

TAC Launches New Website and Bookstore

At the beginning of December, TAC launched a new website and bookstore – both of which will provide easier access to information about TAC for visitors, particularly TAC members, customers and other transportation/roadways sector professionals and future professionals.

The new website will better show TAC’s activities through a dynamic home page, an updated design, easier navigation, social sharing features and more.

Key changes include:

- TAC News, after this winter 2013 issue, will transition to a blog format on the website. This means that articles will be released in a more timely fashion, and new articles will be featured on the website home page. Members will be sent a monthly email highlighting the different articles released during that period.
- Articles recently entered into TAC’s library catalogue are shown in an RSS feed on the home page.

- Links in the footer make it easy for visitors to go to TAC’s Facebook and LinkedIn pages, as another source of information and sharing.
- Banner ads are now integrated through the site. Stay tuned for the banner ad rate card in the coming months, once we make this valuable space available to promote related organizations, products/ services or events.

Linked to the website is a new TAC Bookstore, now offering e-book versions of many TAC publications. The new Bookstore continues to offer 200+ titles in English and French, with preferred pricing for TAC members. Free resources and tools, including reports, primers, briefings and conference proceedings, are also listed and available through the Bookstore.

Visit the new website and Bookstore at www.tac-atc.ca. If you have any comments or concerns (there will undoubtedly be some glitches and broken links in the early days following the launch), please share them with Erica Andersen, eandersen@tac-atc.ca or 613-736-1350 x235.



2014 TAC Conference and Exhibition

Transportation: Past – Present – Future

September 28-October 1st
Montreal, Quebec

The 2014 Call for Submissions has been launched. Interested authors must submit their abstracts online by Tuesday, December 31. All submission restrictions and information are noted in the Call for Submission Prospectus now available in the conference section of TAC’s website.

Hotels and travel information will be posted in the New Year.

Join us in Montreal as we celebrate 100 years as an association at the Palais des congrès!



In This Issue

Special Road Safety Awards Created for TAC’s Centennial
 Chief Engineers’ Council Initiates New TAC Projects
 2014 Seminar Program to Include New and Returning Topics

TAC Launches Project about Public Transit Services Guidelines
 New Guidelines Adopted for Pedestrian Walking Speeds
 Employment Connections Added to TAC Foundation Scholarship Program

Chief Engineers' Council Initiates New TAC Projects

Two new projects, endorsed by TAC's Chief Engineers' Council, are currently being developed.

Organizations interested in making a financial contribution and participating on the oversight steering committee should contact the TAC Secretariat.

Application Guidelines for Speed Reader Board Devices

Dynamic speed display signs are being used in many jurisdictions across Canada. The devices display the speed of passing vehicles, typically along with a sign showing the posted speed limit. Intended to increase driver awareness of speed limits and to provide instant feedback to motorists by displaying the actual speed being travelled, the devices have been found to be effective shortly following installation. However some devices used in the field present excessive distraction potential and may not achieve their intended goal. The design, application and use of speed reader boards are not covered by any current TAC guideline.

TAC's Traffic Operations and Management Standing Committee proposed this project that will review devices currently available on the market and survey agencies regarding existing practices or related guidelines about speed reader devices. Building on this research, the ultimate objective will be to establish best practices and to develop guidelines for speed reader device design and application.

Design, Construction and Inspection Guidelines for Mechanically Stabilized Earth Walls

Mechanically stabilized earth (MSE) walls have been installed in Canada over the past decades. There is growing concern among owners regarding ultimate responsibility for structural and geotechnical design, material considerations, inspection during construction, asset management and repairs. There is currently no Code authority in Canada which addresses these concerns and owners rely heavily on international resources for guidance.

The objective of this project, jointly proposed by TAC's Structures and Soils and Material Standing Committees, will be to collaborate with owners, designers and industry partners to develop a synthesis of guidelines in the selection of backfill materials, requirements for

geotechnical investigation and design, structural design, construction inspection, overall asset management and in-service repair procedures. Lines of responsibility for fabrication, installation, geotechnical and drainage considerations, long term performance targets and life cycle costs will also be identified.

A review of existing codes, MSE wall design manuals, guides, and best practices, as well as surveys will be conducted to determine pertinent issues and to develop a synthesis of best and worst practices with relevant illustrations.

The major deliverable for this project will be a synthesis of best practices along with some guidance from geotechnical and structural design experts and the industry. Further development of a national MSE wall design and construction guide may follow. 

TAC Invites Authors to Submit at 2014 TAC Conference

The Transportation Association of Canada (TAC) is soliciting abstracts for its 2014 Conference technical program, which will include technical and poster sessions, panel discussions and workshops.

TAC opted to broaden its submission process to include a Call for papers (papers with presentations), presentations (presentations without papers) and posters. Some sessions will be restricted to paper submissions only, while others will have the flexibility to choose between submitting a full paper and/or a full presentation for review.

Authors must submit their abstract online by December 31, 2013. Submission criteria (papers and presentations will require a maximum of 400 words; posters a minimum of 1,000 words), restrictions and deadlines can be found in the TAC Conference section of the website at www.tac-atc.ca.

Marking 100 years for TAC as an association, the theme of the 2014 TAC Conference & Exhibition is *Past – Present – Future*. This special event is expected to yield between 1,200-1,400 delegates.

