Bridge Committee Meeting Agenda

Thursday, July 23, 2020 @ 2:00 PM

In accordance with Gov. Gretchen Whitmer and the Michigan Department of Health and Human Services' recommendations designed to help prevent the spread of Coronavirus Disease 2019 (COVID-19), this will be an online-conference call meeting.

Persons needing accommodations for participating in this meeting should contact Niles Annelin at least 24 hours prior to the start of this meeting: annelinn@michigan.gov Phone: (517) 335-2893

Meeting Telephone Conference Line: 1-248-509-0316 Access Code: 894 054 493#

Web Meeting Access Link: Join Microsoft Teams Meeting

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 May 28, 2020 Meeting Minutes ***(Attachment 1)***
   4.2. TAMC Budget Update ***(Attachment 2)***

5. **Update Items**
   5.1. 2020 Bridge Inspections ***(Memo Attachment 3)***
   5.2. Culvert Activities – *Belknap/Curtis/Gilbertson* ***(Memo Attachment 4)***
      5.2.1. Survey of 2018 Local Agency Culvert Pilot Inventory Participants
      5.2.2. TAMC Policy for the Collection of Culvert Data
      5.2.3. Status of Integrating 2018 Pilot Data into TAMC Dashboards/IMAP
   5.3. Local Agency Bridge Data Cleanup Efforts from IRT – *Esparza/Jennett*
   5.4. Status of Bridge Committee Priorities in TAMC Work Program & 2020 TAMC Strategic Planning Session – *Belknap* ***(Memo Attachment 5)***

6. **Public Comments**

7. **Member Comments**

8. **Adjournment**

Next meeting August 27, 2020 at 2 PM - Location to be determined

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
May 28, 2020 at 2:00 p.m.
Meeting was held via Teleconference per Executive Order from Governor Gretchen Whitmer Discontinuing In-Person/Large Meetings Due to the Coronavirus 19 Pandemic
MINUTES

**** Frequently Used Acronyms List attached.**

Committee Members Present:
Christopher Bolt, MAC
Rebecca Curtis, MDOT – Chair
Wayne Harrall, KCRC
Brad Wieferich, MDOT
Keith Cooper, MDOT - Vice Chair
Al Halbeisen, OHM Advisers
Brian Vilmont, Prein & Newhof

Support Staff Present:
Niles Annelin, MDOT
Scott Bershing, MTU
Jesus Esparza, MDOT
Mark Holmes, DTMB/CSS
Jeri Kaminski, DTMB/CSS
Gloria Strong, MDOT
Roger Belknap, MDOT
Tim Colling, MTU
Cheryl Granger, DTMB/CSS
Dave Jennett, MDOT
Bill McEntee, CRA

Members Absent:
None

Public Present:
None

1. Welcome - Call-To-Order - Introductions:
The meeting was called-to-order at 2:08 p.m. Everyone was introduced and welcomed to the meeting. G. Strong did a roll call to verify attendance.

2. Public Comments on Non-Agenda Items:
None

3. Additions or Deletions of Agenda Items:
C. Granger has asked that Agenda Item 5.3.3. be moved to earlier in the agenda to allow for J. Kaminski to give an update on CSS' work on the TAMC culvert interactive maps and dashboards and do a brief presentation before he must attend another meeting. R. Curtis moved his presentation to 5.1. to accommodate his need for an earlier time.

4. Consent Agenda (Action Item):

4.1. - Approval of the April 30, 2020 Meeting Minutes (Attachment 1)

4.2. – TAMC Budget Update (Memo and Attachment 2)

R. Belknap gave an updated budget report. All recently received invoices including funds paid to MTU and CSS for their culvert activities are included in the report. Michigan Department of Treasury and the Michigan Infrastructure Council (MIC) has received a copy of the TAMC Budget Report.

Motion: B. Vilmont made a motion to approve the April 30, 2020 Meeting Minutes; K. Cooper seconded the motion. The motion was approved by all members present.

5. Presentations:

5.1. – Integration of 2018 Pilot Data into TAMC Dashboards and Interactive Maps – C. Granger/J. Kaminski

J. Kaminski from CSS have been tasked with integrating the 2018 TAMC Culvert Pilot Project data into the TAMC dashboards and interactive maps. They showed which counties submitted their culvert data and made sure the data was Americans with Disabilities Act (ADA) compliant. Currently, TAMC has not formally adopted a standard rating scale requirement for culverts. The Bridge Committee feels that if it is decided to add a rating scale, the rating year should also be included in the dashboards and interactive maps. The other element that the Committee would like shown for culverts is size. The Bridge Committee would like the PASER road data separate from bridges and culverts. When a person clicks on a bridge or culvert, CSS will rework the system to only show elements related to bridges and culverts. For example, it will not show asphalt as a material for bridges and culverts. CSS will provide a summary of this to the Bridge Committee and the Bridge Committee will send an email to TAMC Data Committee to get their comments on whether or not to separate pavement from bridges and culverts.

5.2. – TAMC Support Staff Temporary Layoff Schedules – R. Belknap

R. Belknap will be sharing in an email the layoff schedule for state employees for the Bridge Committee members that are not aware of the days staff will be out of the office on temporary layoff.

Action Item: R. Belknap will send the temporary layoff schedule to the Bridge Committee members within the next few days.

5.3. – Culvert Activities – S. Bershing/T. Collings

5.3.1. - Survey of 2018 Local Agency Culvert Pilot Inventory Participants – S. Bershing

MTU sent out a survey to approximately 50 agencies that participated in the 2018 Culvert Pilot Project. At the end of the survey deadline, MTU had 29 agencies respond to the survey. S. Bershing previously shared the survey results via email to the Bridge Committee and support staff. They have not had an opportunity to review the responses. The Bridge Committee would like MTU to send out another reminder to the participating agencies and give them another week or so to respond to get as many responses as possible. After all responses are received, MTU will pull together a summary of the survey results and provide that to the Committee for their review.

T. Colling reported that MTU has also started the interviews with partner agencies about their culvert data repository. They are discussing culvert matching amongst data sources. MTU has found that the Michigan Department of Natural Resources (DNR) and environmental resource agencies stream crossing data is valuable data because they are finding culverts that no one is aware of. MTU is proposing a process to set a sphere of influence for culverts that are less than 100 feet from roads. T. Colling will share more about this when more information has been collected.

Action Item: MTU will extend the survey completion deadline and give the agencies more time to submit their responses to the culvert survey. When all results have been submitted, MTU will summarize the results and submit them to the Bridge Committee for their review.

5.3.3. – Status of Integrating 2018 Pilot Data into TAMC Dashboards and IMAP
Items has been moved to 5.1. above.

