MCL 247.659a(2));
- Advising the STC on the processes and necessary tools needed to implement asset management strategies on a statewide basis, beginning with the federal-aid eligible highway system and, once completed, continuing with the county road and municipal systems, in a cost-effective, efficient manner (MCL 247.659a(2));
- Developing such procedures and requirements as are necessary for the administration of the asset management process, including (MCL 247.659a(5));
    - Data collection
    - Data storage and accessibility
    - Training
    - Reporting
    - Development of a multi-year program,
    - TAMC budgeting and annual funding requests
    - Addressing other issues related to asset management that may arise from time to time.
- Adopting quality control standards and protocols consistent with any existing federal requirements and regulations and existing government accounting standards;
- Setting requirements for asset management plans prepared by counties, cities, and villages (MCL247.663(13)(6));
- Working with the Michigan Department of Transportation (MDOT) and all other road agencies in the state to develop and implement a pavement management system for all federal-aid eligible roads in Michigan (MCL 247.651g);
- Allowing road agencies in the state to link to the TAMC dashboards to improve government transparency as it relates to transportation infrastructure (P.A. 257);
- TAMC is also permitted, under the act, to appoint technical advisory panels, made up of representatives from the transportation construction associations and related transportation road interests (MCL 247.659a(6));
- TAMC is permitted to direct the technical advisory panel to research issues, or it can assign projects to the panel that would assist in the development of statewide

policies. The technical advisory panel's recommendations are considered advisory only and not binding on TAMC (MCL 247.659a).
- TAMC is required to provide an annual report no later than May 2 of every year describing the current state of Michigan's roads and bridges and describing the activities of TAMC during the previous year. At a minimum, the annual report is to be delivered to the STC, the Senate Majority Leader, the Speaker of the House, and the Chairs of the House and Senate Transportation Committees (MCL 247.659a(9)).

TAMC also plays a variety of roles that support and promote the asset management process. These roles include:
- Communication conduits to and from the constituent organizations, ensuring that the needs and concerns of the various stakeholder organizations are aired during TAMC deliberations, and that TAMC decisions and policies are then shared with, and when necessary, discussed with those same organizations.
- Ensuring that certain activities prescribed in the authorizing legislation are completed in accordance with that legislation (MCL 247.659a).
- Ensuring that any additional activities undertaken by the TAMC are completed within the timeframe and budget established by the TAMC, and accordance with the overall intent of the authorizing legislation.

Appendix B contains Public Act 51 legislation as amended into Michigan Codified Law.

Appropriation & Budget
Once established in Michigan Compiled Law in 2002, TAMC was provided an appropriation of $1,626,400 from the Michigan Transportation Fund (MTF). This amount remained consistent until 2017 when TAMC made a request for an additional $250,000. The State of Michigan fiscal year budget of 2018 provided $1,876,400 to TAMC. At this time, it is anticipated that the FY2020 TAMC budget will be based upon $1,876,400 for revenues.

In January of 2018, a second appropriation of $2,000,000 was provided to TAMC out of the State of Michigan's Infrastructure Fund. Under House Bill 4320 (S-3), a supplemental appropriation was given to TAMC for the purpose creating a pilot project for the collection of data and the evaluation of culverts owned by local transportation agencies within Michigan. This appropriation will not be continued in FY2020, however funds still remain from this initial allocation.

Appendix C contains the TAMC financial and budget report. This report also includes the expenditures and fund balance from the 2018 supplemental appropriation for the culvert pilot project.

TAMC Organizational Structure

The TAMC was created to promote asset management principles and the asset management process, and the legislation designates that TAMC members are appointed by various public stakeholder organizations within the transportation community. This requires a series of well-orchestrated and coordinated efforts, carried out by a multitude of actors and organizations in both a formal and informal manner. What follows is a high-level description of the formal entities that have roles and responsibilities for administration of the TAMC, the TAMC Work Program, the various technical and contractual assistance provision and ongoing operational support staff required to perform TAMC's statutory reporting and various defined and undefined roles.

Note: These descriptions are intended to be summaries and are not an exhaustive reporting of all aspects of TAMC coordination.

TAMC - Council

From the formal legislation that created TAMC and responsibilities it charged TAMC with completing, it can be inferred that TAMC members are expected to attend and participate in meetings of the organization, to chair and/or serve on at least one committee and/or subcommittees of the organization, and such other responsibilities as are assigned and necessary for the organization to achieve its goals (by-laws). TAMC and committee chairs are expected to work with the TAMC support staff to prepare agendas for their meetings and to arrange for speakers, exhibits, and/or presentations on topics of interest to the committee or TAMC.