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TAC is a national, not-for-profit association with a mission to promote the provision of safe, secure, efficient, effective and environmentally and financially sustainable transportation services in support of Canada's social and economic goals.

The Association is a neutral forum for gathering or exchanging ideas, information and knowledge on technical guidelines and best practices.

In Canada as a whole, TAC has a primary focus on roadways and their strategic linkages and inter-relationships with other components of the transportation system.

In urban areas, TAC's primary focus is on the movement of people, goods and services and its relationship with land use patterns.

Building Climate Change Knowledge through Collaboration

The Transportation of Canada (TAC) Climate Change Task Force (CCTF) is collaborating with two TAC entities to develop panel sessions for the upcoming 2014 TAC Conference in Montreal.

Organized in conjunction with the Asset Management Task Force, the first panel will review existing tools and techniques for assessing climate change risks to transportation assets. Speakers will share experiences using these tools including data requirements and technical expertise needed for downscaling climate model predictions and how to use existing management tools for adapting infrastructure to a changing climate.

The second panel, developed jointly with the Chief Engineers' Council, will present ways to reduce greenhouse gas emissions (GHG) during construction and maintenance. Invited speakers will share experiences about estimation methods for GHG emissions and data collection on fuel use. Tools and techniques for monitoring GHG during construction and maintenance will also be featured.

Ongoing Collaborative Effort with TAC Entities

This ongoing collaborative effort with TAC entities is a major part of the CCTF's mandate. The CCTF acts as a catalyst to work with members and TAC entities to help understand the technologies and processes to

address the two key aspects of climate change – mitigation and adaptation. The 2014 panel discussions have been structured to address these two important topics. The CCTF is also helping project steering committees include climate change as a contributing element in their projects and initiatives where appropriate.

In addition, the technical programming of the 2014 Conference will focus on activities in the Province of Quebec. Themes may include current and future challenges in adapting to the impacts of climate change; guidelines for addressing challenges of municipalities; the vulnerability of Quebec's infrastructure and impacts on road networks; the extent of severe weather events; fast tracking the move to electric-powered transportation systems and reducing GHG emissions and improving energy efficiency of freight transportation.

A poster session focusing on results of various research projects on the impacts of climate change will also be featured. The subject matter, which will highlight elements from Quebec's 2006-2012 Climate Change Action Plan, is intended for researchers, students and stakeholders concerned with climate change adaptation issues.

The preliminary program for the upcoming 2014 TAC Conference & Exhibition will be posted on TAC's website in the coming months. 

Special Road Safety Awards Created for TAC's Centennial

The Transportation Association of Canada (TAC) has created special road safety awards to celebrate major progress in the field of road safety over the past 100 years in Canada.

Nominations, reflecting distinct avenues of contributions, are currently being sought for:

- TAC Academic Research Centennial Road Safety Award
- TAC Private Sector Centennial Road Safety Award
- TAC Public Sector Centennial Road Safety Award
- TAC Outstanding Career Centennial Road Safety Award

Detailed information on the awards can be found online in the About Us section of www.tac-atc.ca.

A representative of any TAC member may make a nomination by submitting a one-page nomination abstract by email to Katarina Cvetkovic by **January 27, 2014**. Abstracts will be reviewed by an Evaluation Panel selected by TAC's Road Safety Standing Committee. Authors of accepted abstracts will be contacted by **February 18** and invited to send full submissions to TAC prior to **15:00 EST on March 18**.

Final results will be communicated to nominees at the end of June 2014. Awards will be presented during the 2014 TAC Conference and Exhibition in Montreal, September 28-October 1st.

Questions regarding these awards and the submission process may be directed to Katarina Cvetkovic at kcvetkovic@tac-atc.ca or 613-736-1350 ext. 227 at the TAC Secretariat. 



Local Ambassadors Contribute to TAC 2013 Conference and Exhibition

More than 80 local ambassadors representing Manitoba Infrastructure and Transportation and other transportation-related agencies welcomed over 780 delegates at the 2013 TAC Conference & Exhibition.

Highlights included:

- 92 transportation-related booths at the TAC Exhibition - The 2013 W.H. Yeates Award for Best Exhibit was presented to **Gibraltar Cable Barrier Systems** for best use of space, excellent customer service and a diversified suite of products.
- Unique technical tours - Architectural landmarks including the Manitoba Legislative Building, and technical infrastructure projects such as the Red River Floodway and CentrePort Canada Way, the new 10km expressway currently under construction, which will provide access to Canada's first inland port.
- Technical excellence awards – Recognizing the importance of member technical excellence in Educational Achievement (**AQTr** and **MTQ**); Environmental Achievement (**MTQ**), Sustainable Urban Transportation (**Metrolinx and partners**) and Road Safety Engineering (**MTQ**).
- 'Hockey Night in Winnipeg' - Delegates and companions sported their favourite team colours at the Local Showcase with musical performances by local artists Ça Claque; the Asham Stompers and the Dust Rhinos.

- New TAC President - Alberta Transportation Deputy Minister Rob Penny presented outgoing president Doug McNeil with a TAC Honorary Life Membership before addressing the crowd as the new TAC President.
- Canadian Transportation Awards - The Award of Academic Merit was presented to **Professor Guy Doré**, Pavement Engineering, Université Laval, while **Goran Nikolic**, Head of Traffic Planning, Central Region, Ontario Ministry of Transportation, received the Award of Achievement.
- Thought-provoking technical program - Sessions and panels on road safety, pavements, bridges and geometric design were among the most popular; subject matter experts gave interesting presentations and interaction between attendees and presenters was dynamic.