5.3.4. – TAMC Policy for the Collection of Culvert Data – R. Belknap/R. Curtis
Currently, there is no legislative requirement on the frequency and collection of condition data for culverts. The TAMC Collection of Culvert Data Policy will be formulated from the different culvert activities and the 2018 MTU Culvert White Paper. The culvert policy will follow the model of the Pavement and Bridge policies. At a future meeting, when more information is collected and analyzed, support staff will present a draft policy to the Bridge Committee. Once the policy is approved by the Bridge Committee, the Committee will present it to the full Council for their review and approval.

5.4. – Status of Bridge Committee Priorities in the TAMC Work Program and June 3, 2020 TAMC Strategic Planning Session – R. Belknap (Memo/Attachment 3)
The full Council has decided to cancel the June 3, 2020 TAMC Strategic Planning Session due to Governor Whitmer's Executive Order pertaining to meetings and conferences gatherings during the pandemic. The Council will reschedule a Strategic Planning Session to a later time. The full Council has asked each TAMC Committee review their sections of the TAMC Work Program and identify any tasks for their Committee that needs to be marked as task completed, task still in process, or nothing has been done to complete the task. Each Committee can submit their comments to R. Belknap to update the TAMC Work Program for submission to the full Council for their review and comments at the next Strategic Planning Session.

Action Item: Each Bridge Committee member will review the current TAMC Work Program and identify the status of each task pertaining to the Bridge Committee. R. Belknap will pull their results together into an updated TAMC Work Program and submit that information to the full Council for their review and comments at the next TAMC Strategic Planning Session.

6. Public Comments:
None

7. Members Comments:
R. Curtis reported that 23-26 bridges were closed or damaged due to the Midland, Michigan dam failure and flooding. The Midland dam failure and flooding will obviously impact many agencies asset management plans.

8. Adjournment:
Motion: W. Harrall made a motion to adjourn the meeting; B. Vilmont seconded the motion. The motion was approved by all members present. The meeting adjourned at 3:20 p.m. The next Bridge Committee meeting will be held July 23, 2020 at 2:00 p.m. via teleconference.

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	AMERICANS 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 CONTRACT
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

