



**TECHNICAL ADVISORY COMMITTEE
Memorandum of Meeting**

1:00 P.M. Friday December 8th, 2016 – Kitchener, Ontario

Present:

Kevin Williams (Chair)	Atlantic	Ray Wilcock	CSPI
Byron Nelson	Leland	Nick Spence	Atlantic
Dave Watson	Leland	Lyndsay Dokas	Armtec
Randy McDonald	Armtec	Chris Groot	ES Hubbell
Mike Mounts	Valfilm	Bruce Matheson	Frontier
Kamran Derayeh	ArcelorMittal		

Absent:

Shane Setter	Ironside	Phil Carroll	Atlantic
Ian Berry	Warner		

Guests:

Stephen MacKinnon	Atlantic	Jason Sherwood	Atlantic
Butch Ferneyhough	Armtec	Dawn Nigro	Armtec
Janine Yetke	Armtec		

1. Welcome and Opening Remarks

Kevin Williams opened the meeting at 1:00pm and welcomed all members. Go-To-Meeting was not used. Attendance was taken and is recorded above.

2. Review Minutes from October 7th, 2016

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

3. Short Term Items to Complete

a) Tech Bulletin 17 – Polymer Laminate CSP Guideline

Tech Bulletin 2 updated and ready for review. Kevin, Mike & Randy will provide feedback and sign off before we close this item.

b) Tech Bulletin 20 – Winter Construction Guideline

Action: E-blast to be sent in the 1st Q to all in the data base. Include calculators, member map, etc.

c) Bolt & Nut Research Updates

MTQ - update

MTQ report is expected by year end. Ray visited MTQ on September 12th. Visual inspection showed corrosion results were excellent at 2500 hours, whereas abrasion results were similar to HDG. MTQ has agreed to continue to work with us going forward. Leland will be ready to produce NZF3000 in February 2017.

Action: Leland to produce a draft purchasing standard which defines the material and dimensional requirements of the fasteners along with a testing and inspection method to verify quality.

Pennask Site Report

Phil visited the site in October. Please see the attached report. Bolts supplied were DT1500. Byron confirmed same.

Technical Bulletin

Kevin will issue a revised technical bulletin by year end. Ray will send it to MTQ (French version) for feedback. The plan is to present this to MTQ in February / March 2017 for consideration of 75 year service life.

3rd Party Review

Kevin suggested we reach out to Pete Ault for a cost and review of the bulletin.

Action: Ray to download the MTO and MTQ bolt specifications and provide to the TAC Committee for the next meeting.

d) Buried Bridge Presentation – Content, Review & Schedule

Nick updated the slides and will send them to Ray.

Schedule thus far:

Sept 15 th	MTO St. Catharines	Buried Bridges	Completed
Oct 11 th	City of Calgary	Buried Bridges	Completed
Oct 20 th	NS DOT	Buried Bridges	Completed
Oct 21 st	NB DOT	Buried Bridges	Completed
Jan - Mar	MTO Regions	Buried Bridges	Pending
	NF DOT	Buried Bridges	Pending
	PEI DOT	Buried Bridges	Pending
	Edmonton	Buried Bridges	Pending
	Man DOT	Buried Bridges	Pending
	Sask DOT	Buried Bridges	Pending
	Alta DOT	Buried Bridges	Pending
	BC DOT	Buried Bridges	Pending
	MTQ	Buried Bridges	Pending

e) SWM Presentation – Content, Review & Schedule

Ray submitted presentation to PPC for comment. Armtec supplied the following:

- 1) A number of the pictures look dated. They could be updated based on newer pictures from CSPI members. Action: Ray to resolve with PPC.
- 2) A couple of slides listing the MOT's, Municipalities etc. where CSP is approved for use would be helpful to demonstrate its wide acceptance as a solution.
- 3) Examples of special projects, especially those that demonstrate how the structures have met or exceeded their service life would help build confidence in the durability of steel solutions.
- 4) Listing best practices (inspection schedules etc.) used by owners to maintain their structures would also be useful, unless it compares very unfavourably with concrete.
- 5) A table highlighting project conditions under which steel is a favourable option versus concrete might be useful. I've attached a version to this email; please use it as a starting point if the entries are appropriate.