Forty-four separate partner organizations generously stepped up to the plate to support the event as either partners or advertisers – a testament to the value of this major annual conference to the Canadian transportation and roadways sectors.

The 2013 conference papers as well as videos and photos of various events can be viewed in the 2013 Recap at [i i i žac-atc.ca](http://i.i.i.żac-atc.ca). 



Various musical performances were featured at the Local Showcase.



Quebec Minister of Transport, the Honourable Sylvain Gaudreault, introduces a video on Montreal, TAC 2014's conference destination.

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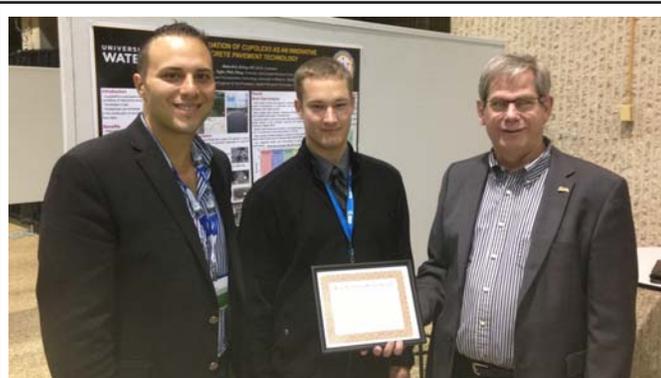
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Le ministère des Transports du Québec won the 2013 Environmental Achievement Award. From left to right, Yves Bédard, Biologist; Jean-François Saulnier, Director and Francis Gauvin, Engineer Project Manager.



The 2013 Sustainable Urban Transportation Award went to Metrolink and partners (Past TAC President Doug McNeil and Jennifer Lay, Program Advisor for School Travel, Metrolinx)



Pavement Poster Chair Chuck McMillan (right), and Stantec Consulting's Amir Abd El Halim (left) present Aleks Kivi (centre) with the 2013 Student Pavement Poster Session for *Field Evaluation of Cupolex® as an Innovative Concrete Pavement Technology*.



The 2013 W.H. Yeates Best Exhibit Award went to Gibraltar Cable Barriers Systems.



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2014 Seminar Program to Include New and Returning Topics

A variety of TAC seminars are now being planned for 2014. Many of the events are expected to sell out so interested individuals are encouraged to register early via TAC Online.

Accommodating Cycling Facilities will be presented in Victoria, Edmonton and Toronto in February and March 2014.

First offered in 2012, this popular one-day seminar provides participants with information about the development and selection of bikeway signs and markings and the application of other techniques to accommodate cyclists on roads.

The seminar covers current and potential future trends in various cycling facilities and traffic control techniques used in urban and rural areas including shared lane concepts, cycle tracks, and bike signals. Topics include safety, human factors, traffic operations, corridor and intersections (including roundabouts) and facility selection. Participants will gain knowledge about the latest trends, understand the importance of cycling and learn how to accommodate the mode in new and retrofit scenarios.

Mike Skene, Mitchell Jacobsen and Dan Casey of Boulevard Transportation Group Ltd., which authored TAC's latest edition of *Bikeway Traffic Control Guidelines for Canada*, will facilitate learning through lectures, case studies and hands-on application exercises.

New Seminars Launching in 2014

A seminar based on TAC's forthcoming *Pavement Asset Design and Management Guide* will be presented in cities across Canada beginning

in 2014. It will provide up-to-date information about Canadian pavement design, engineering and management practices and introduce participants to new elements in the latest edition of this important publication. Instructors will include the principal investigator for the project that developed the Guide, Dr. Susan Tighe (University of Waterloo) and the TAC Steering Committee Chair, Marta Juhasz (Alberta Transportation).

Also new in 2014, a seminar based on TAC's just-released *Roadway Lighting Efficiency and Power Reduction Guide* will provide information about lighting roadways while reducing power consumption and cost. It is intended for city administrators, designers, consultants, and suppliers, who assess, evaluate, select, and deploy energy efficient roadway lighting.

Don McLean, President at DMD and Associates Ltd. and the Guide's lead author, will deliver the seminar in Ottawa on Monday, April 14 in conjunction with TAC's 2014 Spring Technical Meetings.

TAC is pleased to partner with l'Association québécoise des transports (AQTr), in the delivery of seminars in French based on TAC's *National Guide to Erosion and Sediment Control on Roadway Projects*. Events are being scheduled at various venues across the province of Quebec.

For additional information about the seminars, including specific dates and locations, visit TAC's website or contact the Secretariat at seminars@tac-atc.ca or (613) 736-1350 ext. 221. 

TAC Launches Project about Public Transit Services Guidelines

TAC has launched a new project to develop guidelines to help communities design and implement public transit services. A steering committee is being formed and detailed terms of reference are being prepared. Proposals from consultants interested in being considered for the work will be invited early in 2014.

Recommended by the Transportation Planning and Research Standing Committee of TAC's Urban Transportation Council, the guidelines will help municipalities prepare and implement a transit service development plan, as well as land use strategies to encourage the use of those services.