TAMC Budget Financial Reporting - FY18-FY20

Michigan Transportation Asset Management Council

		FY18 Budget	FY18 Actual		FY19 Budget	FY19 Year to Date		FY20 Budget	FY20 Year to Date	
	(most recent invoice)	$	Spent	Balance	$	Spent	Balance	$	Spent	Balance
I. Data Collection & Regional-Metro Planning Asset Management Progam										
Battle Creek Area Transporation Study	2QTR-20	$ 20,500.00	$ 20,213.36	$ 286.64	$ 20,500.00	$ 15,619.52	$ 4,880.48	$ 20,500.00	$ 6,685.65	$ 13,814.35
Bay County Area Transportation Study	2QTR-20	$ 21,100.00	$ 8,028.84	$ 13,071.16	$ 21,100.00	$ 21,100.00	$ -	$ 19,900.00	$ 6,439.60	$ 13,460.40
Central Upper Peninsula Planning and Development	2QTR-20	$ 47,000.00	$ 47,000.00	$ -	$ 47,000.00	$ 47,000.00	$ -	$ 50,000.00	$ 19,511.59	$ 30,488.41
East Michigan Council of Governments	May	$ 111,000.00	$ 81,559.65	$ 29,440.35	$ 111,000.00	$ 96,962.88	$ 14,037.12	$ 108,000.00	$ 64,692.03	$ 43,307.97
Eastern Upper Peninsula Regional Planning & Devel.	2QTR-20	$ 23,100.00	$ 23,100.00	$ -	$ 23,100.00	$ 23,100.00	$ -	$ 25,000.00	$ 4,731.70	$ 20,268.30
Genesee Lapeer Shiawasse Region V Planning Com.	May	$ 46,000.00	$ 45,954.99	$ 45.01	$ 46,000.00	$ 45,695.89	$ 304.11	$ 46,000.00	$9,325.44	$ 36,674.56
Grand Valley Metropolitan Council	1QTR-20	$ 25,000.00	$ 12,060.69	$ 12,939.31	$ 25,000.00	$ 18,410.63	$ 6,589.37	$ 24,000.00	$ 155.00	$ 23,845.00
Kalamazoo Area Transportation Study	3QTR-20	$ 22,000.00	$ 21,588.77	$ 411.23	$ 22,000.00	$ 21,944.89	$ 55.11	$ 22,000.00	$ 7,400.65	$ 14,599.35
Macatawa Area Coordinating Council	2QTR-20	$ 20,200.00	$ 9,575.57	$ 10,624.43	$ 20,200.00	$ 7,271.32	$ 12,928.68	$ 19,000.00	$ 1,933.63	$ 17,066.37
Midland Area Transportation Study	2QTR-20	$ 21,000.00	$ 20,857.81	$ 142.19	$ 21,000.00	$ 19,973.54	$ 1,026.46	$ 21,000.00	$ 2,544.60	$ 18,455.40
Northeast Michigan Council of Governments	May	$ 52,200.00	$ 52,200.00	$ -	$ 46,000.00	$ 46,000.00	$ -	$ 51,000.00	$ 24,866.59	$ 26,133.41
Networks Northwest	2QTR-20	$ 72,000.00	$ 71,915.46	$ 84.54	$ 72,000.00	$ 72,000.00	$ -	$ 75,000.00	$ 7,229.98	$ 67,770.02
Region 2 Planning Commission	2QTR-20	$ 42,000.00	$ 29,362.33	$ 12,637.67	$ 42,000.00	$ 34,881.00	$ 7,119.00	$ 40,000.00	$ 7,290.00	$ 32,710.00
Saginaw County Metropolitan Plannning Commission		$ 22,200.00	$ 22,000.00	$ 200.00	$ 22,200.00	$ 21,012.84	$ 1,187.16	$ 21,000.00		$ 21,000.00
Southcentral Michigan Planning Commission	2QTR-20	$ 57,300.00	$ 37,137.28	$ 20,162.72	$ 57,300.00	$ 57,178.82	$ 121.18	$ 55,000.00	$ 9,471.40	$ 45,528.60
Southeast Michigan Council of Governments	May	$ 174,000.00	$ 174,000.00	$ -	$ 174,000.00	$ 134,547.05	$ 39,452.95	$ 174,000.00	$ 77,298.01	$ 96,701.99
Southwest Michigan Planning Commission	2QTR-20	$ 41,000.00	$ 41,000.00	$ -	$ 41,000.00	$ 40,041.56	$ 958.44	$ 41,000.00	$ 4,546.28	$ 36,453.72
Tri-County Regional Planning Commission	2QTR-20	$ 40,000.00	$ 21,680.54	$ 18,319.46	$ 40,000.00	$ 39,983.00	$ 17.00	$ 40,000.00	$ 18,343.09	$ 21,656.91
West Michigan Regional Planning Commission	Apr	$ 91,000.00	$ 74,351.07	$ 16,648.93	$ 91,000.00	$ 76,853.36	$ 14,146.64	$ 88,000.00	$ 28,239.34	$ 59,760.66
West Michigan Shoreline Regional Development Com.	May	$ 54,000.00	$ 51,333.45	$ 2,666.55	$ 54,000.00	$ 53,996.04	$ 3.96	$ 54,000.00	$ 19,410.72	$ 34,589.28
Western Upper Peninsula Regional Planning & Devel.	2QTR-20	$ 40,000.00	$ 40,000.00	$ -	$ 40,000.00	$ 40,000.00	$ -	$ 42,000.00	$ 6,627.03	$ 35,372.97
MDOT Region Participation	3/31/20	$ 80,000.00	$ 56,032.80	$ 23,967.20	$ 41,440.00	$ 53,614.23	$ (12,174.23)	$ 30,000.00	$ 7,424.70	$ 22,575.30
PASER Quality Review Contract	9/3/19				$ 50,000.00	$ 41,683.39	$ 8,316.61	$ 50,000.00	$ -	$ 50,000.00
Fed. Aid Data Collection & RPO/MPO Program Total		**$ 1,116,400.00**	**$ 960,952.61**	**$ 155,447.39**	**$ 1,127,840.00**	**$ 1,028,869.96**	**$ 98,970.04**	**$ 1,116,400.00**	**$ 334,167.03**	**$ 782,232.97**
III. TAMC Central Data Agency (MCSS)										
Project Management	5/28/20	$ 42,000.00	$ 46,585.00	$ (4,585.00)	$ 60,000.00	$ 76,242.50	$ (16,242.50)	$ 64,200.00	$ 65,752.00	$ (1,552.00)
Data Support /Hardware / Software	5/28/20	$ 68,800.00	$ 67,800.00	$ 1,000.00	$ 55,000.00	$ 17,721.70	$ 37,278.30	$ 37,000.00	$ 19,850.00	$ 17,150.00
Application Development / Maintenance / Testing	5/28/20	$ 114,475.00	$ 115,250.00	$ (775.00)	$ 135,000.00	$ 109,927.04	$ 25,072.96	$ 166,000.00	$ 122,500.00	$ 43,500.00
Help Desk / Misc Support / Coordination	5/28/20	$ 70,200.00	$ 68,200.00	$ 2,000.00	$ 61,900.00	$ 54,227.18	$ 7,672.82	$ 53,250.00	$ 30,800.00	$ 22,450.00
Training	5/28/20	$ 34,950.00	$ 24,850.00	$ 10,100.00	$ 28,660.00	$ 22,071.77	$ 6,588.23	$ 26,000.00	$ 3,700.00	$ 22,300.00
Data Access / Reporting	5/28/20	$ 49,575.00	$ 52,175.00	$ (2,600.00)	$ 38,000.00	$ 30,441.33	$ 7,558.67	$ 28,500.00	$ 36,500.00	$ (8,000.00)
TAMC Central Data Agency (MCSS) Total		**$ 380,000.00**	**$ 374,860.00**	**$ 5,140.00**	**$ 378,560.00**	**$ 310,631.52**	**$ 67,928.48**	**$ 374,950.00**	**$ 279,102.00**	**$ 95,848.00**
IV. MTU Training & Education Program Contract	7/20/20	**$ 235,000.00**	**$ 234,534.14**	**$ 465.86**	**$ 220,000.00**	**$ 219,311.14**	**$ 688.86**	**$ 225,000.00**	**$ 108,743.43**	**$ 116,256.57**
V. MTU Activities Program Contract	7/20/20	**$ 115,000.00**	**$ 114,089.32**	**$ 910.68**	**$ 120,000.00**	**$ 113,588.36**	**$ 6,411.64**	**$ 115,000.00**	**$ 56,588.08**	**$ 58,411.92**
VI. TAMC Expenses										
Fall Conference Expenses	12/10/19	$ 10,000.00			$ 10,000.00			$ 10,000.00		
Fall Conf. Attendence Fees + sponsorship Fees	12/10/19		$ 4,405.00			$ 6,755.00			$ 6,890.00	
Net Fall Conference	12/10/19	$ 14,405.00	$ 7,269.00	$ 7,136.00	$ 16,755.00	$ 7,507.40	$ 9,247.60	$ 16,890.00	$ 6,781.90	$ 10,108.10
Spring Conference Expenses	6/27/19	$ 3,800.00			$ 10,000.00			$ 10,000.00		
Spring Conf. Attendence Fees + sponsorship Fees	6/27/19		$ 8,350.00			$ 9,790.00			$ -	
Net Spring Conference	6/27/19	$ 12,150.00	$ 7,439.36	$ 4,710.64	$ 19,790.00	$ 8,562.18	$ 11,227.82	$ -	$ -	$ 10,000.00
Unallocated / Contingency								$ 10,000.00	$ -	$ 10,000.00
Other Council Expenses	3/12/20	$ 10,000.00	$ 7,301.72	$ 2,698.28	$ 10,000.00	$ 5,073.95	$ 4,926.05	$ 10,000.00	$ 2,046.24	$ 7,953.76
TAMC Expenses Total		**$ 36,555.00**	**$ 22,010.08**	**$ 14,544.92**	**$ 46,545.00**	**$ 21,143.53**	**$ 25,401.47**	**$ 46,890.00**	**$ 8,828.14**	**$ 38,061.86**
Total Program		**$ 1,882,955.00**	**$ 1,706,446.15**	**$ 176,508.85**	**$ 1,892,945.00**	**$ 1,693,544.51**	**$ 199,400.49**	**$ 1,878,240.00**	**$ 787,428.68**	**$ 1,090,811.32**
Appropriation		**$ 1,876,400.00**		**9.37%**	**$ 1,876,400.00**		**10.53%**	**$ 1,876,400.00**		**58.08%**