Michigan Compiled Law defines the council representation and partner organizational membership. Currently, TAMC shall consist of 10 voting members approved by the MIC. The council shall include 2 members from the county road association of Michigan, 2 members from the Michigan municipal league, 2 members from the state planning and development regions, 1 member from the Michigan townships association, 1 member from the Michigan association of counties, and 2 members from MDOT. Nonvoting members shall include 1 person from the Central Data Storage Agency (CDSA) or office selected as the location for central data storage.

It is the responsibility of each member organization to seek out qualified individuals for nomination to the TAMC. Once the nomination is received, it must be acted upon by the MIC. The position of the CDSA shall be nonvoting and shall be for as long as the agency continues to serve as the data storage repository. All terms for TAMC members shall be for 3 years, except for the MDOT and central data storage agency representatives.

The chairperson shall be selected from among the voting members of the council. All voting members of the TAMC are eligible to be Chairperson or Vice- chairperson of the TAMC. The Chairperson and Vice-chairperson's Terms of Office shall be three years. Officers may be reelected to additional terms by the TAMC. Terms may be consecutive. Elections for

Chairperson and Vice-chairperson of the TAMC shall be held during the September TAMC meeting in the last year of the 3-year term or as needed to fill a vacant officer position. Election shall be by a majority vote of the attending voting TAMC members during a regular TAMC meeting where a quorum is present. It is the responsibility of the Chairperson to chair monthly meetings, publicly represent the TAMC and speak on its behalf. It is the responsibility of the Vice-chairperson to perform these duties in the absence of the Chairperson. If the Chairperson or Vice-chairperson fails to meet this responsibility, the voting membership of TAMC may dismiss the Chairperson or Vice-chairperson by majority vote.

TAMC- Committees

At a minimum, each voting member shall serve on one TAMC Committee. The TAMC Chairperson shall select TAMC members for each committee. Member assignments may be reviewed and changed by the TAMC Chairperson as necessary during the Chairperson's term of office. Each committee of the TAMC shall have a Chairperson and a Vice-chairperson selected by majority vote of the voting membership of each Committee. Each committee Chairperson and Vice-chairperson shall serve a 3-year term. In the absence of the committee Chairperson, the committee Vice-chairperson shall manage the committee meetings. Any committee may include for support, technical, or other reasons; non-TAMC members as non-voting advisory participants in the committees.

The TAMC has three permanent committees as follows:
1. Administrative, Communications and Education (ACE Committee): Committee comprised of 3 to 5 TAMC members that advises the TAMC on matters pertaining to training, communications, education and budget.
2. Data Committee: Committee comprised of 3 to 5 TAMC members that advises the TAMC on matters pertaining to data collection, quality, and analysis.
3. Bridge Committee: Committee comprised of 3 to 5 TAMC members that advises the TAMC on matters pertaining to application of asset management principles to bridges and the creation of guidance materials and training program.

The TAMC or the TAMC Chairperson may establish other 'ad hoc' committees as necessary for the operation of the TAMC. Such committees shall operate until the TAMC or TAMC Chairperson disbands them.

Appendix D includes the TAMC member roster, representative organizations, terms of service and committee assignments.

Support Staff

In addition to having two seats on TAMC, MDOT is also directed to provide qualified administrative staff to support the TAMC's functioning. There are a multitude of tasks that are included in the coordination of the TAMC program. At a high level, this includes managing the TAMC work program, providing TAMC with regular updates on progress of the program and

assisting in the periodic creation of new work programs and ensuring that TAMC is fulfilling statutory obligations as defined in legislation and compiled law.

Operationally, support also includes preparations with TAMC Chairperson and Committee Chairpersons for preparations for meeting agendas, scheduling, ensuring compliance with the Open Meetings Act, budgetary, contracting and accounting functions and coordinating TAMC communications with partner agencies, contracting entities as well as the general public. TAMC support staff also coordinate and manage the logistics and facility contracts for conferences, meetings and various other ad-hoc and routine activities. Support staff also ensure adherence to State of Michigan requirements and regulations pertaining to lodging, meals and travel reimbursements for TAMC members, partner organizations and local agency participants.

