

1:00 P.M. to 3:00 P.M. MT, Monday, June 17th, 2024
Rimrock Resort Hotel, Banff, AB

Committee Attendance:

Paul Proctor (Chair)	Atlantic	Mitchell Swisher (abs)	Cleveland Cliffs
Terry Dunn	Atlantic	Colin Rojahn (abs)	Cleveland Cliffs
Pat Mayne (abs)	Atlantic	Jonathon Paton	Warner
Scott MacRae	Armtec	Mike Mounts	Valgroup
Darren Bauman (abs)	Armtec	Todd Gray (abs)	ACI
Bruce Matheson	Frontier	Derek Niezen	Ironside
Jaclyn Pittman (abs)	Hubb-Cap	Chuck Skeen	MarMac
Kamran Derayeh (abs)	AMD	Richard Northcutt	MarMac
Byron Nelson (abs)	Leland	Mike McGough (abs)	NCSPA
Dave Watson	Leland	Ray Wilcock	CSPI

Members in Attendance

Marcia Stinson	AMD	Mike Wilson	Atlantic
Lucas Cooper	AMD	Jason Sherwood	Atlantic
Jason Johnston	Armtec	Matt Field	Atlantic
Sam Mitra	Armtec	Ian Kalverda	Hubb-Cap
Liz Bouchard	Armtec	Mike Green	Leland
Roger Leger	Armtec	Bev Byard	Roundel

1. Welcome and Opening Remarks

Paul opened the meeting at and welcomed everyone. Attendance was taken and is recorded above.

2. Review Minutes from April 11th, 2024, and Approve

Minutes were reviewed and a motion for approval was made by **Scott MacRae**, second by **Mike Mounts** and was carried unanimously.

3. Project List Update

1) CSA G401-24 update



CSA G401:24
National Standard of Canada



Corrugated steel pipe and buried structures

BALLOT DRAFT – NOT FOR FURTHER DISTRIBUTION /
ÉBAUCHE : TOUTE DISTRIBUTION INTERDITE



scc  ccn

- Over 100 revisions to 2014 standard
- 3 main highlights:
 - Change to product lookup versus material / fabrication lookup
 - New annex on Sustainability
 - Added Zinc Flake coated bolts & nuts
- Published on February 28th
- Errata completed in May
- 137 updates to references, clauses, tables, and figures (thanks to Scott & Terry)
- Release to members and the public by the end of June – waiting in CSA.

Discussion / Issues:

- [Find out from CSA the downloading rules for those that have already bought.](#)

- CSPI to approve members and partners for downloading CSPI paid copies. This will deter non-members looking for a free ride.

2) EPD's update

Agreement between AMD & Manufacturers

Action Items

- Post both EPD's to CSPI website
- AMD's XCarb shows a 45% reduction in carbon footprint
- NA average productions show comparable results as 2018
- Start promoting both
- Gauge feedback
- Expect transition in the marketplace to take time
- Update carbon calculator to show industry average, XCarb & RCP this summer
- Cleveland Cliff's sustainability documents – review and table at a future TAC meeting

Discussion / Issues:

None

3) MTO – OPSS for Structural Plate Package

1. Develop an OPSS on structural plate bridge package.
2. The team will consist of MTO, CSPI, Armtec (Scott) & Atlantic (Pat Mayne).
3. Meetings to start this summer once the draft is complete.
4. The idea is to figure out the initial structure of the specification which will contain material, design, and construction, complete with cookie cutter drawings, etc.
5. Will be sending MTO the outline discussed in 2019 after discussion with Scott & Pat.

4) Green Handbook

- 2 Year Project
- Member participation
- Chapter by chapter
- Scott detailed the June 5th Meeting results:
 - Reviewed the Table of Contents
 - Team will meet three times per year
 - Include sustainability and resiliency
 - Minutes pending
 - Ray to send word copy to all HB committee members
 - Target date is 1st Q in 2027.
 - Mike McGough sent a comment that the NCSPA is starting down a similar road for their design handbook. Areas for sharing will be reviewed.

5) SWM Committee discussion / execution – confirm meeting date

Members: Paul, Terry, Scott, Bruce, Kamran, Pat, (Hubb-Cap?) Darren Bauman & Doug Leitch (Armtec), Mike Mounts, Ray.

Ideas:

Look at mastic being used for watertight joints as per Francois.

Discussion:

- The calculator on the NCSIPA website is accessible to CSPI.
- Terry was able to download our CD onto the computer.
- Members have been promoting SWM at Lunch & Learns.
- Serviceability of the systems is key and should be emphasized. Ability to clean out.
- Contech did an excellent presentation on SWM – obtain their webinar if possible.
- Start holding webinars in early fall targeting municipalities and consultants.
- Roll SWM into the handbook – chapter?
- Same committee as Handbook with addition of Mike Mounts.
- [Schedule 1st meeting in July – 1 hour.](#)
- [Send committee the webinar CSPI has done before scheduled meeting.](#)
- [Possible MITACS project.](#)

4. Member / Ongoing Items update

a) AMD

[No update.](#)

b) Cleveland Cliffs

[No update.](#)

c) Valgroup – Lighter polymer laminate & galvanize

- [Josh Cmar has moved to the position of Commercial Manager.](#)

d) Leland - Bolt markings discussion

- [Dave explained the identification of HDG versus NZF.](#)
- [Presently there are no alternatives to head markings.](#)
- [There is lot traceability in paperwork.](#)
- [A question was asked if there were minimum quantity orders? Dave said no; however, transportation costs would be the issue.](#)
- [Dave showed the following slides:](#)



e) Warner

No Update.

f) Ironside – machinery update

No update.

g) ACI update

No update.

h) MarMac – Video on installation

Chuck showed a video on couple installation on non-rerolled ends.