VII. Special Projects with Separate Budgets		**FY18 Budget**	**FY18 Actual**		**FY19 Budget**	**FY19 Actual**		**FY20 Budget**	**FY20 Actual**	
MI Local Agency Culvert Inventory Pilot (FY18 HB4320 S-3)		**$**	**Spent**	**Balance**	**$**	**Spent**	**Balance**	**$**	**Spent**	**Balance**
Central Data Agency (MCSS)	5/28/20	$ 15,000.00	$ 9,312.00	$ 5,688.00	$ -	$ -	$ -	$ 25,000.00	$ 12,250.00	$ 12,750.00
MTU Culvert Project Activities & Training Program	7/20/20	$ 172,100.00	$ 172,100.00	$ -	$ -	$ -	$ -	$ 55,011.46	$ 25,859.97	$ 29,151.49
TAMC Administration & Contingency	3/2/20	$ 84,438.00	$ -	$ 84,438.00	$ -	$ -	$ -	$ 472,863.51	$ -	$ 472,863.51
Central Upper Peninsula Planning and Development	3 QTR 18	$ 88,641.00	$ 51,909.64	$ 36,731.36	$ -	$ -	$ -	$ -	$ -	$ -
East Michigan Council of Governments	Sept '18	$ 328,607.00	$ 259,229.13	$ 69,377.87	$ -	$ -	$ -	$ -	$ -	$ -
Eastern Upper Peninsula Regional Planning & Devel.	4 QTR 18	$ 5,688.00	$ 5,034.70	$ 653.30	$ -	$ -	$ -	$ -	$ -	$ -
Genesee Lapeer Shiawasse Region V Planning Com.	Sept '18	$ 124,909.00	$ 54,266.60	$ 70,642.40	$ -	$ -	$ -	$ -	$ -	$ -
Grand Valley Metropolitan Council	4 QTR 18	$ 77,782.00	$ 69,733.25	$ 8,048.75	$ -	$ -	$ -	$ -	$ -	$ -
Kalamazoo Area Transportation Study	Sept '18	$ 50,402.00	$ 15,879.65	$ 34,522.35	$ -	$ -	$ -	$ -	$ -	$ -
Northeast Michigan Council of Governments	Sept '18	$ 33,506.00	$ 21,781.96	$ 11,724.04	$ -	$ -	$ -	$ -	$ -	$ -
Networks Northwest	Sept '18	$ 184,513.00	$ 163,641.05	$ 20,871.95	$ -	$ -	$ -	$ -	$ -	$ -
Region 2 Planning Commission	3 QTR 18	$ 54,900.00	$ 22,776.80	$ 32,123.20	$ -	$ -	$ -	$ -	$ -	$ -
Southcentral Michigan Planning Commission	Sept '18	$ 93,456.00	$ 36,137.17	$ 57,318.83	$ -	$ -	$ -	$ -	$ -	$ -
Southeast Michigan Council of Governments	Sept '18	$ 87,644.00	$ 45,757.96	$ 41,886.04	$ -	$ -	$ -	$ -	$ -	$ -
Southwest Michigan Planning Commission	4 QTR 18	$ 101,849.00	$ 67,138.17	$ 34,710.83	$ -	$ -	$ -	$ -	$ -	$ -
Tri-County Regional Planning Commission	4 QTR 18	$ 47,587.00	$ 6,962.44	$ 40,624.56	$ -	$ -	$ -	$ -	$ -	$ -
West Michigan Regional Planning Commission	Sept '18	$ 241,511.00	$ 181,441.39	$ 60,069.61	$ -	$ -	$ -	$ -	$ -	$ -
West Michigan Shoreline Regional Development Com.	Sept '18	$ 144,238.00	$ 89,092.30	$ 55,145.70	$ -	$ -	$ -	$ -	$ -	$ -
Western Upper Peninsula Regional Planning & Devel.	4 QTR 18	$ 63,229.00	$ 46,960.41	$ 16,268.59	$ -	$ -	$ -	$ -	$ -	$ -
Culvert Pilot Project Total		**$ 2,000,000.00**	**$ 1,319,154.62**	**$ 680,845.38**	**$ -**	**$ -**	**$ -**	**$ 552,874.97**	**$ 38,109.97**	**$ 514,765.00**
Total Special Program		**$ 2,000,000.00**	**$ 1,319,154.62**	**$ 680,845.38**	**$ -**	**$ -**	**$ -**	**$ 552,874.97**	**$ 38,109.97**	**$ 514,765.00**
Appropriation		**$ 2,000,000.00**		**34.04%**						**93.11%**

Michigan Transportation Asset Management Council

Memo

To: TAMC Bridge Committee Members

From: Roger Belknap, TAMC Coordinator

Date: July 16, 2020

Re: 2020 Bridge Inspections

Background

The circumstances surrounding COVID-19 Executive Orders have resulted in the postpone of Federal Aid pavement condition rating collections and inventories for this season. However, recent guidance from Michigan Department of Transportation (MDOT) and Federal Highway Administration (FHWA) does allow for bridge and tunnel inspections to commence at this time.

Attachments

Attachment 3 is a communication to State and local agency bridge and tunnel owners from the MIBridge and NBIS Program Management.

Having trouble viewing this email? View it as a Web page.

State and Local Agency Bridge/Tunnel Owners, Inspectors, and Consultants. Please see the below guidance from the Federal Highway Administration with regard to inspections and the current Coronavirus COVID-19 situation. If you have questions regarding upcoming inspections and COVID-19, please contact the Michigan Department of Transportation.

Allie Nadjarian - Structure Inspection Program Manager

(517) 331-6602

NadjarianA@michigan.gov

-OR-

Brian Zakrzewski - NBIS Program Manager

(517) 243-9473

ZakrzewskiB@michigan.gov

To the Attention of Division Administrators and Division Directors:

DUE DATE: EFFECTIVE IMMEDIATELY

The Federal Highway Administration (FHWA) recognizes the challenges that many of your State partners are facing with regard to highway bridge and tunnel inspections during the current and evolving circumstances. FHWA also recognizes that our State partners share our mission that public safety is the top priority, and that the health and safety of our staff is as equally important. A proactive risk-based approach to bridge and tunnel inspection will ensure the safety of the traveling public and our transportation workforce.

FHWA does not have the authority to waive the requirements of 23 U.S.C. 144, National Bridge and Tunnel Inventory and Inspection Standards, or its implementing regulations, 23 CFR 650 Subparts C and E. However, FHWA does have flexibility in the statutorily required oversight of State compliance with those regulations. As we have done in the past through our established process for highway bridge and tunnel inspections impacted by natural disasters (flooding, forest fires, hurricanes, etc.), FHWA will assess how incurred delays will affect compliance. Some factors that FHWA will consider in determining compliance include how the State managed the bridges and tunnels with late inspections (e.g., how a State determined priority for inspection or limited the length of delay), and how the State ensured that any safety risks posed in the interim were mitigated.

In States where inspections are delayed, it is important that the Division Office work with their State partner to document and implement a risk-based response plan that maintains bridge and tunnel safety during the delays, and produces the documentation needed to support the annual compliance determination. The Bridge Safety Engineer assigned to your Division and others from my staff are ready to support this effort.

These are both unprecedented and difficult times. Thank you for your steadfast attention to public safety, and the health and well-being of those performing highway bridge and tunnel inspections.

Michigan Transportation Asset Management Council

Memo

To: TAMC Bridge Committee Members

From: Roger Belknap, TAMC Coordinator

Date: July 22, 2020

Re: Culvert Activities Update

Background

The Center for Technology and Training (CTT) has provided a written update as of July 20, 2020 on the tasks for the TAMC Culvert project. For each of the three tasks, CTT summarized notes/findings and progress. The follow-up survey results are summarized at the end along with graphics.

Attachments

Attachment 4 is an update report from the CTT including survey results.