MDOT also participates in the annual Federal-Aid data collection effort by providing trained staff members for the rating teams. This effort also includes provision of vehicles and coordination with the respective Regional Planning Agency and Metropolitan Planning Organization (RPA/MPO) and local agencies to schedule and collect data.

Lastly, TAMC policy, MDOT contractual guidelines and Act 51 regulation establishes a series of compliance requirements that TAMC contractors and local agencies are subject to follow. Support staff at MDOT have the responsibility to ensure compliance with these Act 51 requirements. This includes reporting of the status of compliance for reporting requirements on an ongoing basis as well as act Program Manager with oversight of technical assistance, training and work program contracts with the CDSA, RPA/MPO contracts and the contracts for training, technical assistance and TAMC-sponsored conferences, meetings and workshops.

Central Data Storage Agency
In addition to having one non-voting seat on TAMC, the CDSA is also responsible for providing a secure data storage facility, ensuring that the data is accessible to the TAMC, the 617 transportation agencies in the state, the 14 regional planning agencies, metropolitan planning organizations and to the greater public. The CDSA is also responsible for the coordination of any activities contracted for with TAMC such as the development, operation and maintenance of TAMC's Investment Reporting Tool (IRT), TAMC's interactive performance dashboards, interactive maps and website. Currently, the CDSA designation for TAMC is the Michigan Department of Technology, Management and Budget's (DTMB) Center for Shared Solutions (CSS).

Appendix E contains the Work Program for CSS.

Technical Assistance – Regional and Metropolitan Planning (RPA/MPO)
In addition to MDOT support staff, the TAMC annually contracts with Michigan's Regional Planning Agencies and Metropolitan Planning Organizations (RPA/MPO) to provide technical assistance related to the promotion of asset management principles, PASER data collection and

other activities within each regional boundary. The TAMC Budget contains annual allocations to the RPA/MPO, and MDOT support staff coordinates and administers the Unified Work Program for asset management. At a high level, RPA/MPO allocations provide funding for training, equipment and data collection expenses incurred by planning staff as well as local agencies that participate in TAMC program activities. RPA/MPO work programs also include provision of technical support to local agencies for asset management plan development, data sharing and assistance with compliance with TAMC and Public Act 51 reporting requirements.

Appendix H contains the Unified Work Program for RPA/MPO; appendix C is the TAMC Budget which includes allocations to each of the RPA/MPO contracts involved with TAMC's program.

<u>Technical Assistance – Michigan Technological University (MTU) Center for Technology & Training (CTT)</u>
As part of its function to provide staff support for TAMC, MDOT has contracted with Michigan Technological University's Center for Technology and Training (CTT) to develop and administer a training program that has the principle components to meet the needs of TAMC's audience as well as prepare participants and certify their competence to perform annual data collection activities. Due to its expertise in managing registrations for the variety of training programs hosted by CTT, MTU also has the roles of registering participants in the TAMC spring and fall conferences, managing the audio/visual tech for the conferences, and collecting and analyzing the feedback from conference participants.

MTU is the creator of the Roadsoft software that was selected by TAMC as the preferred data collection tool for PASER ratings. As the owner of the software, MTU is also responsible for training in the use of Roadsoft, tech support for any issues associated with Roadsoft, coordinating with CSS for the efficient and accurate collection and transfer of TAMC data from Roadsoft to CSS's database, developing new tools that speed and simplify the collection of TAMC data or other data of use by transportation agencies, as well as perform annual updates of the Roadsoft software.

CTT also functions as a technical advisor to TAMC providing insights into current research practices in the field of asset management, and providing explorative, applied research activities to meet the needs of TAMC programs. This includes providing technical briefings, pilot studies or professional opinion when requested.

Appendix F contains the MTU CTT Training contract; appendix G contains the MTU CTT Activities contract.

TAMC Goals & Objectives 2020-2022

Strategic Sessions

On June 6, 2018 TAMC held a Strategic Planning Session to guide TAMC's future work programs and provide direction to the various partner and contractual entities that assist TAMC in the deployment of asset management. After a thorough review of pending legislation, TAMC members revised the Mission Statement and Vision Statement (as found on page 2) as well as debated the potential impacts of the legislation on partner agencies and TAMC. TAMC also reviewed elements identified from both the Regional Asset Management Pilots project and the 21st Century Infrastructure Council Report. Lastly, TAMC also discussed assignments of action items to various TAMC Committees and partners. Outcomes of the June 6, 2018 Strategic Session included a commitment to maintain the program tenants that have been deployed over the last decade.

