



Midwest Bridge Preservation Partnership

Agenda – Monthly Teleconference

Tuesday January 5th, 2021

1:00 – 2:00 PM CST

• Roll Call –

Name	Organization		Name	Organization	
Darlene Lane	NCPP	X	Javier Romero	Cook County, IL	
Ed Welch	NCPP	X	Adam Post	Indiana DOT	X
John Hooks	NCPP	X	Scott Neubauer	Iowa DOT	
Chris Keegan	NCPP	X	Joe Stanisiz	Iowa DOT	X
Bill Oliva (<i>Chair</i>)	Wisconsin DOT	X	Don Whisler	Kansas DOT	X
Sarah Sondag (<i>Vice Chair</i>)	Minnesota DOT	X	John Culbertson	Kansas DOT	X
James Leaden (<i>Secretary</i>)	Kansas DOT	X	Joe Molinaro	Missouri DOT	
Jeremy Hunter (<i>Past Chair</i>)	Indiana DOT		Jacob Creisher	Michigan DOT	
Sarah Wilson (<i>Director</i>)	Illinois DOT	X	Jason DeRuyver	Michigan DOT	X
Josh Rogers (<i>Director</i>)	Kentucky TC	X	Paul Pilarski	Minnesota DOT	X
Glenn Washer (<i>Director</i>)	U of Missouri	X	Kent Miller	Nebraska DOT	X
Patrick Conner (<i>Director</i>)	Indiana LTAP	X	Mark Traynowicz	Nebraska DOT	
Nick Graziani (<i>Director</i>)	Watson Bowman		Nancy Huether	North Dakota DOT	X
Tom Donnelly (<i>Vice Chair Non-State Agency</i>)	Transpo	X	Barry Kinnischtzke	North Dakota DOT	X
John Bunderson (<i>Social Media WG</i>)	Metal Fatigue Solutions		Mike Brokaw	Ohio DOT	
Scott Stotlemeyer (<i>Systematic Preventive Maintenance WG</i>)	FHWA	X	Bradley Noll	Ohio DOT	
Brandon Boatman (<i>Preservation Matrix WG</i>)	Michigan DOT		Walt Peters	Oklahoma DOT	X
Fouad Jaber (<i>Deterioration Modeling WG</i>)	Nebraska DOT		Todd Thompson	South Dakota DOT	X
Tim Anderson (<i>Director</i>)	FHWA	X	David Coley	South Dakota DOT	X
Larry O'Donnell	FHWA	X	Richard Marz	Wisconsin DOT	X
Raj Ailaney	FHWA	X	Tim Woolery	Adv. Chem. Tech. Inc.	X
Dick Dunne	GPI	X	Kelly Bengston		X
David Heilman	Jet Filter System		Pat Martens	Bridge Preservation and Inspection Svcs.	X
Greg Heilman	Jet Filter System	X	Nick Graziani		X
Ed Liberati		X	Drew Garceau		X
Lawrence Kirchner		X	Dave Juntunen	Kercher Group	X
Bobby Scarpitto		X	Drew Storey	Kercher Group	X
LJ Dickens		X	Kyle Bartfay	Phoscrete Concretes	X
Lindsay Bossert		X	Mike Stroia		X
Kristen Leier		X	Jennifer Hart		X
Blake Liberati		X	David Brodowski	True Tech	X
Thomas Collins		X	Mike Banasiak		X
Richard Huza		X	Allen Scarborough		X
Michael Hill		X	Andy Nanneman		X

- **Approval of Minutes – December 2nd, 2020 Monthly Meeting**

A Motion was made to approve the Meeting Minutes from the December 2nd, 2020 MWBPP Monthly Teleconference. There were no objections. The Meeting Minutes were approved.