MTU Culvert Project Update

July 20, 2020
CG Gilbertson

Task 1 – Culvert Data Collection and Condition Assessment Training

- Completed three of the five scheduled training webinars.
- Culvert Data Collection using Roadsoft – September 17 (22 registered)
- Culvert Condition Evaluation – September 24 (7 registered)

Task 2 – Evaluate Culvert Data from Combined Source

- Culvert data exists that has been collected by Michigan DNR and EGLE as a result of conducting stream crossing / barrier surveys and from culverts and bridges owned by DNR. This data may be helpful in identifying culverts that may not have been detected by local or state transportation agencies, and data that transportation agencies have may help the DNR efforts in dealing with stream barrier removal. The challenge is that there is not a good way to identify when a culvert is present in both the DNR/EGLE and transportation data sets, as measurement error may cause the same culvert to appear spatially distant when the data sets are joined, and inventory collection fields may not match or directly translate. We have outlined a method and created two flow charts that outline a process for interrogating data between the transportation data sets and DNR / EGLE sets to combine them. We have tested this process on both MDOT culvert data and the local agency pilot culvert data and find that is produces reasonable results. The flow charts have been reviewed by CSS, and it is anticipated that these may form the basis of business rules used in the new software CSS is working with to manage these data sets.

- **Case Study Interviews (Added to work plan but within Task 2 scope)**
  The charge was to identify interest in culvert data outside of the transportation area to determine potential case studies whereby the TAMC Local Agency Pilot data may be of benefit to non-transportation entities. One local transportation agency was added to the interviews as they possessed an interesting case study. That agency, Wexford County, had very little self-generated culvert data and desired to reach out to non-transportation agencies who had data in their jurisdiction and combine that data as a start to their collection efforts.

  - Huron Pines – Josh Liesen – June 25th, 2020
    - Main objective for culvert and dam rehabilitation/replacement is to benefit fish passage (Replace about 6-10 culverts a year).
    - Work with local agencies – generally Huron Pines works to secure funding for materials and then approaches local agencies with offer to help pay for materials with local agency providing equipment and labor for duel benefit of having a new culvert that improves on fish passage.
    - Huron Pines has data that is most important to them (severity ranking based on stream condition) and their shared interest (location, material, size, etc.) data is sufficient for their needs.

- Good/Fair/Poor and other summary statistics are helpful for establishing prioritization between Huron Pines and Local Agencies.
- Would be interesting to Huron Pines to see how TAMC Pilot data for Oscoda County lines up with their data.
- Having inventory data before pursuing field work would be useful.

- Conservation Resource Alliance – Amy Beyer – June 26th, 2020
  - Main objective is optimizing stream flow and fish habitat with focus on achieving goal watershed-wide while still being able to take advantage of opportunities to optimize stream crossings being replaced for other reasons.
  - Not so much interested in maintaining inventory but want to have an eye on opportunities to improve or replace culverts that would meet main objective
  - Work with local agencies – CRA works on securing funding with local agency providing equipment and labor.
  - Strong focus on cost data driven approach – cost of prevention vs cost of emergency response, value of enhanced habitat.
  - Accurate replacement cost data over time would be of great interest to CRA.
  - Looking back, how have investments held up, also of interest.

- SEMCOG – Kelly Karll & Rachael Barlock – July 8th, 2020
  - SEMCOG is looking for culvert data to use for a wide approach to infrastructure asset management that includes environmental, flooding, and transportation needs.
  - Looking to provide flood consideration input into projects being considered for funding.
  - Shared interest data (Location, material, size, etc.) would be helpful as this data tends to be lacking. Culvert data related to flood risk, including condition, would be highly valued.

- Wexford County – Karl Hansen – July 16th, 2020
  - Motive is to create a culvert asset management plan and inventory
    - Desire to be more proactive with maintenance
      - Budget for culvert maintenance
      - Generate maintenance work plan for county crew
  - Increased knowledge of assets would allow for more efficient partnering with resource agencies for everyone's benefit
  - Getting data from Forest Service, DNR, Trout Unlimited (260 culverts so far) – working with LTAP to get data into RoadSoft
    - Contains some data useful to county
      - GPS coordinates
      - Length
      - Diameter
    - Partner data dOKoes not contain the following which would be helpful
      - Condition

        - Pictures of inlet & outlet
    - Willing to participate in training to include DNR/Forest Service needs in data collection at an estimated 5-10 additional minutes per culvert
- Concerns with sharing of data
    - Some agencies and groups with data are not forthcoming about sharing their data though they would like to receive data from others.
    - Concerned with importing data from various entities and overriding existing data in the process or overriding newly collected data with old data.

- Michigan State University – Robert Goodwin –
    -

- Michigan DNR – Pat Ertel –
    -

- Michigan DNR online reporting tool and knowledge base – Michael Rubley
    - Demonstration of public website for DNR data on stream crossings
    - https://great-lakes-stream-crossing-inventory-michigan.hub.arcgis.com/
        - 2,434 stream crossings surveyed (breakdown of crossing types identified)
        - Figure of structural condition
            - No deficiencies
            - Moderate deterioration
            - Major deterioration
            - Severe deterioration
            - Other
        - Crossing type
            - Road – 30.92%
            - Trail – 68.83%
        - Structure Material
        - Aquatic Passability
        - Educational materials
        - Stream Crossing Viewer – Interactive map showing crossing locations
        - Stream Crossing Dashboard – Interactive map with information that adjusts per boundary shown on map; number of crossings, estimated annual erosion tonnage, future visits needed, aquatic passability, pictures & notes, list of culverts, stream crossing condition, crossing type. Plus additional information that may be selected to replace default data reports.
        - Raw data available
- People are encouraged to learn more, spread the word, become involved (training and volunteer opportunities) and contribute (sign up for access to Stream Crossing Collector).

Task 3 – Culvert Condition Assessment System Translation

The goal with Task 3 is to create a system for translating MDOT and TAMC culvert data for the purpose of creating dashboards that would allow comparison between these two condition data sets while maintaining the integrity of each agency's detailed element level collection criteria.

Both MDOT and TAMC condition assessment systems considered individual culvert elements in a detailed evaluation schema. These can be simplified to a Good/Fair/Poor/Critical basis for reporting and to establish commonality between the data sets. In both cases the individual element conditions are used to report an overall condition rating.

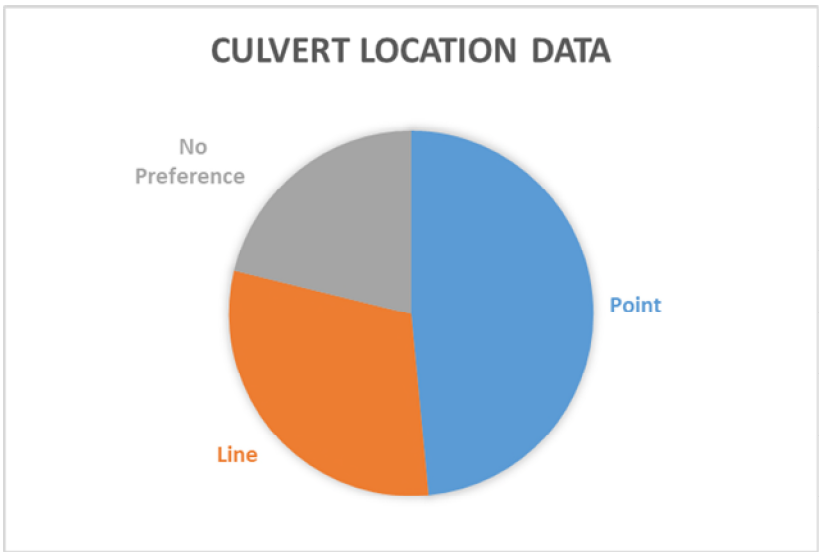
The MDOT TAMS Asset Collection & Condition Assessment Guide for 1'-<10' Span Culverts, revised June 2018 states that the overall condition rating is based on the lowest rating for the critical attributes. The TAMC pilot also used a lowest rating method within Roadsoft to determine the overall culvert condition.

