

**TRANSPORTATION ASSOCIATION OF CANADA
STRUCTURES STANDING COMMITTEE**

**Fall 2010
MINUTES OF MEETING**

Location: Rooms 202/203, World Trade and Convention Centre (WTCC), Halifax, NS

Date: Sept. 26, 2010

Present:

Robert VanGinkel	Chair	Tetra Tech
Brian Wood	Vice-Chair	Stantec Consulting Ltd. - Winnipeg
Darrell Evans	Secretary	PEI Dept. of Transportation & Infrastructure Renewal
Howard Yea	Past Chair	Saskatchewan Ministry of Highways and Infrastructure
Shane Finlay		Armtec
Dino Bagnariol		Ontario Ministry of Transportation
Ted Brumfitt		IBI Group
Jianping Jiang		MMM Group Limited - Vancouver
Karyn Ferguson		CSA
Virendra (Vinni) Sahni		PWGSC
David Penny		Corrugated Steel Pipe Institute (CSPI)
John Fussel		Associated Engineering Group Ltd.
Michael Paulsen		Associated Engineering Group Ltd.
Bob Ramsay		AECOM
Raymond Yu		Alberta Transportation
Stewart Neslon		Concrete USL
Craig MacFarlane		City of Calgary
Chris Haines		Dillion Consulting Limited - London
Eric Loewen		AECOM
Brad Neirinck		City of Winnipeg
Zoubir Lounis		NRC-IRC
Doug McMahon		Manitoba Infrastructure and Transportation
Andy Horosko		Beau-Bay Consulting Ltd.
Ruth Eden		Manitoba Infrastructure and Transportation
Robert Sharpe		New Brunswick Dept. of Transportation
Jadwiga Kroman		City of Calgary
Gérard DesGagné		Ministère des Transports du Quebec
Dale Gaston		Atlantic Industries Ltd.
Randy MacDonald		Armtec
Phil Carroll		Armtec
Colin Dickson		Cement Association of Canada
Al-Amin Abdullah		Yukon Dept. of Highways and Public Works
Zichau Wu		AECOM
Jay Reiger		Transport Canada
Vidyadhar Limaye		MacDonnell Group Consulting Limited
Ralston MacDonnell		MacDonnell Group Consulting Limited
Shiraz Kanji		City of Edmonton
Will Darracott		Composites Innovation Centre

Distribution: All above
TAC Secretariat
All Committee Members

Recorded By: Darrell Evans

<i>ITEM</i>	<i>DESCRIPTION</i>	<i>ACTION</i>
	meetings. <ul style="list-style-type: none">○ Repair of ACM's - ISIS is working on a repair guideline for distribution; however, actual repair methods in the field will be site specific. ISIS is not producing a formal repair document.○ Low Volume Roads - Dino has the survey results and will tabulate them and distribute the results at the next TAC meeting.	
2010F-4	Committee Membership Changes/Contact List.	Chair
	<ul style="list-style-type: none">● The SSC will be changing executive in October 2010. The executive will be as follows:<ul style="list-style-type: none">○ Past Chair - Robert VanGinkel○ Chair - Brian Wood○ Vice-Chair - Darrell Evans (replacing Kevin Baskin)○ Secretary - To be determined● Ruth Eden was nominated by Brad Neirinck for Secretary position. Seconded by Doug McMahon.	
2010F-4	TAC Presentation	AB
	<ul style="list-style-type: none">● TAC Report to Standing Committee of the Chief Engineer's Council<ul style="list-style-type: none">○ Presented by Asim Baluch.○ Overview of the Board of Directors Vision for TAC.○ CEC reviewing technical, environmental and administrative priorities.○ Reviewing the future of infrastructure after recent investments.○ There are 22 projects ongoing through the various councils and standing committees.○ The TAC website has been recently enhanced. Council and Committee Members Handbook are available on the website.○ Next Meetings:<ul style="list-style-type: none">- Spring TAC - Ottawa, April 14th to 20th, 2011- TAC Annual Conference - Edmonton, Sept. 11th to 14th, 2011○ Asim Baluch advised that he had accepted a position elsewhere and would be leaving the TAC Secretariat. The executive thanked Asim for his years of dedication to the Standing Committee and wished him all the best on his future endeavours.○ A copy of Asim's presentation is appended to these minutes.	
2010F-6	Presentation	DB