On June 5, 2019 TAMC held another Strategic Planning Session to review TAMC's goals and priorities in light of recent amendments to Public Act 51, including PA 323, PA 324 and PA 325 of 2018. Again, outcomes of the June 5, 2019 Strategic Session included a commitment to maintain the foundation of the program as well as pursuit of tasks that align TAMC's program with legislative requirements.

TAMC is committed to reviewing priorities, relevant changes in legislation and changes in the transportation landscape. To this end, TAMC will review and update the Work Program on an annual basis. TAMC has targeted the month of June as an appropriate timeframe to hold strategy meetings to ensure budgetary and contractual considerations are met.

TAMC Priorities

PA 499 of 2002 created TAMC and established the structure and organizational membership. Additional legislation thereafter increased reporting requirements for local agencies as well as TAMC. TAMC has monitored these changes and has responded with Work Program updates and priorities to continue progress of the statewide asset management strategy, incorporating updates in technology, industry standards, and changes in public policy and demands for service. The following goals and objectives are the result of TAMC's engagement in these areas during 2018 and 2019.

TAMC Council

Goal 1: Promote the principles of asset management statewide to enhance the productivity of investment in Michigan's roads and bridges through coordination and collaboration among state and local transportation agencies; TAMC will promote and communicate

this statewide strategy with the legislature, MIC, STC and other transportation committees.

Objectives

1. Surveying and reporting the condition of roads and bridges by functional classification and legal system ownership categories.
2. Analyzing completed and planned investments in roads and bridges.
3. Supporting the development of appropriate asset management methodologies.
4. Providing education and training on the benefits of asset management principles and procedures.
5. Additional forecasting to create a statewide strategy built on the basis of a mix of fixes.
6. Coordinate/education and communication activities with the MIC/WAMC.
7. Share information around the world on asset management practices.

Goal 2: Provide fiscal and budgetary accountability for TAMC's budget appropriation as well as all other supplemental appropriations, funding grants and financial resources.

Objectives

1. Develop an annual budget categorized by work program activity, regional allocations for technical assistance and data collection, CDSA operations, contractual funding for technical assistance and activity support as well as TAMC-specific activities.
2. Include TAMC budget as part of annual reporting to MIC, STC and legislature.
3. Report financial status of contracts and TAMC budget status on a monthly basis.
4. Create a consistent timeline for TAMC budget submissions and needs to the MDOT.
5. Create a draft three-year budget plan to match the work program goals.
6. Review and define allocation to our regional partners across the State.

Goal 3: Coordination of asset management with MIC, WAMC and other partner organizations such as MDOT, County Road Association (CRA), Michigan Municipal League (MML), Michigan Association of Regions (MAR), Michigan Transportation Planning Association (MTPA), Michigan Association of Counties (MAC) and the Michigan Township Association (MTA).

Objectives

1. Develop coordinated approach to condition assessment and other areas when applicable.
2. Communicate with MIC/WAMC on transparency and what needs to be coordinated.
3. Attend and monitor MIC meetings.

4. Attend and monitor WAMC meetings.
5. Participate on MIC/WAMC/TAMC X-Council (cross council).
6. Support TAMC partner agencies at various trainings, conferences and workshops.
7. Define the process to seek procurement of TAMC assistance from outside vendors or consultants for coordinated activities.

Goal 4: Evaluate asset management plan submissions and make recommendations regarding compliance.

Objectives
1. Update TAMC asset management plan template accounting for all required elements per PA 325.
2. Provide training and workshops for use of the asset management plan template.
3. Establish TAMC policy for the submittal and review of asset management plans for PA 325 requirements as well as PA 338 of 2006.
4. Report monthly on the number and compliance status of local agency submittal of asset management plans.
5. Identify technology that may expedite data collection for PA 325 requirements, including the IRT.

TAMC Committee Priorities
The following goals and objectives are the result of TAMC's engagement of current and ongoing activities at the committee level during 2018 and 2019. Many of these objectives have been directed to the appropriate committee by TAMC.

ACE Committee

Goal 1: Evaluate asset management plan submissions and make recommendations regarding compliance for agencies with a minimum of 100 certified miles.

Objectives
1. Recommend TAMC asset management plan template accounting for all required elements per PA 325 and make assessible to public.
2. Provide training and workshops for use of the asset management plan template.
3. Recommend TAMC policy for the submittal and review of asset management plans for PA 325 requirements as well as PA 338 of 2006.
5. Review monthly on the number and compliance status of local agency submittal of asset management plans.
6. Recommend technology that may expedite data collection for PA 325 requirements, including the IRT.