Jan- Mar	Region of Waterloo	SW Management	Pending
	Kitchener	SW Management	Pending
	Waterloo	SW Management	Pending
	London	SW Management	Pending
	Hamilton	SW Management	Pending
	Ottawa	SW Management	Pending
	Hull	SW Management	Pending
	Thunder Bay	SW Management	Pending

It was agreed to combine the bridge and SWM presentations into one for the Municipalities. Ray will complete this in December and send to Nick for sign off.

f) Structural Plate Inspection – (post FHWA document on Website)

Action: Kevin will send Ray the latest copy for posting to the website.

4. Long Term Items

a) ASTM A742 Review & Testing – Polymer Laminated Steel

As per the conference call held on April 21st it was agreed to proceed with the following tests:

- Adhesion in ASTM A742 (mandrel bend);

- Adhesion in ASTM D3359
- Boiling water adhesion test
- Salt spray.

Samples were supplied to Warner. Tests have not been started yet.

Action: Ray will follow up with Ian before year end.

5. Ongoing Items

a) AISI – Funding Requests 2017 Projects

AISI approved an increase of \$4,000 over that of 2016.

<u>2017 Projects</u>	<u>Presented</u>	<u>Approved</u>
1. Polymer Laminated Steel	10,000	10,000
2. CSA Certification Programs	10,000	10,000
3. Bolt Research & Testing	5,000	5,000
4. University Outreach Program	5,000	5,000
5. Galvalume project in 3 Provinces	5,000	5,000
6. Floodnet	1,000	1,000
7. CSA G401 rewrite for 2019 / 2020	5,000	
8. Rerolled Ends – elimination	4,000	
9. Testing of Water Tight Joints in the field	5,000	
10. Metallic Coated Technical Bulletin	2,000	
11. Environmental product declaration for CSP	3,000	3,000
12. Life cycle assessment comparing plastic, concrete and steel SWM systems	<u>5,000</u>	<u> </u>
Total	60,000	39,000

Number 11 (<http://www.environdec.com/en/What-is-an-EPD/>).

- 1) The Kleskun Hills report was presented and is attached to these minutes. The only question raised was the performance of the gabion baskets. This will be looked at in 2017.
- 5) The Algonquin Test Site report was presented and is attached to these minutes. Kamran gave an overview of the tests that were conducted on Galvalume in the 1980/1990's. Although performance surpassed Galvanized, the project was shelved due to production constraints (could only supply single rolls). Changes have been made that enable AMD to supply double rolls. The purpose of these tests is to determine how Galvalume performs in soft water / low PH conditions. AMD would like to see Galvalume replace Aluminized Type II.

Stephen suggested Ray take a core sample next year when visiting the site. Mike confirmed that polymer could be laminated to Galvalume.

Action: Kamran was asked to supply past test information to the TAC Committee.

Action: TAC Committee to advise AMD what information will be required going forward.

b) Regional Updates – Certification Programs

Region	CSP Protocol	Structural Plate Protocol	Comments
Newfoundland	Presentation made on August 11 th	Submitted Polymer Plate Spec. Met with Doug at TAC in Sept. Buried Bridges presentation to be scheduled this winter.	Will follow up with Doug Power and John Morrissey at Buried Bridge presentation.
PEI	Spoke with Darrell Evans at TAC in Sept 2015.	Spoke with Darrell Evans at TAC in Sept.	Would like CSPI to visit this winter and discuss along with a Buried Bridge presentation.
Nova Scotia	Presentation made on August 12 th	Changes Specs every 2 years. Download section 12 and send changes in 1st Q 2017 to Will Crocker	Reviewed at October 20 th Buried Bridge Presentation. Changes to be submitted.
New Brunswick	Attempted a number of times through Rob Simpson. Work through Armtec & AIL	Spoke with the ADM Tony Desjardins and was able to set up a bridge presentation.	Reviewed at October 21 st Buried Bridge Presentation. Follow – up with Tony.
Quebec	Using 2007 with no CSPI reference. Sent Gerard OGPDPG.	Spoke with Gerard Desgagne on Sept 12th and bridge group. Under review.	Bridge presentation to be scheduled for January 2017.
Ontario	Webinar held with Art Groenveld. St. Catharines visit on January 18th.	Met with Tony & Ranko on August 4 th to discuss changes to spec. Under review. Presented to the bridge group on Sept 15 th along with Heba	Continue dialogue with visits to St. Catharines. Next step is to present to bridge heads and then regional staff.