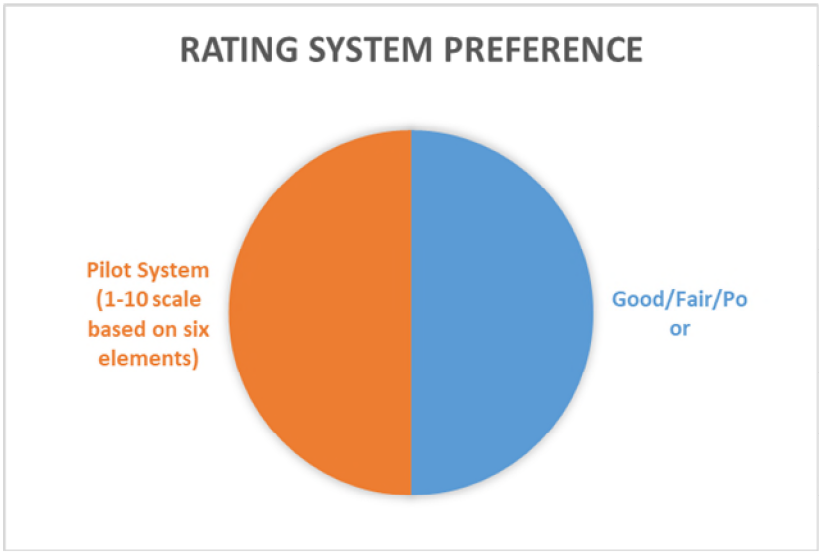
Work is in progress for evaluating the individual elements to a consistent Good/Fair/Poor/Critical breakdown to determine if the overall condition rating can appropriately be simplified in this same way.

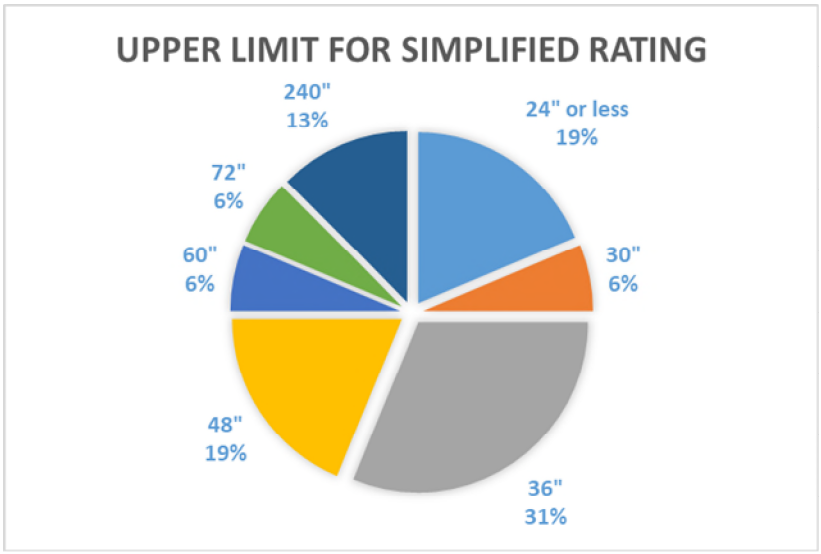
EXTRA - Survey

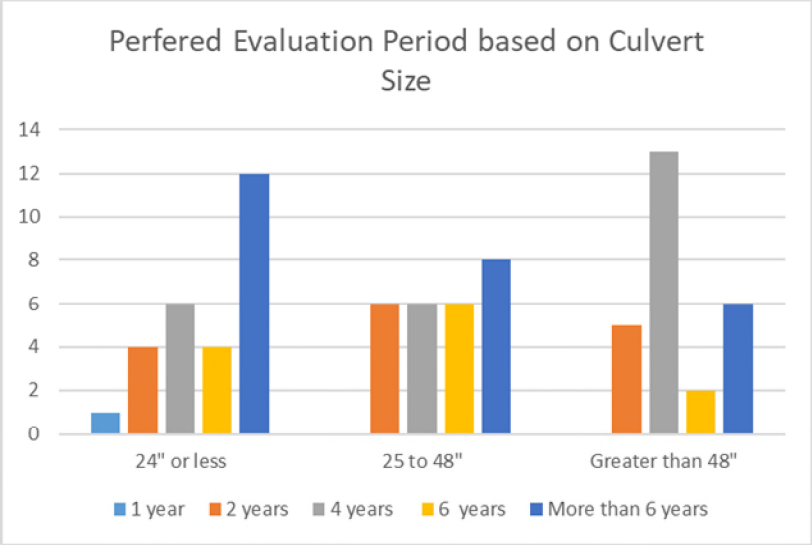
Added to project work plan as a follow-up to the 2018 pilot because CTT had contact list and resources to conduct survey and results would be beneficial to TAMC Bridge Committee for their effort in creating a culvert inspection and condition evaluation policy document.

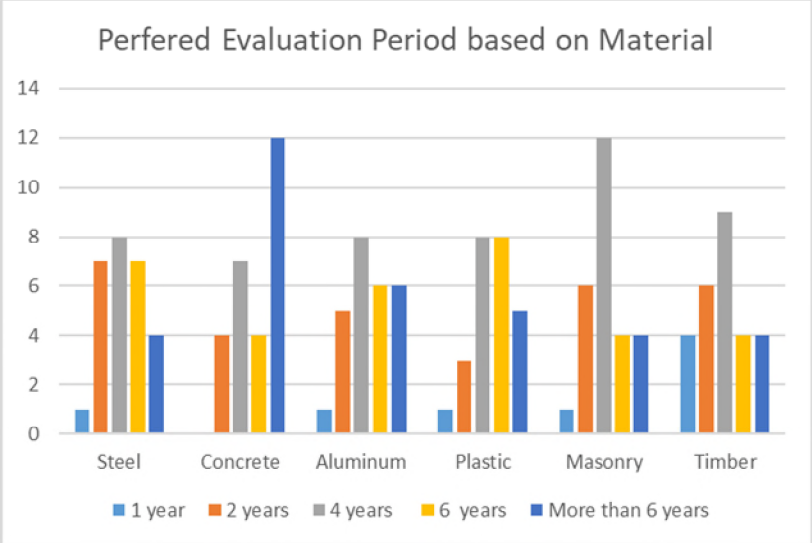
- **Percent of respondents who found pilot data useful one-year after pilot:**
    - Inventory ID (65%)
    - GPS coordinates (85%)
    - Material type (100%)
    - Asset collection date (77%)
    - Shape (100%)
    - Skew angle (74%)
    - Length (100%)
    - Span (width) (100%)
    - Rise (height or diameter) (97%)
    - Depth of cover (90%)
    - Roadway surface type (81%)
    - Culvert Condition (97%)
    - Photographs (optional) (78%)
    - *Additional comments:*
        - *Additional notes specific to culvert or location*
        - *Depth of cover doesn't matter until it is about 5 ft (trench protection) and 10 ft and deeper (larger excavator)*
- **Percent of respondents who found pilot condition evaluation data useful:**
    - Invert deterioration (79%)
    - Structural deterioration (93%)
    - Section deformation (79%)
    - Joint/seam condition (90%)
    - Channel blockage (90%)
    - Scour (86%)
    - *Additional comments:*
        - *These are only useful when it is bad. Still think that a single rating for the pipe and a single rating for the channel & stream would be fine. We are not doing different fixes for all the individual ratings, but basically replace it or not.*