Population growth in municipalities and a recognized need for more sustainable transportation systems have sparked renewed interest in public transit services in Canadian communities. A community contemplating introducing new or expanded public transit must assess the range of possible service options and select an appropriate approach for its existing and future land use patterns.

Not only must the approach consider the municipality's financial capacity, it must also meet the access and mobility needs of its residents.

Current approaches and best practices in the design and delivery of public transit services for different contexts and sizes of communities will be reviewed as part of the new project. The range of transit service operation models and appropriate applications to meet the full range of mobility needs of the community will be identified. Existing guidelines for estimating capital and operating costs for typical approaches and service levels, including potential sources of capital and operating funding, will be examined.

Funding partners are **Manitoba Infrastructure and Transportation**, the **Ontario Ministry of Transportation**, le **ministère des Transports du Québec**, **Transport Canada**, the **Halifax Regional Municipality** and the **cities of Calgary and Saskatoon**.

2013 Canadian Transportation Awards Presented at TAC Conference

The Honourable Steve Ashton, Manitoba Minister of Infrastructure and Transportation, and TAC President Rob Penny, Deputy Minister, Alberta Transportation, presented two Canadian Transportation Awards at the closing event of TAC's 2013 Conference in Winnipeg.

The Canadian Transportation Awards Program (CTAP) recognizes leadership, excellence and achievement in all modes and segments of the transport sector. An independent panel of judges with multi-modal representation selected the award recipients after reviewing nominations from across Canada.

Dr. Guy Doré, Professor of Civil Engineering at Laval University, received the Award of Academic Merit, while **Goran Nikolic**, Head, Traffic Planning, Central Region, Ministry of Transportation of Ontario (MTO), received the Award of Achievement.

The Award of Academic Merit recognizes a long-term contribution to the advancement of the academic field and to the development of tomorrow's transportation leaders.

Before embarking on a teaching career, Dr. Doré fulfilled several roles at the ministère des Transports du Québec, including Acting Service Chief at the pavement engineering laboratory. He helped TAC develop the Canadian Strategic Highway Research Program and has been instrumental in assisting the US National Research Council create the American program. Guy currently teaches various road pavement courses at Laval University and remains active in pavement response and performance in cold climates research, as well as permafrost engineering. He also manages the ARQULUK Research Program on permafrost engineering applied to transportation infrastructure.

In the summer of 1997, Guy couldn't pass up the opportunity of applying for a teaching position at Laval University and accepted the challenge with great enthusiasm.

"The position consisted in the development of training courses and a research program in road engineering. The huge challenge that represents the repair of provincial and municipal road networks and the amounts invested by the government for the rehabilitation and renewal

of infrastructure is a key motivator for students. The challenge is to keep them interested in pavements, which may be less attractive compared to other infrastructure such as bridges and structures. When students realize the complexity of interactions in a pavement structure and the consequences linked to a poor design or management, many of them opt for this industry specialization."



Guy Doré received the Award of Academic Merit

When asked how we can help attract more students to the transportation industry, Dr. Doré explained that there are two major contributing factors.

"I think that the availability of lucrative jobs and opportunities for advancement can help attract students," notes Guy. "The good news is that these factors currently exist in our industry. The bad news is that students are unaware because they aren't really exposed to the transportation sector during their graduate studies. Presentations given by industry practitioners in conjunction with courses or extracurricular

(continued on pg. 8)

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(continued from pg. 7)

activities, grants to increase the participation of students to transportation conferences, scholarships at the undergraduate level, and employment of trainees by organizations susceptible to attract younger people will help increase the numbers.”



Goran Nikolic received the Award of Achievement

Goran Nikolic received the Award of Achievement for having achieved, through innovation and initiative on a particular project or program, positive and measurable improvements of significant and enduring benefit to transportation.

Over the past decade, Mr. Nikolic has made a significant contribution to the state-of-the-art in transportation engineering by orchestrating efforts with respect to the introduction, development, promotion and support of traffic simulation technology in Ontario.

“Traffic simulation represents a major step forward in the representation and evaluation of traffic conditions,” explains Goran. “My work resulted in the development of a ground-breaking simulation framework (integrating macro, meso, and micro simulation) to provide much-improved decision support with respect to MTO projects and programs.”

The *Traffic Technology International Journal* (April/May, 2012 issue) acknowledged MTO’s international leadership with respect to the development and application of traffic simulation.

“Traffic simulation became an integral requirement for relevant MTO assignments,” notes Goran. “As a result, knowledge dissemination and widespread application of traffic simulation among Ontario’s transportation consultants are a common occurrence.”

Goran has leveraged this technology development and promotional effort, within his day-to-day role heading the most influential traffic engineering agency in Canada, to achieve significant cost savings for MTO and Ontario’s taxpayers, as well as reduced traffic pain for motorists through analytical support for innovative traffic management strategies related to rehabilitation of the Province’s highways and bridges.

He exerted leadership in emergency evacuation management (at the Darlington and Pickering nuclear facilities), planning and implementation of managed lanes and roundabouts, and highway work-zone management.

“We cannot overestimate the importance of continuing to enhance user-stimulated commercially available traffic simulation software,” concludes Goran. “It remains a vital factor in the development of this industry.”

NEW MEMBERS

TAC is pleased to welcome the following new members:

CentrePort Canada Inc.