<i>ITEM</i>	<i>DESCRIPTION</i>	<i>ACTION</i>
	<ul style="list-style-type: none">● Recent MTO Bridge Audit Presentation<ul style="list-style-type: none">○ Dino Bagnariol gave a brief 15 minute presentation on a recent Audit that MTO's bridge section recently experienced.○ In short, eight areas of recommendations were given, these are as follows:<ul style="list-style-type: none">- Bridge Safety- Bridge Inspection Data- Accessing Bridges for Inspections- Inspection Oversights- Bridge Maintenance- Bridge Management System- Procurement and Contract Management- Municipal Bridges○ A copy of Dino's presentation is appended to these minutes.	
2010F-7	Presentation	PC
	<ul style="list-style-type: none">● Draft CSPI Buried Structures Guidelines<ul style="list-style-type: none">○ Phil Carroll from Armttec gave a brief, 10 minute presentation of CSPI's Draft Buried Structures Guidelines to the standing committee and solicited comments from jurisdictions.○ A copy of Phil's presentation is appended to these minutes.	
2010F-8	Update on work on CHBDC	DE/HY
	<ul style="list-style-type: none">● Darrell Evans and Howard Yea gave an update on the up coming revisions and editions to the CHBDC.<ul style="list-style-type: none">○ Aluminum Section to be released by 2011○ Seismic updates and revisions to be released by 2012 or 2013.○ The next edition of the Code is scheduled to be released by 2014.<ul style="list-style-type: none">- Included will be the next generation of barrier indices, moving from the PL index to the TL index.- An update to the Foundations Section to include MSE and SRW walls.	
2010F-9	Guide to Bridge Traffic Barriers - Comments from Sub-Committee	JK/SK
	<ul style="list-style-type: none">● Jadwiga Kroman advised that the Guide is complete and is available for purchase through TAC.● The Guide was delivered on schedule and on budget, thanks to the MMM Group.● Received numerous favourable comments on the guide an its content.● Reviewing the possibility of a training module.	

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	<ul style="list-style-type: none">○ Preliminary plan in place for training module.○ MMM to conduct training session across the Country. They are preparing a preliminary training plan on how training might proceed.○ The projection of costs per participant is \$450 - \$500 pp; however, TAC will set the final dollar value for participants.○ The training is envisioned to be a full day session with insight on the materials and not a recital of the guide.○ Current projections are based on approximately 20 participants per session.○ Select cities across the nation, includes Vancouver, Calgary, Edmonton, Toronto, Hamilton, Ottawa, Montreal and Charlottetown.○ The committee agreed that this was a very positive manner in which to proceed.	
	<ul style="list-style-type: none">● It was moved by Virendra (Vinni) Sahni to have TAC proceed with the training module as prepared by the MMM Group. Seconded by John Fussel. Motion Carried.	
	Bridge Hydraulic Guide - Training Status Report	KF
	<ul style="list-style-type: none">● Karyn Ferguson from CSA provided a brief 10 minute presentation on the up coming training module on TAC's Guide to Bridge Hydraulics.<ul style="list-style-type: none">○ Guide to Bridge Hydraulics produced by TAC SSC in2006.○ CSA presented Bridge Hydraulic Training Course. Pilot course given in Edmonton this past July with positive results.○ Next step is to launch the course across Canada.○ Cost is roughly \$450 pp.● Karyn's presentation is attached to these minutes.	
2010F-11	Training Needs	Chair
	<ul style="list-style-type: none">● No further training needs were discussed beyond those for the Bridge Barrier Guide and the Guide for Bridge Hydraulics.	
2010F-12	Presentation n Climate Change Task Force	ZL
	<ul style="list-style-type: none">● Zoubir Lounis gave a 10 minute presentation on the Climate Change Task Force mandate and how the group is proceeding. A copy of the presentation is appended to these minutes.● After the presentation, a Survey Questionnaire was circulated to the membership who were asked to select the top two concerns on climate change related to dealing with bridge design/construction.● Chris Haines enquired on the deliverable the Task Force will present the	

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	committees with. It is unclear what that may be.	
	<ul style="list-style-type: none">● General discussion related to design parameters for climatic events varies from jurisdiction-to-jurisdiction.	
2010F-13	Bridge Sustainability Project - Terms of Reference	Chair
	<ul style="list-style-type: none">● A break out group was formed at the Spring TAC Technical Committee Meetings for Sustainability and from this a working group was formed (Zoubir Lounis, Reed Ellis, Chris Haines and Jadwiga Kroman).● This group looked at two programs:<ul style="list-style-type: none">○ Green Roads at University of Washington.<ul style="list-style-type: none">- Publishing a document in the future.- Bridges aren't explicitly mentioned; however, they are not excluded.○ Green Light - NYSDOT<ul style="list-style-type: none">- Twelve mention of bridges.<ul style="list-style-type: none">■ Aesthetics.■ Materials and costs.■ Pedestrian access.● There is a challenge in developing a framework for documentation of sustainability of bridges.● It was agreed by the Working Group that a document would be useful.● ACI Document 130 - 'Sustainability of Concrete'.● NRC-NRTSI - 'Framework for Sustainable Core Public Infrastructure'● Review of European Policies.● After an open discussion, it was agreed by the committee that we need to define sustainability as it relates to bridge infrastructure and that a good interest was formed for this project.● A Task Force Sub-Committee was created to work in conjunction with the Working Group, these are:<ul style="list-style-type: none">○ Shiraz Kanji, Gérard DesGagné, Darrell Evans and Will Darracott.● The Task Force will need to bring a proposal for a White Paper to TAC's Spring Technical meetings in Ottawa in 2011.	
2010F-13a	Canterbury , NZ - Sept. 4, 2010 Earthquake	MP
	<ul style="list-style-type: none">● Michael Paulsen from Associated Engineering gave a presentation on the Sept. 4, 2010 earthquake which occurred in Canterbury, New Zealand, for general interest to the Committee.● A copy of Michael's presentation is attached to the minutes.	
2010F-14	Metokaolin and Fly Ash	JK