		& Kevin. Protocols have been supplied to Tony & Ranko.	
Manitoba	Presentation made on Sept 22 nd		Follow up with Ruth Eden in 2017
Saskatchewan	Presentation on Sept 21 st . Polymer laminated edges – issue?	Height of Cover Tables need updating – download from Website. Met with Howard Yea at TAC in Sept.	Meet with Doug Ross in 2017 – site visits, water testing, certification for 2017. Would like CSPI to present buried bridges this winter.
Alberta	Presentation on August 4 th and Kleskun Hills visit. Met on December 15th and presented certification. Issues being resolved.	Submitted changes to Section 118 in June 2016. Met with Des Williamson on October 13 th . Under review.	Des is very interested in having CSPI present at the Alberta bridge / roads meeting in January 2017. Ray will send out an outline and confirm.
B.C.	Changes to specification effective January 1, 2017. Both CSP and SPCS require plant certification.	Changes to specification effective January 1, 2017. Both CSP and SPCS require plant certification.	Updated section 320 & 303 and submitted in 2015. Took 1.5 years.

c) ASTM

Ray, Randy and Kevin attended the November meeting. Randy mentioned that Jesse Beaver of SGH is working on a “Culvert Inspection Manual”. Jesse is looking at topics to submit for NCHRP funding. CSPI will submit a few ideas:

- Rehabilitation of inverts using half round plate
- Rerolled Ends – elimination
- Testing of Water Tight Joints in the field
- Life cycle assessment comparing plastic, concrete and steel SWM systems
- Fish Baffle Design
- Maximum deformation of pipe out of round

d) NCSPA

Ray and Randy attended the November fall meeting. Areas discussed include the following:

- a) Plant certification with ASSHTO moving forward with 6 states involved
- b) Joint tests with Queen's (round 2) will proceed using flat and simple bands, and rerolled versus non rerolled ends
- c) Polymer Coated testing to proceed with 7 types plus 5 types of bolts if Leland participates.
- d) Structural Plate calculator presentation
- e) Product comparison sheets (Storm sewer bulletins) – pass out to TAC Committee
- f) Zinc in the water – Concrete push – will pass on information to Mike
- g) PPC – hiring an intern part time to work on FB, Twitter and linked in
- h) Find a member changes
- i) Market share in the US – 15%, 200,000 tons

Bidding Alternative Drainage Systems //idms.golder.ca/adpsweb

Username: mmcgough

PW: adps2015

e) TRB

Next meeting is in January. Kevin will be a speaker at a future bridge webinar titled “Best Practices for Sustainable and Resilient Buried Bridge Structures” and will advise the date when confirmed.

f) CSA – CHBDC

At the TAC standing structures committee meeting, Mark Braiter mentioned the committee is looking at changes for durability and that there is a website link to make suggestions / changes, etc. CSPI has submitted to Mark our Technical Performance Bulletin #13. Ray will get the link from Mark and advise the committee.

Action: Ray to contact CSA and obtain update on fee / cycle structure for updating CSA G401. Contacts Ken Phu & Mark Braitor

g) AREMA

No update.

h) CSCC

The latest board meeting was held on December 7th. The new brochure “Strong Safe Affordable and Sustainable Steel” was passed around the meeting room. The information from the Sustainability committee will be very helpful in the CSPI Environmental Product Declaration project. Ray will pass along the information on sustainability to the committee for the next meeting.

6. Discussion / New Business

a) Scholarship Award

This topic was covered in the Strategic Planning session.

b) Sustainability (environmental product declaration, recycled content for CSP and structural plate, LEED points for stormwater management systems)

Action: Ray will scope out the information provided by Kamran and will present at the next TAC meeting. Kamran to present at next meeting on AMD's program.

Action: Determine amount of LEED points steel stormwater systems qualify for.

Action: TAC to work towards developing an environmental product declaration for steel.

c) Technical Issues / Bulletins

Nothing to report

d) Other

L/T Items to be tabled at a future meeting:

- Polymer coated colour other than black. Requests for gray.
- Relining culverts using half – round plate technology as introduced in Europe.
- Northern permafrost issue and suggestion that CSPI tackle this - CHBDC committee issue.
- Impact on Polymer Coated Plate from brackish / sea water.

Action: Ray to follow up with Ian on any U.V. issues if colour is changed from black.

7. Adjourn & Next Meeting

The meeting was adjourned at 3:04pm. Next meeting will be at the call of the chair.

Secretary
Ray Wilcock