Winnipeg, MB
John Spacek, Vice-President, Planning & Development

C.F. Crozier & Associates

Collingwood, ON
Alexander Fleming

CPCS

Ottawa, ON
Mark Booth

Cruickshank Construction Limited

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Steve Cruickshank

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Improving Safety on Quebec Municipal Roadways

There are over 1,100 local municipalities in Quebec, and more than half of the injury crashes occur on the municipal road network. Municipal authorities therefore play an important role in improving the overall road safety record.

To support the municipalities in their actions, the first report of the *Table québécoise de la sécurité routière* (TQSR), published in July 2007, proposed three recommendations relating to municipal partnerships: share knowledge and road safety intervention tools with municipalities; design consultation mechanisms tailored to local or regional realities and establish financial assistance for road safety actions led by municipalities.

These recommendations have resulted in a broad range of undertakings, including a number of documents covering many aspects of road safety delivered to elected officers, managers and technical staff of municipalities and engineering firms.

Consultation Mechanisms

The second recommendation launched two separate partnership-building pilot projects to develop a road safety diagnosis followed by an action plan. The first project, conducted from January 2010 to August 2011, encompassed seven municipalities of the Municipalité régionale du comté (MRC) de Roussillon, a mostly urban and suburban area located just outside of Metropolitan Montréal. The second pilot project, initiated in April 2012, was conducted in the Arthabaska MRC, located in the Centre-du-Québec region which encompasses 23 predominantly rural municipalities.

The first pilot project developed an innovative diagnosis methodology, along with a partnership strategy and an organisational structure suited to the study area's characteristics. It also provided many insights and learning opportunities, notably in regards to data collection methods, data quality and availability, project organization and skills requirements, and what is needed to establish and sustain partnerships that will extend into the action plan implementation phase. The purpose of the second pilot project is to validate the results of the first and to test the feasibility of adapting and applying the methodology and the partnership-development process in a more rural environment.

Financial Assistance

As stated in the TQSR Report recommendations, the limited resources available to certain municipalities do not always allow them to set ambitious road safety objectives and undertake extensive road safety initiatives, as the cost of these initiatives can be prohibitive. That was the basis for the recommendation to provide financial assistance to municipalities for road safety measures.

A number of existing programs managed by the Ministère des Affaires municipales, des régions et de l'occupation du territoire or the Ministère des Transports du Québec (MTQ) already provide financial assistance to municipalities to improve the road network under their jurisdictions.

In addition, the Gouvernement du Québec 2012-2013 budget included several measures to support the municipalities, including a special fund to the MRCs to plan the work needs on the municipal road network. This led to the launch, in September 2012, of the Plan d'intervention de

sécurité routière en milieu municipal (PISRMM - Municipal Road Safety Intervention Plan), which provides support to municipal agencies in planning high-efficiency local road network improvement projects specifically aimed at enhancing road safety in their territory.

The PISRMM is targeted to MRCs, agglomerations or municipalities with MRC powers, as well as cities with a population over 100,000. The program provides up to 100% financing for road safety diagnosis and road safety action plans for the municipal road network. These actions plans may include specific measures relating to roadway infrastructure improvements, raising awareness and education, law enforcement and regulation. A collaborative approach is an essential step of each and every PISRMM.

Several agencies are already taking full advantage of the financing available through the program. By working in combination with other existing assistance programs, municipalities will acquire the knowledge and tools they need to foster cooperation among key stakeholders in developing highly effective road safety improvement initiatives in their territory.

All of the road safety information Quebec municipalities may need has been brought together in the MTQ Website under the Partenaires – Municipalités – Sécurité routière heading. 

MEMBERSHIP HAPPENINGS

The Canadian cement and concrete industry announced the formation of the **Concrete Council of Canada**, a new organization of national and provincial associations from cement and concrete manufacturers across Canada, including the **Cement Association of Canada**. The Council's mission is to advance the industry's leadership in sustainable construction and promote the social, environmental and economic value of concrete, its products and systems in Canada.

The **Transportation Research Board (TRB)** presented the 2013 Roy W. Crum Distinguished Service Award to **Dr. Ralph Haas**, Norman W. McLeod Engineering Professor and Distinguished Professor Emeritus, Civil Engineering, University of Waterloo. Dr. Haas is being recognized for making wide-ranging research contributions in the areas of pavement engineering and management and in civil infrastructure during the past five decades.

Delcan's Downtown Moves study, which identified ways to create vibrant, inclusive and accessible streets for residents and visitors across Ottawa's central business district, received an Award of Merit from the International Downtown Association and an Award of Merit from the **City of Ottawa** as part of its Urban Design Awards Program. The aim of this study is to leverage the transformative opportunity presented by the City's investment in the Confederation Line Light Rail Transit, which is now under construction.

2013-2014 TAC BOARD OF DIRECTORS

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CORPORATE SECRETARY

Michel Gravel, TAC Executive Director

Information Modeling for Transportation



Image courtesy of Creighton Manning

Intelligent Models from Design to Build

Reconstructing a major intersection to decrease traffic congestion, improve access, and enhance safety takes more than a civil engineering design package. Just ask Creighton Manning Engineering, LLP. This 2012 *Be Inspired* Award-winning firm selected Bentley's innovative information modeling software to design this entire project in 3D. It created information models for intelligent, better-performing transportation infrastructure that reduced production time and lowered project costs by providing accurate data for automated grading during construction.

