

Minutes

Soils and Materials Standing Committee and Pavements Standing Committee
Room A-4670, 4th floor
École de Technologie Supérieure
1100, Notre-Dame Ouest, Montreal, Quebec
Sunday September 28 2014 09:00 – 15:00

09:00: Welcome and Introductions

Danielle Fleury

Approval of Agenda

Danielle Fleury

*A motion was made to accept the agenda by Hugh Donovan, seconded by Tom Kazmierowski.
Agenda Approved.*

Approval of Soils and Materials Standing Committee Minutes – Spring 2014 **Marta Juhasz**

A motion was made to accept the minutes by Chuck McMillan, seconded by Al Cepas. Minutes Approved.

Approval of Pavements Standing Committee Minutes – Spring 2014

Danielle Fleury

*A motion was made to accept the minutes by Tom Kazmierowski, seconded by Jean Carrier.
Minutes Approved.*

Update of Soils and Materials Committee Membership List

Ania Anthony

A list was circulated to members to update their information and add new contact information.

Update of Pavements Committee Membership List

Marta Juhasz

A list was circulated to members to update their information and add new contact information.

Update from TAC Executive Meeting

Danielle/Sherry

- Sharepoint platform is under development for TAC, and should be available sometime after the Spring meeting. It will be a place to exchange ideas, documents, and circulate information.
- More information will be available at the Spring 2015 meetings.
- TAC conference features a mobile app this year.
- Sherry discussed the TAC Publications Policy which was extensively discussed at the spring meeting 2014 in regards to the pricing of the documents, and the substantial time delays between completion and actual publication dates. TAC provided a presentation on the publication policy that is attached to the minutes. This policy is set until 2017, and any changes will not be considered until then although discussions on a new pricing policy will begin in 2016.

9:15 Council Updates

Education and Human Resources Council

David Hein/Lynn Cowe-Falls

- Engineering Ethics session during this conference is raising a lot of interest.
- Similar to 2014, next year's conference will also have specific efforts to include and encourage young people/students attendance.
- Education achievement award received only one application this year – the process is thought too onerous and Council will revise the submission process to hopefully encourage more applicants.
- Will attempt to get permission to submit student papers for the President's Medal. It is thought that sometimes student papers are as good or better as the rest of the papers.

Environmental Council

Allan Widger

- The two standing committees of Environment Council met jointly on Friday Sept 26, 2014 with 24 members in attendance. There was a discussion of the Climate Change Task Force mandate and what the role of EC and the standing committees should be when the task force mandate ends. It was generally agreed that a lot of the issues dealt with by the task force could be handled by the standing committees and there would be no need for a new standing committee. There was a concern that a new committee would create timing conflicts.
- The Migratory Bird Project will move ahead while the Climate Change Component of Environmental Assessment does not have enough support to proceed.
- A presentation and proposal by Nicholas Windfield of DFO to develop a joint project on DFO standards and guidelines was well received but there could be issues with TAC wanting to charge for the final product which typically would be made available free by DFO. Further discussion is required.
- The afternoon tour was a behind the scene tour of the Biodome.
- EC met on Saturday Sept 27, 2014 with 30+ members in attendance. The chairs report was presented by Darren Carter. There was a general discussion of the Chief Engineers decision to end projects if they did not have 75% funding after 18 months. EC will adopt a similar approach.
- Revised Council Terms of Reference were presented and approval of the proposed changes was given.
- A presentation was made on the Calgary SW Ring Road, by Oliver Laser, AMEC.
- Presentation: MTQ Training in Environmental Monitoring Carl Dufour, Ministère des Transports du Québec
- Presentation: Evolution and Performance of Provincial Light and Heavy Vehicle Fleet, Pierre-Olivier Pineau,
- HEC Montréal Update from World Roads Association Task Force, Jane Weldon, Director General
- , Surface Infrastructure Programs, Transport Canada TAC Secretariat Report, Michel Gravel, TAC Executive Director
- TAC report by Michal Gravel
- TAC 101, Sarah Wells, TAC Director, Technical Programs
- Roundtable Discussion: Emerging Issues, New Legislation, Tools and Projects Related to the Environment Council

Climate Change Task Force

Peter Dzikowski

- Goal is to have each committee incorporate climate change as part of project work.
- Looking for a representative from each committee on the Task Force.
- Sandy Brown will be the Pavements Committee representative.
- Massoud Robati will be the Soils and Materials Committee representative.
- Presentation attached to minutes.