- **Assistance with Meeting Minutes – Schedule**

From the December MWBPP Monthly Teleconference, a list of those who have volunteered to help with the Meeting Minutes for future MWBPP Teleconferences was established and presented to the partnership. The call for volunteers was part of a motion passed that recognized a need to ease the effort and time investment of the Secretary/Treasurer by sharing 50% of the Meeting Minutes preparation duties with other Officer /Director volunteers leading up to the fall, 2021 face-to-face annual meeting. The list is shown below:

Tuesday December 1st, 2020	Jim Leaden
Tuesday January 5, 2021	Jim Leaden
Tuesday February 2nd, 2021	Jim Leaden
Tuesday March 2nd, 2021	Sarah Sondag
Tuesday April 6th, 2021	Sarah Wilson
Tuesday May 4th, 2021	Sarah Sondag
Tuesday June 1st, 2021	Drew Storey
Tuesday July 6th, 2021	Jim Leaden
Tuesday August 3rd, 2021	Drew Storey
Tuesday September 7th, 2021	Jim Leaden

Bill Oliva thanked those who stepped up to the task by volunteering to help out.

- **2020 MWBPP Annual Meeting (TBD) – John Hooks -**
 - *Quick update on all four 2021 Annual Meetings (so far, MWBPP still is a go for Sep 28 – 30, 2021).*
 - *Update on the 2020 TSP2 webinar*

Recordings are / will be available for viewing @

<http://bit.ly/2020BridgeWebinars>

<https://tsp2bridge.pavementpreservation.org/2020-aashto-tsp%20b72-bridge-webinar-series/>

John Hooks gave a quick recap of the 8 virtual events that were developed to take the place of the Midwest Bridge Preservation Partnership (MWBPP) 2020 (face-to-face) Annual Meeting which was forced to be cancelled because of the ongoing Pandemic. The 8 virtual meetings consisted of 4 Webinars, and 4 Panel Sessions. These virtual events had an average of 403 persons per event attendance. John also made a note that NCPP not only sponsored these 8 Bridge Webinars, but they also sponsored several pavement preservation webinars and a few others with a total of 16 in all. And when you rank the attendance from high to low, the Bridge Webinars took 7 out of the 8 top spots. He thinks that's an indication of how much thanks is due to the moderators, presenters, panel members, and all those who

logged in. It is evidence of a successful effort. John Hooks thanked everyone who took part in these virtual events. The link above will take you to a YouTube Channel provided by The NCPP that allows you to go back and review videos of the 8 virtual events.

John Hooks then followed up with the latest news on the upcoming 2021 (face-to-face) Annual Meetings. The SEBPP Annual Meeting was moved to take place November 2nd thru 4th, 2021 in Hot Springs, Arkansas. The WBPP Annual Meeting was moved to take place December 7th thru 9th, 2021 in Phoenix, Arizona. The MWBPP Annual Meeting is scheduled to take place September 28th thru 30th, 2021 in Lexington, Kentucky. The NEBPP Annual Meeting is scheduled to take place October 12th thru 14th, 2021 in Harrisburg, Pennsylvania.

John Hooks also announced that there is a MWBPP Officers Meeting scheduled for January 20th, 2021 to kick off the planning for the MWBPP 2021 Annual Meeting.

Bill Oliva thanked everyone for their efforts for the successful completion of the MWBPP 2020 virtual events.

- **MWBPP Deterioration Modeling Working Group (Bill Oliva)**

- *Reoccurring monthly meeting Set up – Third Friday of each month at 9:00 AM CST Next is Friday December 18th.*
- ~~*Task 3 Data Collection is complete with a few follow up with DOT's*~~
- ~~*Task 4 Data Screening is moving forward and hope to wrap this up by end of December.*~~
- *Task 5 web meeting will most likely be February 2021 - TBD*

Bill Oliva started off by stating that Wood Environmental is churning numbers. They got the data collected. They are currently working on building relationships. Task 5 is being pushed back some as they get into it (justifiably so). They are going to have some good information by February 2021. So, they will be scheduling a face-to-face meeting to look at some of those preliminary results and provide some feedback and direction to the researchers. The project is moving forward and is within budget. The overall schedule is optimistic to have results by late fall of 2021. Bill O. thought that this would be a good presentation topic at MWBPP's 2021 Annual meeting in Lexington Kentucky.