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Updates Approved for Pedestrian Signal Head Warrant

TAC's *Traffic Signal Warrant Handbook* is being updated to address pedestrian signal heads. Resulting from a project completed under the auspices of the Traffic Operations and Management Standing Committee, the update presents a methodology which will enable practitioners to evaluate the need for pedestrian signal heads at a traffic signal.

To be re-released as the *Traffic Signal and Pedestrian Signal Head Warrant Handbook* with an accompanying calculation tool, users will be able to quantify whether pedestrian signal heads are warranted at an already-signalized intersection. Operational notes are also provided about whether the warrant was not met due to minimum pedestrian activity, whether there is insufficient side street green time for safe pedestrian crossings or whether pedestrian signals should be considered as a result of complex signal operations.

The warrant model, based on a pedestrian-vehicle cross product conflict method, was developed following a review of existing international warrant practices, policies, by-laws and municipal initiatives for pedestrian signal warrants. An extensive jurisdictional survey on current pedestrian signal warrant practices was also completed. AECOM carried out the work for this project.

The handbook identifies the input data required for the warrant analysis and describes how each of the warrant components is calculated. A number of case studies are presented to help practitioners understand the application of the matrix warrant methodology and the sensitivity of each component within the methodology.

To reflect the updates to the warrant procedure, additions will be made to an upcoming new edition of the *Manual of Uniform Traffic Control Devices for Canada* in Part B, Division 2 about installation guidelines for traffic control signals.

Project funding partners included **Transport Canada, Alberta Transportation, Manitoba Infrastructure and Transportation, Nova Scotia Transportation and Infrastructure Renewal, the Ontario Ministry of Transportation, le ministère des Transports du Québec, Halifax Regional Municipality, the Regional Municipality of Waterloo and the cities of Burlington, Calgary, Edmonton, Hamilton, Montreal, Ottawa, Saskatoon, Toronto, Vancouver and Winnipeg.**

New Guidelines Adopted for Pedestrian Walking Speeds

A study about pedestrian walking speeds at signalized intersections has been completed and will result in revisions to the *Manual of Uniform Traffic Control Devices for Canada*.

It has been common practice to use 1.2 m/s as the assumed walking speed for signal timing purposes, unless there are large volumes of older pedestrians present at a particular intersection. The recent study, completed under the auspices of the Traffic Operations and Management Standing Committee, recommends the use of a range of walking speeds between 0.8 and 1.0 m/s for traffic signal timing in the Canadian environment. The selection of the most appropriate walking speed within this range should be based on the percentage of older pedestrians at the site, as well as the percentage of pedestrians who use mobility assistive devices.

The study, conducted by MORR Transportation Consulting, found that using a walking speed design value of 1.2 m/s excludes approximately one-third of older pedestrians and about 90 percent of pedestrians who use assistive devices such as walkers or canes. The study report is available through the TAC Library.

Walking is a vital activity which provides several benefits including improved health, reduced emissions, and an increase in the overall quality of life. In the provision of a sustainable, equitable, and safe transportation system, it is important to explicitly consider the needs of system users.

The funding partners for this project were **Transport Canada, Alberta Transportation, Manitoba Infrastructure and Transportation, Nova Scotia Transportation and Infrastructure Renewal, the Ontario Ministry of Transportation, le ministère des Transports du Québec, Halifax Regional Municipality, the Regional Municipality of Waterloo and the cities of Burlington, Calgary, Edmonton, Hamilton, Montreal, Ottawa, Saskatoon, Toronto, Vancouver and Winnipeg.**

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'Employment Connections' Added to TAC Foundation Scholarship Program

The Transportation Association of Canada (TAC) Foundation launched its Scholarship Program as a way to support and encourage bright, young college and university (undergraduate and graduate) students pursuing studies and a career in transportation.

Full details and application forms for the 2014 TAC Foundation Scholarship Program are available online in the TAC Foundation section of www.tac-atc.ca. **The deadline for applications is February 17, 2014.**

A new and exciting feature has been added to the 2014 TAC Foundation Scholarship program. **Employment Connections** will provide a way for the Foundation's major donors to connect with top scholarship applicants (recipients and finalists) about future employment opportunities in their organization.

Late in the application review process, top scholarship applicants will have the option to submit information, along with their resumé, about their future employment interests. Each fall after the TAC Foundation



scholarships have been awarded, this employment interests information will be compiled and shared with donor organizations supporting named scholarships, for their consideration as potential new talent.

Donations from organizations interested in supporting the TAC Foundation, through either a named scholarship or a donation to the general programs fund, are still being accepted for 2014!

TAC Foundation scholarships now BOTH support education in transportation-related disciplines AND connect transportation and roadways sector employers with the best and brightest young professionals entering the field.

To learn more, contact TAC Foundation Executive Director, Brian Henderson, at brianhenderson@rogers.com or 416-225-6744.

If you would like to work with the TAC Foundation to help achieve its vision of educating tomorrow's transportation leaders, contact foundation@tac-atc.ca. 

Organizations Invited to Complete Research and Development Survey

Organizations are invited to complete the Research and Development survey form as TAC conducts its annual inventory of research projects in surface transportation in Canada.

Contribution to this survey is particularly important as results are used to increase the exchange of knowledge between experts in the field of road and rail transportation. The information compiled in this survey is distributed in electronic format to the Organisation for Economic Co-operation & Development and where it becomes part of the International Transport Research Documentation database, as well as the Transportation Research Board (TRB) and its Research in Progress (RIP) database.