7. Discuss how other infrastructure assets will be considered for future data collection and asset management plan inclusion.

Goal 2: Increase awareness and improve familiarity with TAMC annual report.

Objectives
1. Coordinate press releases and report cover letters in well-orchestrated manner to ensure maximum exposure and accessibility of TAMC members and support staff.
2. Provide summary reports of Michigan road and bridge conditions by legislative district with distribution of annual report; each legislator receives both conditions for local district as well as statewide summaries found in report.

Goal 3: Raise awareness of asset management principles; promote outstanding agency performance in the area of asset management.

Objectives
1. Establish an annual schedule and develop 4 articles each year for the Local Technical Assistance Program's *The Bridge* Newsletter.
2. Seek nominations and highlight best practices of organizations and individuals through the TAMC Awards program; develop scoring matrices evaluate and update selection process of award recipients.
3. Coordinate 2 educational conferences per year; incorporate "best practice case-studies" into educational sessions for high-performing agencies to advocate their learning and methods; provide formal presentation of TAMC Award recipients at conferences and in conference materials.
4. Distribute press releases outlining TAMC Awards program recipients.
5. Explore social media platforms.
6. Pilot two 90-second videos.

Goal 4: Ensure TAMC's training programs and policies are appropriate and optimized for ongoing support of TAMC's data collection and reporting requirements; ensure these programs and policies are well-communicated among partnering agencies and participants.

Objectives
1. Continue review and update of TAMC Policy for the Collection of Roadway Surface Condition Data to accommodate technological updates, appropriateness of training certification for qualifying participants and in response to changing or challenging trends in technology or industry needs.

2. Provide monthly Regional Coordinator conference calls from April through December each year for communicating TAMC policies, announcements, training opportunities and provide forum for participants to raise issues and respond to inquiries.
3. Update and maintain TAMC website, TAMC brochure and TAMC training resources as appropriate to incorporate changes in legislation, reporting requirements, TAMC policy and procedures as well as technological advancements.
4. Create a decision-tree/policy which can be utilized to determine when a request for work from CSS/MTU can be approved at the committee level.
5. Create a training program for culverts and traffic signals, and/or other infrastructure assets.

Bridge Committee

Goal 1: Ensure TAMC's training programs and policies are appropriate and optimized for ongoing support of TAMC's bridge data collection and reporting requirements; ensure these programs and policies are well-communicated among partnering agencies and participants.

Objectives
1. Continue review and update of TAMC Policy for the Collection of Bridge Condition Data to accommodate technological updates and in response to changing trends in technology or changes in Federal/State industry reporting standards.
2. Work with TAMC to ensure TAMC Dashboards and Interactive Map applications are compatible with data structure and reporting standards of the Michigan Bridge Inventory.
3. Compare and analyze bridge condition data and TAMC IRT data for planned bridge project data; incorporate IRT data into Bridge Forecasting Tool.
4. Review potential for bridge cost information to be included in the ADARS reporting.

Goal 2: Continue progress of roadway culvert asset management integration building upon lessons learned from 2018 TAMC Local Agency Culvert Inventory Pilot project as well as culvert data collection efforts performed by MDOT, other transportation agencies and other stakeholder organizations including WAMC, Michigan Department of Environment, Great Lakes and Energy (EGLE) and Michigan Department of Natural Resources (DNR).

Objectives
1. Develop data governance and standards for roadway culverts.

2. Develop culvert performance metrics for local agency reporting and integration into asset management plans and TAMC technological reporting.
3. Establish TAMC Policy for the Collection of Culvert Condition Data to provide guidance and directives for ongoing culvert inventory updates, condition assessment, and data integration procedures.
4. Provide tools and training for the ongoing collection of roadway culvert inventory and condition assessment.
5. Incorporate culvert inventory and condition data into TAMC Dashboards and Interactive Map applications.
6. Review other agencies for culvert information which can be incorporated into inventory for reduction in duplication of effort, i.e. EGLE, DNR, Drain Commissioners, etc.

Data Committee

Goal 1: Ensure TAMC's training programs, policies and technological applications are appropriate, current with most recent data and optimized for continuation of TAMC's Federal Aid, Non-Federal Aid and Inventory-based Rating System data collection efforts; TAMC will continue collecting no less than ½ of Federal Aid system annually.