Asset Management Task Force

Nicole Fleury

- A change in executive occurred – new vice chair – Milenka Mitrovic from Transport Canada
- A presentation on the New Brunswick Asset Management Decision Framework was made by Don Mason

- A paper/presentation session for the 2015 conference will be submitted: “Lost in Translation – Communicating Asset Management” This session will focus on merging the accounting/financial and engineering understanding of asset management.
- Discussed the suggestion made via email from the Roadside safety standing committee regarding a joint paper session. Would like to instead make an alternate proposal to have a joint panel session to explore opportunities for synergies between asset management and safety. As the network screening tools used to determine where safety improvements are required could be used as part of a multi-criteria analysis to prioritize projects determined through asset management practices by including the safety risks. A decision will likely be provided soon.
- An update on the pooled fund study project – Synthesis of Asset Management Best Practices in Canada was made. This project is proceeding well and will be completed by the 2015 fall conference.
- The Traffic Monitoring Best Practices pooled fund study project has launched. Transport Canada has just agreed to contribute to this project, so it is now 100% funded.
- New pooled fund study project proposals will be worked on between now and the spring meetings:
- Synthesis of Cross-Asset Optimization solutions, processes, software. This initiative will provide a critical evaluation, identify risks and gaps, and the road map for moving forward.
- Synthesis of Asset Management Training.
- In response to several items discussed during the agency updates, roundtable discussions will take place at the spring meeting on 3 topics: Asset management and modelling deterioration on gravel and chipseal (AST) roads; in house versus off the shelf systems for Asset Management; and Asset Valuation.

9:45 External Updates

PIARC

David Hein

- TAC is now responsible for the organization of Canadian PIARC activities with the exception of “Canada-Quebec”. PIARC permits each country 1 person on each of its technical committees. While the focus in the past has been filling all of the positions, it has change to try to find the “best fit” person to represent Canada for each individual committee.
- The next World Road Association Conference is in 2015 in Korea. As a part of this effort, Canada is producing several “National Reports”. Based on the on-going work for the Synthesis of Asset Management Best Practices in Canada, TAC is submitting a Canadian National Report on Optimizing Road Infrastructure Investments and Accountability.

ASCE

David Hein

- ASCE has a committee developing a standard for the structural and hydrological design of permeable interlocking concrete pavements (PICP). The committee has had 7 meetings to date and is expected to publish the standard in mid-2015. The next committee meeting is being held in Buffalo, NY in November. The Foundation of the Interlocking Concrete Pavement Institute as well as the California and Nevada Cement Association and members sponsored research on the structural performance of permeable interlocking concrete pavements (PICP). Test sections were construction at the University of California Davis and tested in the spring of this year using their accelerated load facility. The results of this testing will be incorporated into the ASCE standard.
- The ASCE Board of Governors has approved a proposal for a new activity to develop a standard for the design, construction and maintenance of Porous Asphalt pavements. ASCE will shortly

be soliciting for potential sponsors for the standard as well as for membership on the standards committee. This activity is expected to be completed sometime in 2017.

CUPGA / CTAA

Hugh Donovan

CUPGA will provide training session the morning of November 16 with a half day afternoon session on November 16. CTAA is November 17 to 19 2014 in Winnipeg. CUPGA is also leading contractor's workshop Tuesday afternoon which will be on End Product Specifications.

Expert Task Group

Sandy Brown

- Binder task group is working with Turner Fairbanks Lab in developing a new test for detecting engine oil bottoms in asphalt binder. EOB seems to have a considerable effect on binder rheology. Research on PPA has just be released (author is Harold Von Quintus).

PIEVC (Public Infrastructure Engineering Vulnerability Committee)

Hugh Donovan

- FULL UPDATE ATTACHED TO THE MINUTES

10:00: Status of Committee Sponsored Projects

MSE Walls

Danielle Fleury

- Project has only 50% funding so far, but waiting on ON and QC contributions, which are committed verbally.
- Still need funding, and agencies are encouraged to participate and/or increase their current level of contributions.
- There is increased urgency in getting the funding – recent changes to project management indicate that if projects do not receive 75% funding in 18 months, they will be terminated.
- Canadian Geotechnical Society is also interested in working closer with the SMSC, and perhaps they will collaborate with us on this project, by providing a reviewer on the project steering committee.
- Also, Danielle is leading the work on creating a closer relationship between the CGS and TAC, possibly through the signing of a Memorandum of Understanding. TAC is supportive of this concept.
- Hugh Donovan will also work with Roger Skirrow, and express a desire for SMSC to have a list of topics that CGS thinks may be good for SMSC to discuss.

