

10:00 A.M. Friday October 19th, 2018 – Cambridge Office

Present:

Kevin Williams (Chair)	Atlantic	Kamran Derayeh	ArcelorMittal
Riley Wilson	Atlantic	Stan Lipkowski	ArcelorMittal
Phil Carroll	Atlantic	Dave Watson	Leland
Heba Ahmed	Armtec – C.C.	Jim Evans	AK Steel
Bruce Matheson	Frontier	Ray Wilcock	CSPI
Byron Nelson	Leland		

Absent:

Jason Sherwood	Atlantic	Shane Setter	Ironside
Nick Spence	Atlantic	Mike Mounts	Valfilm
Jason Johnston	Armtec – C.C.	Marc Warden	Hubbell
Ian Berry	Warner	Mike McGough	NCSPA

1. Welcome and Opening Remarks

Kevin Williams opened the meeting at 10:00 a.m. and welcomed everyone. Go-to-meeting was used for those calling in. Attendance was taken and is recorded above.

2. Review Minutes from June 11th, 2018

Minutes were reviewed and a motion for approval was made by **Byron Nelson**, second by **Kamran Derayeh**.

3. Outstanding Items to Complete

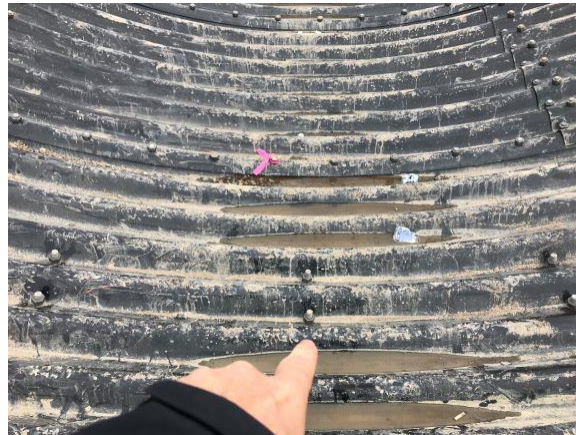
a) Bolt & Nut Research

MTQ acceptance request update

1. Ray: Gerard Desgagne, chief bridge engineer of MTQ has retired and has been replaced by David Bastien. Follow up in the 4th quarter and schedule a visit in the 1st Q of 2019. In addition, work with Stephen Martineau (AIL) and Tony Tekly (Armtec-CC) to meet with Anne-Marie Leclerc, the Deputy Minister to move this specification forward.
2. Kevin reached out to Pete Ault for 3rd party testing to determine scope for material service life. Byron agreed to pay for the tests if that is the direction chosen. This may

depend upon the NCSPA results which have yet to be published. NCSPA have a TAC meeting on November 7th where we will learn status.

3. Phil stated there may be an issue with bolt heads spinning on polymer plate. He had this issue on a project which took multiple attempts to reach torque on the structure invert polymer plates b/c the bolt heads kept spinning. He ended up torque checking almost all the invert bolts then used a cordless impact wrench (not air) and it managed to grab the bolt head and stop it from spinning. It took many hours to complete. Byron stated that the ribs under the head may not be locking in on polymer coated plate. Phil suggested a testing and committee agreed. See following picture:



1. 1st Q 2019 MTQ visit
2. Arrange to send polymer coated samples from Warner (Ian) to Leland (Dave) for testing.

b) Rehabilitation Gap Analysis Literature Review

MTO issues requiring rehabilitation brought up at the 2017 buried bridge presentation:

- Flattening of the crown
- Seam openings – pull apart
- Haunches buckling – invert rising
- Crimping of the conduit walls (along the wall haunches)
- Bolt hole tears
- Excessive deformation of the conduit especially along the crown and shoulders
- Water leakage along plate seams and through bolt holes
- Corrosion and cross section losses (difficult to quantify and repair)

Objective is to produce a 3rd party white paper for DOT's and consultants on rehabilitation techniques to address above noted issues.

Progress: Project has been started by Robert Cichocki under the direction of Dr. Ian Moore of Queen's University in Kingston, Ontario. This is a 4-month project that has been funded

via Mitacs with CSPI funding of \$7,500. A meeting is scheduled with Robert, Kevin, Heba & Ray on October 30th for update.

c) MTO – Structural Plate Standards Advancement

1. Ray followed up with Tony Merlo, Chief Bridge Engineer. Tony stated that the submission has not been looked at yet.
 2. Ray met with MTO Kingston (Ryan Vanderburg) and St. Catharines (Art Groenveld) who asked CSPI to conduct a review on a number of polymer laminated pipes installed in 2017 on Highway 62 near Belleville. These pipes contained rust stains and spots on the entire pipes. Art stated that if this shows penetration of the laminate, then he would have to lower material service life to 50 years. Mike Mounts stated that it may be due to a high iron content in the water, however a site visit is required to determine if it is contamination on the surface or actual penetration into the surface of the film. Jim suggested using a paper towel to start and then move to a scotch brite pad if warranted.
1. Will continue to follow up each quarter with Tony.
 2. Visit Highway 62 site in mid – November.