Objectives
1. Continue review and update of TAMC Policy for the Collection of Roadway Surface Condition Data to accommodate technological updates.
2. Ensure Framework Base Map, Roadsoft and TAMC Investment Reporting Tool (IRT) applications are compatible and up-to-date to accept pavement condition data.
3. Report on Road Data Collection progress on a monthly basis during the collection season.
4. Annually perform quality control assessment of pavement condition data collected by rating teams.
5. Develop data for costs-per-mile of data collection.
6. Ensure TAMC's Dashboards, Interactive Map, and IRT applications are updated routinely with latest available data sets.

Goal 2: Ensure TAMC's training programs and IRT applications are appropriate and optimized for continuation of the annual investment reporting requirements as part of Act 51.

Objectives
1. Ensure Roadsoft, MDOT's Act 51 Distribution and Reporting System (ADARS) and TAMC IRT applications are compatible and up-to-date.
2. Monitor IRT compliance and report compliance status on a monthly basis.

3. Perform quality checks on IRT data and report on quality of information.
4. Update Average Project Cost data by improvement category on an annual basis.
5. Compare pavement condition data and IRT planned road project data.
6. Develop an understanding of roadway asset deterioration.
7. Develop means to upload 3-year capital project data into the IRT from electronic State Transportation Improvement Program (STIP) and RPA/MPO Transportation Improvement Programs (TIP).
8. Develop condition forecasting tool that uses IRT planned project data.
9. Incorporate pavement warranty data fields into IRT for ongoing reporting and compliance.

Goal 3: Develop traffic signal asset management integration building upon guidance from traffic signal subject matter experts at MDOT and other local transportation agencies.

Objectives
1. Develop data governance and standards for traffic signals.
2. Develop traffic signal performance metrics for local agency reporting and integration into asset management plans and TAMC technological reporting.
3. Establish TAMC Policy for the Collection of Traffic Signal Data to provide guidance and directives for ongoing inventory updates and data integration procedures.
4. Provide tools and training for the ongoing collection of traffic signal inventories and condition assessments.
5. Incorporate traffic signal inventory data into TAMC Dashboards and Interactive Map applications.

APPENDICES

Michigan
Transportation Asset
Management Council

Memo

To: TAMC Bridge Committee

From: Roger Belknap, TAMC Coordinator

Date: August 16, 2019

Re: Bridge Forecast and Statewide Investment Strategy

Recommendation for the TAMC Bridge Committee
Discussion item for consideration of committee to develop recommended strategy of investments to address statewide bridge conditions.

Background
Act 51 gives reference to TAMC recommending a "statewide strategy" for transportation investments. Pursuant to this task, the TAMC Data Committee has been working with Gil Chesbro and Tim Lemon at MDOT to use the Pavement Condition Forecasting System (PCFS) to create road forecasting scenarios for pavements. An objective of this work would be for TAMC to recommend a statewide investment strategy that would be included in the 2019 Michigan Roads and Bridges Annual Report.

At the August 7, 2019 TAMC meeting, a request was made for the TAMC Bridge Committee to develop a similar strategy for Bridge Investments using the Bridge Condition Forecasting System. TAMC is hopeful a strategy could be developed in the November-December 2019 timeframe for review and consideration for the annual report planning.

Attachments with Agenda Packet
None.

Memo

To: TAMC Bridge Committee

From: Roger Belknap, TAMC Coordinator

Date: August 16, 2019

Re: TAMC Culvert Pilot Project

Recommendation for the TAMC Bridge Committee
Continue discussions and provide directives to TAMC MDOT Support Staff and Michigan Technological University's Center for Technology and Training (MTU-CTT) to continue development of culvert asset management initiatives.

Background
There are several areas of consideration for these efforts, including establishing a volunteer committee to help the Bridge Committee guide the process, establishing a list of data elements for inclusion into TAMC's interactive map and dashboards, and a work plan for future years to address training and protocols for asset management plans.