AASHTOWare Pavement ME (US Task Force)

Marta Juhasz

- Working on a 5-year strategic plan.
- Addressing how to maintain usability of the software through changes to operating systems.
- Considering whether the software should be a web-based tool.
- Code review is ongoing by an external party.
- Software survey sent out to users this week.
- Considering additional training on the ME principles behind the design method and software. Consultant is developing a lesson plan.
- Also working on including the University of Pittsburgh work on concrete pavements into the software.

AASHTOWare Pavement ME (Users Group)

Hugh Donovan

- 32nd meeting of the user group took place this month.

- Rod Hamilton of City of Winnipeg will be the new Vice-Chair.
- Discussing further development of the Canadian user guide, agencies have contributed to the guide extensively so far.
- Fatigue cracking and rutting models are currently under review.
- Thin pavement section trials done in MB will be incorporated, and each agency will run these sections through their own climatic model.
- Ontario has their own user guide already, and the user group wants to build on this resource.
- In the meantime, Hugh will be discussing with TAC whether the Ontario guide can be stored on the TAC website somewhere, so people can find it easily and use it.
- FULL UPFATE ATTACHED TO THE MINUTES

Northern Transportation Infrastructure Subcommittee

Muhammad Idrees

- Looking at summarizing permafrost projects and creating a comprehensive list for access of information in one place.
- Had a climate change presentation – expecting 1 m rise in water levels over time.

Low Volume Roads Load Management Practice

Ania Anthony

- Project Steering Committee chair is Ania Anthony.
- Current funding is \$90,000, RFP is almost complete – aim to get it out by end of October, expected project completion Spring 2016.
- Project is to define what is a weak pavement, synthesize current practice of Canadian and other agencies of similar climates, carry out a literature review on damage of weak pavements, review economic aspects of road bans, and provide technical solutions for road ban application, management, and enforcement.
- There is still time for agencies to join in and participate.
- Funding level may be still low to accomplish the objectives, however, the project steering committee is comfortable to proceed, and will revise scope if necessary.

ACTION: Ania will re-send the project description in case other agencies want to contribute funding.

Synthesis of AM Best Practices in Canada

Nicole Fleury

- A pooled fund project is underway on the synthesis of asset management best practices in Canada.
- The scope of project is to provide practical suggestions and avoid pitfalls on AM. Some topics include what asset management tools are used and cross-asset optimization. Focus is on roads and bridges with secondary focus on transit and roadside infrastructure.
- Pooled Fund Synthesis of AM Practices due next Fall.

Canadian Roundabout Design Guide

Sherry Sullivan

- After inquiries and actions from the PSC executive, a working group has been created to include pavement design components in this guide.
- Draft document is available and out for high level review and comments.

10:45 Morning Presentations

ETS Pavements and Materials Lab and Recent Projects

Alan Carter

- Alan introduced ETS Lab, and highlighted a few current projects, including work with recycled materials and using lime for cold in place recycling.

- He also showed a pavement design method developed by ETS.
- FULL PRESENTATION ATTACHED TO THE MINUTES

PSISuite – Mechanistic Modeling

Curtis Berthelot/Rielle Haichert

- A presentation was made on a modeling tool that allows for 3D modeling of pavement response to loading.
- The software is based on fundamental mechanistic principles, and has been in development over 30 years. Dr. David Allen (formerly Texas A&M) is one of the primary developers.
- Software interface is user friendly and highly customizable, and includes a material library of common road materials and their properties needed for modeling.
- It is a tool for specialty analysis, including unique loading.
- FULL PRESENTATION ATTACHED TO THE MINUTES

11:45 – 12:30 Lunch

12:30 Afternoon Presentation

Bonded Concrete Overlay of Asphalt ME Design Procedure

Julie Vandebossche

- FULL PRESENTATION ATTACHED TO THE MINUTES

13:15 2014 Conference Sessions, Panels and Student Award Sherry Sullivan/DanielleFluery

- 3 student posters were evaluated with the award increased to \$150 this year. The winner was The winner was: **Simon Dumais**, Étudiant en génie civi, Programme de recherche ARQULUK, Université Laval
- The conference sessions were also reviewed:

<p>Posters Sessions: Pavements <i>A New Generation’s Perspective: Pavements of the Future</i> - 1 poster <i>Design, Construction and Maintenance of Permeable Pavements</i> - 3 posters <i>Green Technologies – Innovation to Implementation and Evaluation</i> – 2 posters</p> <p>Pavements and Asset Management <i>Serviceability Approach to Asset Management</i> – 3 posters</p> <p>SMSC <i>Characterization of Soils and Pavement Materials for Mechanistic Empirical Pavement Design</i> - 2 posters <i>Emergency Repair and Reconstruction of Transportation Infrastructure</i> – 2 posters</p>	<p>Poster sessions will be held in Hall 220D, Level 2, PDC, from Sunday, September 28 to Tuesday, September 30. Authors will be onsite to answer questions on Monday, September 29 from 11:00 to 12:00 and/or Tuesday, September 30 from 08:00 to 12:00</p>
Monday, September 29 (13:45 - 17:00)	Session Chair
Room 513C, 5th Floor, PDC <i>Serviceability Approach to Asset Management</i> (joint with ATF)	Jean Carrier (Pavements)
Tuesday, September 30 (08:30-12:00)	
Room 513A, 5th Floor, PDC <i>Characterization of Soils and Pavement Materials for Mechanistic Empirical Pavement Design</i>	Danielle Fleury (SMSC)
Room 518A, 5th Floor, PDC <i>Experience with Pavement ME Design (A)</i>	Hugh Donovan (Pavements)
Room 513D, 5th Floor, PDC <i>Green Technologies – Innovation to Implementation and Evaluation (A)</i>	Tom Kazmierowski (Pavements)
Tuesday, September 30 (13:45-17:00)	
Room 518A, 5th Floor, PDC <i>Experience with Pavement ME Design(B)</i>	Marta Juhasz

	(Pavements)
Room 513D, 5th Floor, PDC <i>Green Technologies – Innovation to Implementation and Evaluation (B)</i>	Amir Abd El Halim (Pavements)
Wednesday, October 1 Panel Discussion (08:30 -12:00)	
Room 516D, 5th Floor, PDC <i>Canadian Experience, Performance and Best Practices with respect to P3 Roadway Projects</i>	Stella Madsen (SMSC&Pavements)
Wednesday, October 1 (13:45 -17:15)	
Room 513B, 5th Floor, PDC <i>Design, Construction and Maintenance of Permeable Pavements</i>	Sherry Sullivan (Pavements)
Room 519A, 5th Floor, PDC <i>Emergency Repair and Reconstruction of Transportation Infrastructure</i>	Daryl Nixon (SMSC)

13:30 Brainstorming for 2015 Conference Sessions

ALL

- The theme is Getting you there Safely
- It was agreed that topics broader in scope tended to be better
- The sessions proposed were as follows:
 - Pavements
 - New Developments in ME Pavement Design
 - Safety considerations in pavements
 - Sustainable Pavements in Practice
 - Pavement preservation workshop (to approach Maintenance and Construction) – Gabe Cimini to be lead
 - Green Technologies (see below under SMSC)
 - Advances in the Data Collection and Usage for Pavement Management Systems (Joint session with Asset Management)
 - SMSC
 - Advancements in Stabilization and Reinforcement of Soils and Unbound Granular Layers
 - Climate Change Considerations for Geotechnical and Pavement Materials Engineering
 - Innovation in Pavement Materials and Surfacing Technology
 - Green Technology in Pavement and Materials Engineering (joint with PavSC)

14:00 Brainstorming for 2015 Spring Meetings

ALL

- SMSC ideas: microspheres (presentation); roundtable on culverts repairs
- SMSC and PavSC executives agreed to work on agenda items

14:10 Past and Future Conferences

ALL

- CTAA 2014 Nov 16 – 19 Winnipeg
- TRB Jan 11 – 15 20145
- TAC Spring meetings April 15 – 22
- 9th International Conference on Managing Pavements, Alexandria Virginia May 17 – 23
- TAC 2015 in Charlottetown Sept 27 - 30

14:20 Other Business

ALL

- Allen Bradley agree to be the PavSC representative for the Active Transportation Committee
- Both PavSC and SMSC acknowledged Danielle Fleury's work as retiring chair of SMSC.
- Dr. Hassan Baj was elected new secretary of SMSC

The meeting adjourned at 14:30 and was followed by an ETS laboratory tour