<https://youtu.be/50GgKvzTjlc?si=ZJ4MqlqRKZLQv4Nf>

Discussion:

- Keep the coupler as clean as you can prior to peeling and wrapping.
- Sizes up to 1400mm.
- Public information.
- Covered questions on outside temperature during installation.
- Readily available.
- Promote on Linked In and use in all future presentations.
- Post video links to the website.
- Include test results conducted at Oregon State with minutes.

5. Other Associations - Updates

a) NCSPA update

- NCSPA is working on a site water chemistry map.
- CSPI will be attending their November meeting.

b) ASTM update

- CSPI to attend next meeting in November.

c) 2024 TAC Spring Meetings & September Conference

- 2 abstracts submitted / not accepted for September conference in Vancouver.
- Attend as a delegate only.

Spring Meetings (virtual):

- Apr 5th Structures Committee
- Apr 25th Climate Change Integrated Committee
- Apr 26th Environmental Legislation Committee
- May 1st Environmental Issues Committee
- May 2nd Environmental & Climate Change Council

Ideas for abstract 2025 submissions?

- Covered in the PPC meeting.

d) TRB / AREMA / AISI

TRB	No update
AREMA	No update
AISI	No update

6. Discussion / Old / New Business

a) Gorilla water tape or Flex Seal tape versus Denso Tape (Mike)

- Mike ran test on all three with comparable results after 1 million cycles.
- The weight loss was in line with polymer laminated.
- Alternatives for PL repair in CSA G401 are allowed.
- Watertight as Denso is used in the oil and gas sector.
- Update Polymer Repair Technical Bulletin with Mike.

Test results - Samples (tape applied directly to G200 galvanized steel)

- Denso Butyl 35 Tape – 25 mils thick

- Gorilla Waterproof Patch and Seal Tape – 25 mils thick
- Flex Seal Waterproof Repair Tape – 22 mils thick

Method – ASTM A926, Abrasion Drum with mixture of rocks and gravel

Weight Loss after 1 million cycles:

- Denso – 13.3 g
- Gorilla – 11.0 g
- Flex Seal – 13.3 g

No exposed steel on any of the samples at the end of the test

b) Bolt issue identified in Newfoundland and Labrador in Caplin Cove with salt seepage. This was visited in November 2023.

- Reviewed photos. Inconsistent bolts and questions as to what make.
- Dave to accompany Ray on next NL trip for site visit.

c) Alberta Transportation - Open Bottom Structures. Cookie cutter design, headwalls, cross sectional drawings, standard drawings, this number of boxes, arches, etc. Mimic concrete. Discuss pending meeting with MTO.

- Will keep AT in the loop as we move forward with MTO.

d) From SWAT Team – produce a Life Cycle Environmental Analysis (Darren to address).

- Possible EPD – Cradle to Grave for structures.
- Mitacs Project – University Student.
- Explore at next meeting.

e) Has any jurisdiction published deformation limits constituting potential failure for rehabilitation? (Asked by Sask DOT).

- Site specific.
- Review AT bulletin and respond to the committee.

f) Technical Bulletin #13, Performance Guideline for Buried Steel Structures – reference to AASHTO electrochemical tests to previous version. Requires review, discussion and update if required. (Scott to address).

- Scott to work with Ray to update TB #13 with AASHTO new tests.

New Business

g) Ian Moore from Queen's University – asked if CSPI would participate in a stormwater detention system project.

- New building “Canada Foundation for Innovation”
- Research facility to study climate change impacts.
- Research project of SWM system
- CSPI donation of the required steel components?
- Identify key research questions related to performance.
- Design the research study.
- Reached out for more interest depending upon committee interest.

Discussion:

- Reach out to Ian and obtain more details as members are interested.
- MarMac would donate couplers to the project.

h) Canadian Water Resources Association – reached out to see if CSPI would be interested in running a one-day workshop on culvert design.

- CWRA is a national registered charity.
- Members from the public, private and academic sectors
- Committed to promoting responsible, innovative, and effective water resources management.
- Formed in 1947 as the Western Canada Reclamation Association
- CWRA is the only national organization addressing all water resources issues across all regions of Canada.

Discussion:

- Reach out for more information to define scope such as walking through the handbook, structural, hydraulics?
- Possible partnering with a consultant.

i) Minimum Thickness for 1220 galvanize coating needs to be 5.0mm as 4.0mm is too thin to pick up 1220 galvanize coating thickness. This would be an industry issue not just specific to one manufacturer or supplier. (Paul)

Discussion:

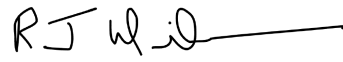
- Scott to look at and address at next meeting.

7. Adjourn & Next Meeting – September 2024, call of the Chair

The meeting was adjourned at **3:00 pm** motioned by **Jason Sherwood** and second by **Bruce Matheson** and was carried unanimously. Next meeting at the call of the Chair.



Paul Proctor
Chair



Ray Wilcock
Executive Director