- **Monthly Preservation Topic – Drone Photogrammetry & Multi-Beam Sonar Merging for Scour Critical Bridges (Michael Banasiak of Collins Engineering)**

Michael Banasiak took control of the screen to begin his presentation. He started off by stating that he was going to talk about a project where they were able to merge two emerging technologies: Drone Photogrammetry Imaging, and Underwater Multi-Beam Sonar. These technologies produce visually compelling results from which they can measure clear quantitative data. Mike ran thru a specific case study that they performed last year for the Montana DOT. MDOT hired Collins to inspect a handful of scour critical bridges. A bridge is defined as Scour Critical if it meets the criteria of having one substructure element rated as unstable due to observed or evaluated scour. The intention of the project was to perform in-depth underwater inspections including single beam sonar as well as Multi-Beam Sonar (3-D imaging). The 3-D imaging would allow the assessment of the substructure element being inspected as well as any debris and any previously installed scour counter measures.

Underwater Multi-Beam Sonar is mounted to a boat or sits on the channel bottom. The unit can provide imaging of the channel bottom, piers, debris, etc. It is a good tool to use in zero visibility water or high flows. It provides a solid dataset, not just relying on what a diver thinks he feels under the water. Collins took it one step further using drones with a preprogrammed flight plan, and targets on the ground

to develop a survey of the surrounding terrain. They wanted to combine the drone data they obtained with the UW imaging data. The drone took thousands of photos looking straight down. Michael noted that Photogrammetry is different than LIDAR. They used geo-references on the ground to get data to create contours. Michael then went through a number of “Case Studies”. He focused on a specific location where they used drone photogrammetry superimposed on a 3-D image (above water imaging from the drone, and below water imaging from the UW Multi-Beam Sonar). He showed the scour that developed under the bridge at the pier while navigating through the 3-D image of the structure location.

A question was asked... From the contour map, are you able to develop quantities of rip rap needed for scour counter measure purposes? Michael said yes, you can measure off these maps to develop quantities for things like that. He said that you could even cut cross sections across the channel. Michael said that from looking at these images, it becomes clear what the problem is, and it becomes clear what the solution is. Some data may be missing because the drone may not be able to get all the imaging, but you can see what is happening at the structure and under the water because of the UW Multi-Beam Sonar.

Michael talked about future technology. NORBIT It is all geo referenced. The point cloud in the dataset is tied to Latitude and Longitude. He also mentioned Geo-referenced 3-D bathymetry. He also mentioned UAS mounted Bathymetric LIDAR where you can get topographic and underwater imaging from the same flight. He also mentioned Amphibious Drones that use 4K photogrammetry for the top, and underwater sonar for the bottom (works good on slow water, not sure on how good it is on a fast river).

Michael wanted to note that this technology supplements the diver. It is not intended to replace the diver.

He then opened it up to questions. Somebody asked how large the data files were. Michael said that he will have to get back to them on that. Bill Oliva asked - could the 3-D files be used in 2-D hydraulic models? Michael answered – Yes, from 3-D models, you can cut any cross-section. Hence you can cut any profile for the channel. With that, the presentation was concluded. Michael Banasiak said to feel free to contact him if there is any interest to continue the conversation. You can contact him via email (MBanasiak@collinsengr.com), you can also contact him on LinkedIn. Bill Oliva thanked Michael Banasiak for the presentation.

- **Preservation Discussion: All –How states are verifying substructure capacity when adding overlay weight, barrier weight, or looking to re-deck. Paul Pilarski – Minnesota DOT**
 - *MnDOT has developed a scoping unit within our bridge construction unit over the last 5 years to vet bridges that will be seeing a repair project. The purpose is to make sure load ratings for the bridge are solid if we want to redeck or overlay, barrier upgrade policy is met, and in last 2 years we have new guidelines to look at pier caps as the detailing and design methods back in the day have changed. Many of these show cracking noted as shear cracks in the inspection reports, and when you analyze them with strut and tie...well, they just don't work out well. So we have been doing a lot of verification attempts on pier cap capacity using todays code and it remains challenging. Paul would is curious how other states are verifying substructure capacity when adding overlay weight, barrier weight, or looking to redeck.*

This was a carryover from the December MWBPP Monthly Teleconference. However, Paul Pilarski had to leave this teleconference, so he was not available to lead discussion on this topic. This will be held over for the February MWBPP Monthly Teleconference.

- **MnDOT completed a report on use of electrochemical chloride extraction and as a follow up excavated to some highly chloride contaminated regions of the pier caps without outward signs of deterioration. (Paul Pilarski – Minnesota DOT)**
 - *While there was some minor corrosion at one site, the corrosion was insignificant despite chlorides at least 3X chloride threshold. It makes me think we need a research project on chloride levels and corrosion rate for service life modeling.*

As stated above, Paul Pilarski had to leave this teleconference, so he was not available to lead discussion on this topic. This will be held over for the February MWBPP Monthly Teleconference.