d) Municipalities Standards Submission:

Four municipality applications have been completed. The remaining six will be completed by the end of the year.

e) Galvalume – outstanding issues, Algonquin site visit report

1. Ray gave an overview of the Algonquin site report.
 2. Kamran would like to see Tech Bulletin #1 updated based upon Pete's report. Kevin is hesitant given that service life (Figure 4) has not been addressed. Kamran agreed that AMD will do the electrochemical testing which will enable Pete to complete the material service life section of his paper. It is a matter of Pete giving Kamran the objective.
1. Conference call to be held on November 2nd to hammer out the scope of the tests required. Participants will include Pete, Kamran, Kevin & Ray.

f) OPSS 1801 Update

Ray sent updates to the committee on September 12th which included edit clarifications and CSPI CSA certification bulletins 18 & 19. Committee is expected to respond by the end of the year.

g) Sustainability (EPD), technical bulletin 8

1. Stan gave an overview of his study comparing steel to precast concrete. The results are impressive, however in order to use this information in the marketplace, would require 3rd party verification. For this comparison, the cost would be \$10,000 US, working with SCS Global who worked on the CSPI EPD. The LCA critical review of comparing materials would make a great marketing tool. In addition to concrete, Bruce would like to compare steel to HDPE. The committee would like to start with concrete. Stan stated that North American data is available and will verify if AISI can do the modeling. To buy one's own data base would be approximately \$8,000 US. The critical review comparison can take up to a year to report scientific evidence to the public. Someone asked about grants, however Stan was not aware of any.

Ray to work with Stan on moving this project forward.

2. Bulletin #8 has been updated by both Ray, Stan & Kevin. This draft will be circulated to the committee for comment prior to the November 29th fall meeting. It will be published by year end.

h) Winter storage technical bulletin

Committee approved latest draft.

Include in next E-Blast (November) and post to the website.

4. Long Term Items

a) ASTM A742 ballot

ASTM ballot containing minor modifications was submitted. Results will be available at the next ASTM meeting in November. There is no schedule for the L/T items of salt spray and abrasion testing. Both Mike and Ian did not attend, thus will set up a conference call to move this forward before year end.

b) Thermopolymer plate in brackish/salt water – Quebec site update

There are three sites requiring a review (1 in BC, PQ & NS). MTQ are extremely interested in these sites as this is their number one concern.

Ray visited the Quebec site and has a sample. Will be tabled for the next meeting. Phil agreed to visit the BC site with Ray next spring and will supply the canoe.

c) Technical Bulletin on Invert Reline

Ray to send information to Robert to tie into the study on rehabilitation. Kevin mentioned a TRB report pertaining to paving of inverts.

d) Bolt & Nut Research – Higher abrasion resistant coatings (Leland lead)

Byron stated that testing is in process to meet required 3,000 hours for ASTM. With regards to timeline, there is no firm date at this time.

5. Ongoing Items

a) Kleskun Hills report – August 2018 site visit

The committee asked for more time to review. End of month was given before release to Alberta Transportation. Kevin would like to bring this project into a technical bulletin once the 5 years is completed.

➤ [Next site visit in August 2019](#)

b) ASTM

Next meetings are in Washington DC from November 5-6.

c) NCSPA

No ASTM ballot yet on polymer coated plate or bolts. Next meeting is in Washington DC on November 7th. Ray will be attending along with Jason Sherwood.

d) TRB

Kevin stated the next meeting is during the second week in January 2019. There will be a one-day segment on bridge rehabilitation on structures greater than 20 meters for both steel and concrete. Kevin asked to pass this on to PPC for inclusion in the next E-Blast.

e) CSA G401 revisions

Ray covered the revision list that was sent to all committee members. It was agreed to hold a separate conference call by mid November, to ensure that we are ready to submit to CSA by year end. Ray will canvas members who want to participate.

f) AREMA

No update from NCSPA.

g) CSCC (Canadian Steel Construction Council)

Next Board meeting is on October 31st in Milton.

h) AISI 2019 Projects Submission - August 30th

1. Polymer Laminated Steel	10,000
2. CSA Certification Programs	10,000
3. University Outreach Program	5,000
4. Galvalume Project	5,000
5. Floodnet	1,000
6. Municipal Standards Project	5,000
7. CSA G401 update for 2020	10,000
8. Rehabilitation Technical Bulletin	5,000
9. EPD – Benchmarking	5,000
10. Elimination of Rerolled Ends	5,000
11. Life cycle comparison - BC	5,000

Total **\$66,000**

Ray presented to the committee on August 30th. Decision will be forthcoming by the end of the year.

6. Discussion / New Business

1. Calculators on the website (from last meeting): Nick & Ray to work on this.
2. LCC project - Coquihalla Highway comparing buried bridges versus traditional. Ray to set up conference call with BCMOT as there has been a change in players with recent retirements.

7. Adjourn & Next Meeting

The meeting was adjourned at **11:30am**. Next meeting is in Kitchener on Thursday, November 29th.

Secretary
Ray Wilcock