At the April 25, 2019 TAMC Bridge Committee meeting, TAMC MDOT Support staff was assigned a task to contact the Water Asset Management Council (WAMC) and other TAMC Council members to invite interested members to participate with TAMC on establishing culvert data elements and asset management guidance. At present time, staff has confirmed the interest from the following participants and the organizations they represent:

| **TAMC**	**WAMC**	**Regional-Metropolitan Planning Organizations**
Bill McEntee	Carrie Cox, Oakland County	Kelly Goward, Macatawa Area Coordinating Council
Gary Mekjian	Evan Pratt, Washtenaw County	Ed Hug, Southeast Michigan Council of Governments

In 2018, the MTU-CTT Activities contract with TAMC was amended to include the funding and additional work items to create the Culvert Mapping Pilot work program. After conversations with MDOT Contract Services staff and MTU-CTT staff, MDOT TAMC Support staff is recommending a separate Culvert Activities contract for MTU-CTT for administering training and coordinating culvert asset management activities. A separate contract from the existing TAMC Activities contract is recommended for the ease of accounting and administration. This contract would include a 2020 Work Plan which will also be included in the 2020-2022 TAMC Strategic Work Program as a separate appendix. Funds for the MTU-CTT Culvert Work Plan will be provided out of the fund balance of the 2018 Culvert Mapping Pilot appropriation and not the annual TAMC appropriation out of the Michigan Transportation Fund.

Attachments with Agenda Packet
Attachment 4 is the previously assembled culvert data elements list from the 2018 Culvert Mapping Pilot.

TAMC Culvert Pilot – Data Fields/Elements for TAMC Dashboards & Interactive Maps (DRAFT)

Estimated Local Agency Culvert Condition
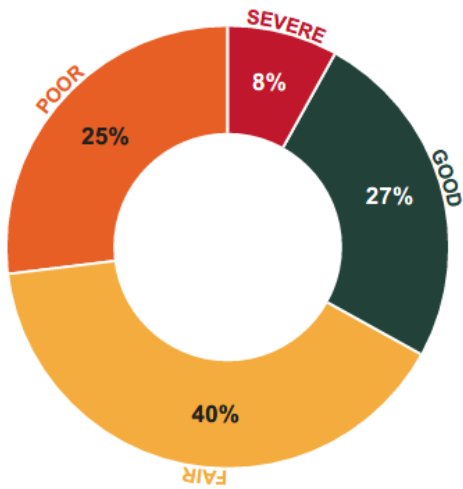
Agency Name
Agency Type (County/City/Village)
Culvert ID
Location
Condition Rating (10 Scale Rating)
Summary of Rating • Good • Fair • Poor • Severe

Reported Culverts by Span or Diameter
(in inches)
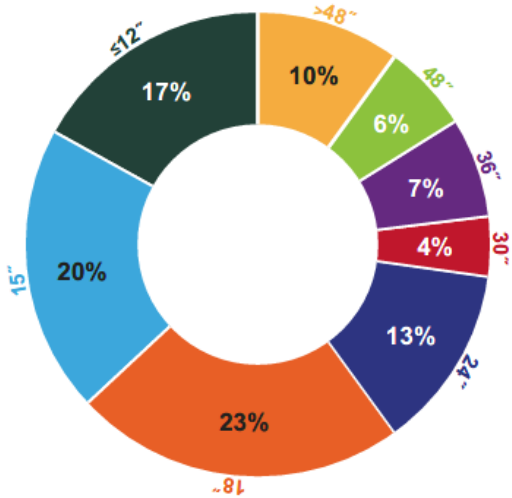
Agency Name
Agency Type (County/City/Village)
Culvert ID
Location
Summary of Size Categories: • 24" or less • > 24"- 48" • > 48"- 10' • > 10'- < 20'

Reported Culverts by Material Type
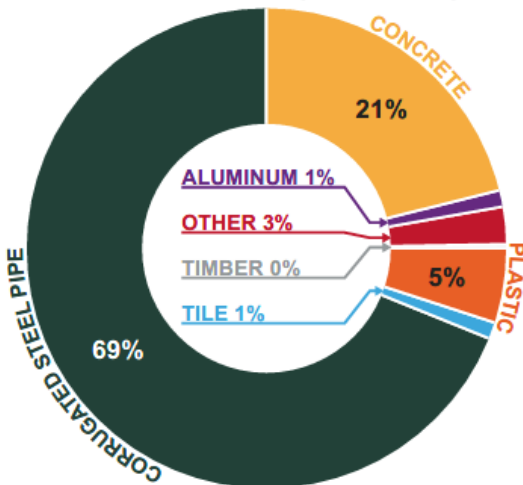
Agency Name
Agency Type (County/City/Village)
Culvert ID
Location
Culvert Material Type • Corrugated Steel • Concrete • Plastic • Other