- **Update - FHWA Bridge Preservation Task Force is putting together a case study on the state of Local Agency Bridge Owners across the country (Jason DeRuyver)**

Jason DeRuyver started out by stating that BPETG is trying to do a case study of the State-of-Bridge-Maintenance at the local agency level as well as looking at funding. The four Partnership Representatives were asked to come up with a list of 10-12 local agencies to submit/look-at and then send questions to, and then further narrow it down from that. Back in November was the first round of Jason reaching out to the Partnerships (John Hooks sent out a survey to all of the locals where responses were sorted by Partnership regions on a spreadsheet). Dave Juntunen, Drew Story and Jason DeRuyver whittled this down to get 10 or 12 local agencies (vetted through the States and Partnerships) to interview for these case studies.

A meeting is coming up in the next month (February) to discuss further. Bill Oliva asked if there was not enough representation by some local agencies? Jason responded that a number of local agencies that are really good with maintenance activities have responded. Dave Juntunen said that there were good results from the survey. They picked local agencies that they thought would respond well. The purpose was to get feedback from others. They are looking for an excellent example of an agency that responds to bridge preservation needs. The request for Case Study Candidates will be addressed again in the near future to maybe find some of those good examples of local agencies that have been overlooked. There will not be one local agency from each State. There will be 3 or 4 local agencies from each Partnership that show good preservation maintenance abilities.

A complete list of survey results for all Midwest Local Agency Responses will be attached to these Meeting Minutes.

- **Lucky Strike Extra –**

JANUARY 13 Evaluation and Protection of Bonded Post-Tension Tendons
David Whitmore, P.Eng., FACI, FCSCE,
NACE CP Specialist No. 9424
Vector Corrosion Technologies – Winnipeg, MB

www.wesavestructures.info/events.

Bill Oliva noted that next week there is a free webinar on January 13th, 2021 (see link above) related to the evaluation and protection of bonded post-tension tendons. He said that Lisa Viker wanted to share the news of this opportunity. There are pdh credits available. He said to feel free to take advantage of this.

- **Other New Business**

- *Monthly Preservation Topics for February - volunteers*

Paul Pilarski-MnDOT has 2 topics that will carry over from the MWBPP January 2021 Teleconference to the February 2021 Teleconference.

Ed Welch brought up discussion about the Bridge Preservation Blog which is part of the Social Media Working Group. He asked if there was still interest, or not, in moving forward and fund the efforts of the Bridge Preservation Blog. He noted that it will cost \$1500 per Partnership per year for Lorella Angelini to support and maintain the blog, and to attend one of each Partnership's annual meetings each year. He noted that there was interest to bring this up at each of the 4 Partnership's calls and try to find out if people are reading the blogs, do they consider it a useful tool, should we continue to fund the effort. He noted that the blog is sent out to about 1000 people who have attended our meetings over the last 4 years, as well as being out there on social media sites. He brought this up to have discussion to determine if there is a consensus to move forward with these efforts from the Social Media Working Group.

Bill Oliva responded saying that he feels the blog is valuable. He mentioned posts he's seen in LinkedIn and Face Book. Bill asked members if they had feelings one way or the other about this topic. He asked if there were any suggestions for improvements. The cost is \$1500 from each Partnership plus \$250 to go to one of the 4 Partnership meetings (once a year) to do her interviews and write 12 blogs per year. Kent Miller added that he enjoys reading them and that he believes it is a valuable thing. Bill Oliva asked if there was anyone who was in opposition to continue with the blogs? ...crickets... So, no opposition from the MWBPP equates to showing support. Bill offered to maybe have a formal vote on the February agenda. Ed Welch suggested that we get feedback from the other Partnerships and go from there. Bill Oliva asked Ed to let him know if he wants to have a formal vote from the Partnership.

- **Next Monthly Meeting**

- *February 2nd, 2021*

- **Meeting Adjourned**

The January, 2021 MWBPP Teleconference adjourned 8 minutes late at 2:08 PM in the Central Time Zone.