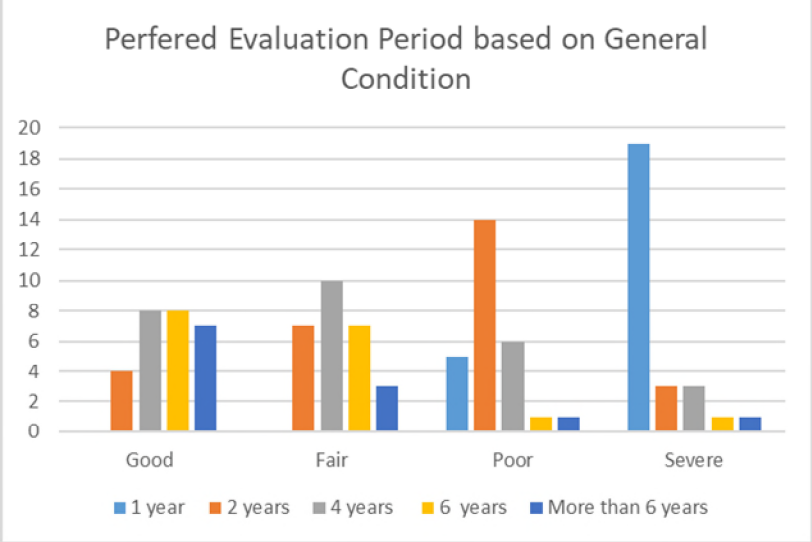

CULVERT LOCATION DATA
No Preference
Point
Line


RATING SYSTEM PREFERENCE
Pilot System (1-10 scale based on six elements)
Good/Fair/Poor


UPPER LIMIT FOR SIMPLIFIED RATING
240" 13%
24" or less 19%
72" 6%
60" 6%
30" 6%
48" 19%
36" 31%


Perfered Evaluation Period based on Culvert Size
14
12
10
8
6
4
2
0
24" or less
25 to 48"
Greater than 48"
1 year
2 years
4 years
6 years
More than 6 years


Perfered Evaluation Period based on Material
14
12
10
8
6
4
2
0
Steel
Concrete
Aluminum
Plastic
Masonry
Timber
1 year
2 years
4 years
6 years
More than 6 years


Perfered Evaluation Period based on General Condition
20
18
16
14
12
10
8
6
4
2
0
Good
Fair
Poor
Severe
1 year
2 years
4 years
6 years
More than 6 years

- **How have you used the culvert data that you collected in the 2018 pilot?**
    - Helps when preparing estimates for road repair for identifying before field measuring and for rough estimates of cost
    - Look up culvert info from the desk to at least get a good idea of what is there
    - Culvert Asset Management program for the county and township
    - The City did not have data on all the culverts prior to this pilot program. Since then, all culvert data has been uploaded to GIS for employee use.
    - Marked the locations so the crew can locate them
    - We provided the township where the pilot was completed data to help with planning of sanitary sewer projects.
    - Inventory data and updating database as additional culverts are found and culverts are replaced.
    - We used the information to prioritize our maintenance schedule.
    - Helps us with estimates on road projects knowing how many culverts are on a segment of road before going into the field to verify.
    - Plan maintenance projects
    - Incorporated it into Cityworks
    - We have used the condition data for our 5 year replacement plan.
    - The data has been helpful when we rebuild a roadway corridor to really think carefully about examining the culverts carefully to see if they require attention.
    - Used to prioritize replacements, scope resurfacing projects to see if culvert replacements are needed
    - Determining culvert replacements and culvert lining on future projects
    - To find the location of culverts to replace prior to road construction/maintenance.
    - Haven't. Shared the "bad ones" with maintenance foremen, but we don't have the time or money to be proactive. Just fix replace when it fails.

- **67% of respondents have continued collection after the pilot**
    - Not on a routine cycle. Catching culverts that were missed in initial survey and updating when repairs or replacements are made.
    - New culverts have continually been added
    - Collecting locations and rating culverts as they are replaced, and as discovered because some were missed during the pilot. Also, rating culverts at known problem areas, and as time allows.
    - Any time our foreman or working foreman come across a new culvert, it gets added by engineering. Every road project we scope and evaluate all culverts in that stretch to make sure that none need to be replaced prior to HMA work occurring. All culverts that get replaced during the year are updated in Roadsoft that following winter/spring, to make sure the data is accurate. We have a close working relationship with the drain commissioner, and have shared the culvert layer data with them in ArcGIS. This has been way easier to view and use then in Roadsoft.
    - When possible we are collecting the same data that was collected with the pilot program.

- We filtered out our current database and have been inspecting local road culverts, 4' span and larger. All the primary road culverts have been inspected and our database has been updated.
- Same as in the pilot, currently finishing the initial collection of all culverts with in the county
- We have continued on project by project basis. When we work on a project culverts are reviewed and rated.
- We will still try to evaluate a culvert with the full number of condition categories.
- Every time we replace a culvert we update that info in RoadSoft.
- We have set a 5 year inspection cycle. We have approximately 3200 culverts and ideally would like to inspection 650 per year. In 2019 we fell short of that goal inspecting around 300. So far this year we are at around 800 inspections. The inspectors are verifying the data input from 2018 as well as updating the condition rating. They are also finding a few culverts that were missed during the culvert pilot.
- First, we have completed a draft of our asset management document and often discuss "scope" in terms of the number of culverts we think we own and the overall condition. This data has been helpful in budgetary discussions and formulating plans to manage our risk. The data has slightly shifted the discussion from "oh this can wait a few more years, to "we better do this now, because there will be other culvert problems waiting, and we must pace ourselves".
- Continue to use the method developed for the pilot project
- Length, width, height, diameter, material type, depth of cover, rating, entrance structure, exit structure, number of culverts, span, rise, waterway sometimes, as well as the memo on the rating.
- Length, depth, material, shape, size, and the pipe condition