The Canadian portion of this international database, available on TAC's website, contains summaries of over 2000 research projects from more than 120 Canadian transportation research organizations, including Transport Canada, the National Research Council, provincial and territorial transportation agencies, universities, associations, municipalities, private firms and other research agencies.

The survey form can be accessed in the Library section of TAC's website at www.tac-atc.ca or by contacting TAC's Transportation Information Service at tis@tac-atc.ca.

PEOPLE IN THE NEWS

Nithi Govindasamy has been appointed Deputy Minister of Highways and Infrastructure for the Province of Saskatchewan, and **Jennifer Ehrmantraut** has been named Associate Deputy Minister.

Previously at Saskatchewan Highways and Infrastructure, **Ted Stobbs** is now working at EBA, A Tetra Tech Company. **Ron Gerbrandt**, Acting Assistant Deputy Minister for Regional Services, will replace him as interim Chief Engineer until further notice.

The **Honourable George Kuksuk** has been appointed Minister of Transportation, Department of Economic Development and Transportation at the Government of Nunavut. **Pauloosie Suvega** has replaced **Methusalah Kunuk** as Associate Deputy Minister.

Carl Kuhnke has accepted the position of Managing Director of the Saskatchewan Centre of Excellence for Transportation and Infrastructure (SCETI).

Thameur M. Souissi is replacing **Robert Kahle** as Chief Engineer and Consultant at the Ville de Montréal, Direction des transports.

Taso Koutroulakis has been named Manager, Traffic and Right-of-Way Services, of the Halifax Regional Municipality.

Bruce Richet has joined CIMA+ as Vice President, Business Development for Saskatchewan.

COMING EVENTS ~ 2014

93rd Annual Meeting of the Transportation Research Board

January 12-16
Washington, DC
Tel. (202) 334-2934
<http://www.trb.org/AnnualMeeting2014/annualmeeting2014.aspx>

International Winter Road Congress – World Road Association (PIARC)

February 4-7
Andorra la Vella
<http://www.aipcrandorra2014.org/?lang=en>

Sustainable Communities Conference and Trade Show

February 11-13
Charlottetown, Prince Edward Island
Tel. (613) 241-5221
<http://www.fcm.ca/home/events/>

13th International Conference on Traffic and Transportation Engineering

February 25-26
Tehran, Iran
<http://ictte.ir/en/>

Annual Conference of the Canadian Construction Association

March 8-14
Panama City, Panama
Tel. (613) 236-9455
<http://www.cca-acc.com/en/events/annual-conference>

Technical Conference and Exhibit of the Institute of Transportation Engineers

March 9-12
Miami Beach, Florida
Tel. (202) 785-0060
<http://www.ite.org/meetings/index.asp>

49th Annual Conference - Association québécoise des transports (AQTr)

March 31-April 2
Quebec City, Quebec
Tel. (418) 948-8850
<http://www.aqtr.qc.ca/index.php/fr/component/flexicontent/item/397>

TAC Spring Technical Meetings

April 9-15
Ottawa, ON
Tel. (613) 736-1350
www.tac-atc.ca

CCMTA Annual Meeting

May 25-28
Toronto, Ontario
Tel. (613) 736-1003
<http://ccmta.ca/en/component/ohanah/2014-ccmta-annual-meeting>

Annual Conference of the Canadian Society for Civil Engineers

May 28-31
Halifax, Nova Scotia
Tel. (514) 933-2634
<http://www.csce.ca/>

Annual Conference /Trade Show of the Federation of Canadian Municipalities

May 30-June 2
Niagara Falls, Ontario
Tel. (613) 241-5221
<http://www.fcm.ca/home/events/>

Annual Conference of the Canadian Transportation Research Forum

June 1-4
Windsor, Ontario
Tel. (519) 421-9701
www.ctrf.ca/

Annual Conference of the Intelligent Transportation Systems Society of Canada

June 1-4
Victoria, British Columbia
Tel. (905) 471-2970
<http://www.itscanada.ca/events/index.html>

Annual Conference of the Canadian Institute of Planners

July 9-12
Fredericton, NB
Tel. (613) 237-7526
<http://peoplematter2014.ca/>

TAC Fall Meetings

September 26-28
Montreal, QC
Tel. (613) 736-1350
www.tac-atc.ca

TAC Conference & Exhibition

September 28 to October 1st
Montreal, QC
Tel. (613) 736-1350
www.tac-atc.ca



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A Moment in Time – Historical Milestones in Transportation

A Moment in Time features historical anecdotes and images showcasing milestones in Canadian transportation, in preparation for TAC's 2014 centennial in Montreal.

TAC is developing a transportation showcase on the role of transportation in the development of Canada and its communities.

This historical exhibition of the past, present and future of transportation in Canada will have both online and in-person components; the physical event will be held at the 2014 TAC Conference & Exhibition in Montreal, and the virtual exhibition will feature extended archives and exclusive online content.

The showcase will use the TransCanada Highway as a focal point for the exhibit content. As viewers travel along the TransCanada Highway, they will learn about various transportation challenges and issues, as well as highlights and key transportation features of provinces and cities. The route will end with glimpses into the future of transportation including electric buses and bikes, and driverless cars. These artifacts will resonate with the delegates and the general public about the challenges to be faced in the coming decades.