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	<ul style="list-style-type: none">● Jadwiga indicated that an ACI report has identified that Fly Ash is NOT considered to be a 'Hazardous Material' by USEPA.● Fly Ash contains 1ppb Mercury where the USEPA threshold is 200 ppm.● The use of metokaolin is still in the early testing stages; however, it appears that the concrete with metokaolin is performing similar to concrete with fly ash.● Gérard DesGagné advised that MTQ are allowing the use of metokaolin SCM in the use of pre-cast pipes and wall as the initial set-up time is more rapid than concrete with silica fume SCM.● There is an issue with consistency of results, depending on the type of fly ash used in the testing.● Howard Yea indicated that Sask. Highways have used it on e one bridge deck to date. Results to follow.	
2010F-14a	TAC Structures Standing Committee Secretary	Chair
	<ul style="list-style-type: none">● It was moved by Shiraz Kanji that Ruth Eden become the new Secretary for the TAC Structures Standing Committee Executive and was seconded by Jadwiga Kroman. The motion carried. Congratulations Ruth!	
2010F-15	Round Table Discussion	All
	<ul style="list-style-type: none">● Shiraz Kanji enquired on what the acceptable maximum longitudinal grade is on a bridge deck.<ul style="list-style-type: none">○ DE Noted that TAC's Geometric Design Guide limits this to 6 or 8%, depending on surrounding terrain.● SK also enquired on deign loads for bridges.<ul style="list-style-type: none">○ AT and City of Edmonton use CL-800 and 2 other permitted load configurations. City of Winnipeg use CL-625. Sask Highways use CL-750 plus other loads as required.● Dale Gaston enquired if the jurisdictions have a system in place similar to the US states, where, if a product is approved in one state, it is approved in all states by default.<ul style="list-style-type: none">○ The consensus around the table was that this system is not in place and all jurisdictions approve products on an individual basis.● There was some general discussion on MSE walls using steel versus synthetic anchorages.<ul style="list-style-type: none">○ Raymond Yu stated that AT limits their wall heights to 8 metres, regardless of anchorage used.○ RY also noted that the FHWA recently published a manual on MSE walls in 2009. RY to provide a link for the document.	

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	<ul style="list-style-type: none">● Will Darracott enquired on which jurisdictions are using ACM's in bridge construction or rehabilitation.<ul style="list-style-type: none">○ MTQ have some GFRP internal reinforcement in their bridge decks.○ MIT have used GFRP in decks and barrier walls.○ NBDOT have one design on the shelf ready for construction.○ PETIR have 10 steel free bridge decks with GFRP internal reinforcement.○ City of Edmonton has used ACM's in bridge construction.○ City of Winnipeg has used ACM's in repairs.○ City of Calgary has used some GFRP's in bridge decks.○ MIT advised that GFRP reinforced deck slabs do not distribute the loads in a similar fashion to steel reinforced bridge decks.● Brian Wood enquired on a detail in Quebec where the ends of the concrete girders are 500 mm from the front face of the breast wall.<ul style="list-style-type: none">○ Gérard DesGagné advised that this is a standard detail in MTQ to allow for future inspections of the breast wall and expansion joint above.● Shiraz Kanji advised that they have just completed paving a SPS bridge deck. The deck was fabricated in Rotterdam and they experienced no issues with the installation or the SPS system itself. The quality control was very good. The deck replaced an existing deck on an existing thru-truss bridge.● Darrell Evans advised that Bridgeline 2010 Conference will be held in Ottawa on November 18th to the 19th, 2010.<ul style="list-style-type: none">○ Ralston MacDonnell noted that the conference will focus on management and technology for bridge owners with a slant towards monitoring, management and maintenance systems.○ Will be held at the Ottawa Marriott and includes about 50 presentations and 25 exhibitors.○ More information can be found on their website at www.bridgeline2010.ca.○ SSC will endorse the conference to the Chief Engineers Council based on the technical merit of the program.● Brian Wood addressed the issue of having two technical sessions and the poster session.<ul style="list-style-type: none">○ There was a consensus to have either three presentation sessions or two sessions. The poster session should be removed from the program.○ The SSC executive will bring this matter forward to the CEC.○ Call for papers for TAC 2011 is online on TAC's website.	

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	<ul style="list-style-type: none">• The results of the impromptu sustainability questionnaire were submitted to Zoubir Lounis.• MIT noted that Sundance fly ash source has been creating problems in the concrete mix, specifically with air entrainment, being high and highly variable.• Shiraz Kanji invited all of the SSC members to attend next year's TAC Annual Conference from Sept. 11 to 14th, 2011 in Edmonton, AB.	

The Structures Standing Committee Fall meeting was adjourned at 5:00 pm, ADT.

Next TAC SSC Meeting: Ottawa on Saturday, April 16th, 2011.

These Minutes are the writer's best interpretation of the discussions held during the meeting. Please inform the writer if there are any noteworthy errors or omissions.