- **22% said it would be beneficial to import stream crossing survey data**
- **78% said they have no concerns sharing their basic culvert data in an open, statewide database**

    - Everything we share with the state seems to be used against us eventually. But we would do it.
    - Yes and no. Any data is subjective, but now you have the fact that in memo fields any data can be entered and then anyone state wide can see it. We had one culvert point that said in the memo best Chinese food in the county. To proof thousands of points would be extremely cumbersome, in addition to the numerous duplicate points that were in the system prior to the TAMC.
    - Data could be incorrect or missing pieces.
    - Culverts can be in terrible condition visually but with the right amount of cover and supporting soil around it, can last a long time. Sharing data will likely lead to mandated inspections instead of voluntary. Resources are slim so inspections are completed when time permits.
    - Could be a liability if a failure occurs prior to repair
    - The only concern is that the user needs to field verify all data.

- But must qualify my answer; as long as the state and federal agencies "work with us" cooperatively.

- **What Resources, if any, do you need to actively collect data on your culverts?**
  - Time (7 responses)
  - People/funding (9 responses)
  - The City has all resources needed such as survey/GPS equipment, measuring tape, camera, etc.
  - Technology that would allow the data collection to be more efficient.
  - I would like a handheld GPS data collector device. The windows tablet is too awkward for field use. Its just as well to use a laptop as the ergonomics of the tablet are not suitable for this activity, when doing solo work.
  - GIS support
  - Roadsoft, Laptop & GPS
  - We have the equipment needed.
  - The use of our smarter "summer kids" who where science-based degree seekers, was a good resource in 2018 and I would not hesitate to do that again. With Covid 19, we had a period where we wanted our construction assistants "out of the office" before construction season started. We gave them a tablet and told them "To hit the road" with culvert inspections. This has been successful to date.
  - Challenging to do when vegetation gets too high in summer.
  - Tape measure, 125' tape, something with a gps is extremely helpful, and a poker to test the bottom of the tubes to get a better idea on what on what to rate the culvert condition itself.
  - It would be nice to know which ones are close to failure so maintenance crews can fix before failure.

- **Other feedback for TAMC related to culvert inventory and data collection:**
  - Too much data was collected, which isn't needed. Decisions are based on follow up site visit, not based on some inventory years before.
  - Work orders. Need a field originated work order process with customizable drop down choices for typical repairs associated with culverts.
  - I am glad we are having this state-wide discussion on asset management. It is just the right thing to do fiscally.
  - Rating on the condition of the culvert is more important then waterway, channel rating. it should almost be the only rating in all honesty.
  - For small culverts, just 1 rating for the culvert in a good fair poor is more than enough. If you want to rate the channel, not opposed, but nothing will happen until the culvert is replaced

Michigan Transportation Asset Management Council

Memo

To: TAMC Bridge Committee Members

From: Roger Belknap, TAMC Coordinator

Date: July 16, 2020

Re: TAMC Strategic Planning Session 2020 – UPDATE

Recommendation

As we progress through the year, each TAMC Committee has been working on a list of agenda topics and priorities for TAMC to discuss at the 2020 TAMC Strategic Session. As you may recall this was originally scheduled June 3, 2020 and was cancelled at the May 6 TAMC meeting. Earlier this month at the full TAMC meeting on July 1, the council discussed September 6 as a possible date for the 2020 Strategic Planning Session.

This provides a little more time for thoughts and guidance from TAMC members on the draft Status Update of the 2020-2022 TAMC Work Program Goals and Objectives. Committee members are encouraged to review these goals and objectives to determine if new items are to be added in future work programs or if changes are suggested.

Attachments

Attachment 5 is a draft status update of the 2020-2022 Work Program Goals and Objectives for the TAMC Bridge Committee.

2020-2022 TAMC Strategic Work Program: Status of Bridge Committee Priorities

Status color key: Red= No progress/Future Work Yellow= Ongoing Task Green= Completed Task

Goal 1: Ensure TAMC's transportation asset management plan template, policies and training programs 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 and State industry reporting standards.

Ongoing; Policy updated 9-6-17

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 System.

Ongoing; preparations of 2019 Michigan Roads and Bridges Annual Report includes ensuring dashboard structure matches reporting formats.

3. Compare and analyze bridge condition data and TAMC Investment Reporting Tool data for planned bridge project data; incorporate TAMC Investment Reporting Tool data into Michigan Department of Transportation's Bridge Forecasting System.

No progress identified at present time

4. Review potential for bridge cost information to be included in the Act 51 Distribution and Reporting System and other applications.

No progress identified at present time

5. Continue to review submitted transportation asset management plans and TAMC asset management plan template for consistency with Federal and State industry standards and findings from previous transportation asset management plan submittals.

No progress identified at present time; very early in the schedule for plan submittals

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 Michigan Department of Transportation, other transportation agencies and other stakeholder organizations including Water Asset Management Council, Michigan Department of Environment, Great Lakes and Energy and Michigan Department of Natural Resources.

Objectives

2020-2022 TAMC Strategic Work Program:
Status of Bridge Committee Priorities

Status color key: Red= No progress/Future Work Yellow= Ongoing Task Green= Completed Task

1. Develop data governance and standards for roadway culverts.

Status: Forthcoming following the completion of culvert data migration attempts across jurisdictions; TAMC Bridge Committee to identify key attributes and data format for development of these directives; Survey instrument for obtaining feedback from 2018 participants has been sent out; TAMC Bridge Committee engagement with Center for Shared Solutions and Framework platform for data management has begun; Engagement with other data providers also underway for policy considerations and data modeling.

2. Develop culvert performance metrics for local agency reporting and integration into asset management plans and TAMC technological reporting.

Status: Forthcoming following the completion of culvert data migration attempts across jurisdictions; TAMC Bridge Committee to identify key attributes and data format for development of these directives

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.

Status: Forthcoming following the completion of culvert data migration attempts across jurisdictions; TAMC Bridge Committee to identify key attributes and data format for development of these directives

4. Provide tools and training for the ongoing collection of roadway culvert inventory and condition assessment.

Ongoing; CTT has scheduled 5 culvert-related training events for 2020

5. Incorporate culvert inventory and condition data into TAMC Dashboards and Interactive Map applications.

Ongoing; CSS has been provided with the attributes needed for the creation of the culvert dashboards

6. Review other agency's culvert information which can be incorporated into inventory for reduction in duplication of effort among Michigan Department of Environment, Great Lakes and Energy and Michigan Department of Natural Resources and Drain Commissioners, etc.

Ongoing; CTT is in the process of developing external parters to explore data gathering and usage techniques, document case studies on value and procedures of data sharing, and reporting this for future application; some of these examples were to be included in the TAMC Conference program for 2020