Specific transportation issues will also be highlighted, such as road safety, urban/alternative transportation, sustainable transportation, and more. These topics represent excellent opportunities for potential partner organizations and their work to be featured in the showcase.

We thank members and contributing organizations for their loan/donation of historical images and archival footage which will be featured in the transportation showcase and other *Transportation 2014* key initiatives including the e-book, website and the production of video vignettes.



Photo: Montreal Tramway, 1914. Source: City of Montreal



Photo: Bleury Street, Montreal, 1912. Source: TAC

As part of the *Transportation 2014* campaign, TAC is producing a commemorative e-book, which will highlight past, present and future achievements in Canadian transportation. *Transportation in Canada: Transforming the Fabric of our Land*, will contain 13 chapters, submitted by various content experts in the transportation and roads related sectors, which will be released periodically throughout 2014. The preface of the e-book is included in the following pages.



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ACKNOWLEDGMENTS

The development of *Transportation in Canada: Transforming the fabric of our land* was guided by a group of dedicated individuals representing a cross-section of members of the Transportation Association of Canada (TAC). TAC gratefully acknowledges them and their agencies for their contributions to this project.

Geoffrey Noxon (Editor)
Noxon Associates Limited

Luc Couture
MMM Group Limited

Lynne Cowe Falls
University of Calgary

Jeannette Montufar
University of Manitoba

Kumar Ranjan
Regional Municipality of Niagara

Transportation in Canada could not have been produced without the support of *Transportation 2014's* major funding partners.

Please reference the full list of partners at the end of this title.

Montréal 



TRANSPORTATION IN CANADA

TRANSFORMING THE FABRIC OF OUR LAND



PREFACE



Ucal-Henri Dandurand, CGRA's first President.
(Courtesy: Centre d'histoire de Montréal, fonds Dandurand)

In 2014, the Transportation Association of Canada (TAC) is celebrating its centennial, an exciting milestone. Not bad for an organization born in 1914 from the efforts of 302 enthusiastic motorists—pioneers who realized that the automobile would profoundly change transportation, and that Canada needed better roads to accompany this revolution.

To mark its 100th birthday, TAC launched Transportation 2014, a celebration of the past, present and future of Canadian transportation. TAC's evolution is tightly linked to Canada's transportation history, from dirt roads to ultramodern highways and multimodal transportation systems. It's been quite a trip!

Even as the association grew and evolved over the last century, it continued to promote the provision of efficient, effective and safe transportation services to support Canada's economic and social development. TAC remains committed to being a neutral forum for transportation professionals to exchange ideas, information and research in line with its motto "*Connecting Knowledge and People*".

The association's contribution to Canadian transportation over 100 years has been nothing short of outstanding. TAC was a leading voice behind construction of the Trans-Canada Highway, a key step in building our nation. It helped Canada's streets and highways become among the safest in the world by facilitating the development of national standards and practices, and by encouraging harmonized regulations. Over the years, TAC has gained respect and influence through its research, development of best practices, and knowledge transfer activities such as courses and seminars.

TAC has long emphasized the need to support students interested in transportation, and has played a pivotal role in educating Canada's future transportation leaders. For over 60 years, talented Canadian students have benefited from scholarships provided by TAC and, more recently, the TAC Foundation. As Canada's transportation landscape has shifted over the past century, TAC has changed with the times. The association's mandate was broadened throughout the 1970s and 1980s to include all modes of transportation. Then, in the early 2000s, TAC returned to its core focus of roads and associated infrastructure, as well as urban transportation. More recently, it has adapted to tackle emerging issues such as environmental sustainability, climate change and the needs of small municipalities.

TAC's experience over the past century has laid the foundation for its vision:

"Canada will be a world leader in transportation knowledge, for the benefit of our people, our economy and our environment. TAC



Bleury Street – 1912



THIRTIETH ANNUAL CONVENTION CANADIAN AUTO ASSOCIATION



1926 conference delegates

will be recognized as a leader in creating the technical expertise and exchange of information required to build and maintain this position."

With the efforts of TAC's members and volunteers, this vision is sure to become a reality in the not-too-distant future!

Happy Centennial!
Michel Gravel
TAC Executive Director



1914 Program

A LOOK BACK THROUGH TIME

In May 1914, the first International Good Roads Congress held in Canada took place in Montreal. It gave birth to the national good roads movement and the incorporation of the Canadian Good Roads Association (CGRA) in 1917. That organization was renamed the Roads and Transportation Association of Canada (RTAC) in 1970, which in turn became the Transportation Association of Canada (TAC) in 1990. TAC has previously marked two major milestones. In 1964, CGRA celebrated its golden jubilee with an equipment and construction symposium in Toronto, followed by an annual meeting in Montreal to coincide with the 50th anniversary of Quebec's Highways Department. In 1974, RTAC celebrated its diamond anniversary by holding a one-day symposium in Montreal during National Transportation Week with the Quebec Ministry of Transport, which was celebrating its 60th anniversary. This was followed by RTAC's annual meeting in Toronto, which kicked off with an International Day.



TRANSPORTATION IN CANADA

TRANSFORMING THE FABRIC OF OUR LAND



PARTNERSHIP

Thank you to the funding partners of the Transportation Association of Canada (TAC)'s Transportation 2014 campaign, for their support during the association's centennial anniversary.

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