

## Upcoming Guide to Bridge Traffic and Combination Barriers

TAC's new *Guide to Bridge Traffic and Combination Barriers* will be published in the coming months.


The guide was developed to synthesize and help unify Canadian bridge barrier design practices. This was achieved by providing information and discussing issues relating to current practices in Canada, as well as by summarizing available resources, research and design guidance accepted by major North American agencies and jurisdictions.

The content of the publication is consistent with the requirements of the *Canadian Highway Bridge Design Code*, which is the principal design code specification for bridge barriers in Canada.

Divided into eight chapters, the publication specifically focuses on barrier performance levels, conceptual design guidance for new traffic barriers, combination barriers and multi-modal protection, bridge barrier end treatments, as well as evaluation and upgrade of existing systems.

The publication is intended to serve as a comprehensive summary rather than a design specification guide. No crash testing was conducted for the project and all findings are based solely on a literature review and

interviews with expert researchers and representatives of the major Canadian jurisdictions.

Initiated by TAC's Structures Standing Committee, the project was conducted by **MMM Group Limited** under the direction of a steering committee. The guide is expected to be released this summer. 



## Proposed Pilot Study to Address Climate Change and Road Safety

Sponsors are now being sought for a TAC pilot project on micro-mapping climate change and identifying which road collision types could be affected by climate change and where the collisions would take place in the future.

The project was recommended by TAC's Road Safety Standing Committee, following the work of the Climate Change Task Force to raise awareness about the need to address climate change issues in all TAC council and committee work.

Impacts of climate change on the frequency and severity of collisions need to be understood in order to identify areas where the safety committee's future initiatives could have an influence on this phenomenon.

A key objective of the pilot project will be to establish a good understanding of the problem in the current context through a detailed literature review and rigorous statistical analysis of collision data from six urban areas for the most recent 10 to 25 years. The data will be combined with **Environment Canada's** climatological records from major observing stations.

The areas to be studied include the Golden Horseshoe area in Ontario, Greater Montreal and as yet undetermined cities.

It is important to study a long time period in order to guarantee a robust analysis. In a climate change impact analysis, it is also critical to

distinguish between natural climate variability and climate change signals.

A second key objective of the pilot project will be to consider the expected problem in the context of future climate conditions, that is, for the periods 2011-2040 and 2041-2070.

The final deliverable will be a detailed report describing the research and findings for application by agencies considering their preparedness for weather-related safety conditions now and in the future. This will form

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the foundation for possible further work documenting treatments and mitigation measures to be considered in preventing the negative impacts of climate change on road safety.

More information about the project, including information that would likely be included in the report, is available on TAC's website, under sponsored projects in development.

If your organization is interested in funding this project, contact Sarah Wells at the TAC secretariat. 

## Canadian Transportation Awards Program

### *Nominate the Transportation Industry's Best Players!*

The Canadian Transportation Awards Program is intended to **recognize leadership, excellence and achievement in all modes and segments of the transport sector**. If you know someone who has made an outstanding contribution to transportation in Canada, this is your opportunity to ensure that this individual is considered for the industry's most prestigious awards!

Nominations are solicited for the following four award categories in 2010:

- ◆ **Transportation Person of the Year;**
- ◆ **Award of Excellence (up to two awards);**
- ◆ **Award of Achievement (up to two awards); and**
- ◆ **Award of Academic Merit (up to two awards).**

Supported by Transport Canada, the Canadian Transportation Awards Program is administered by TAC. For more information on the program and to submit a nomination, **visit TAC's website at [www.tac-atc.ca](http://www.tac-atc.ca)**. **Nominations for the 2010 awards must be received online no later than May 14.**

Canada's Minister of Transport, Infrastructure and Communities or the Minister's alternate will confer the awards during the closing banquet of TAC's 2010 Annual Conference and Exhibition to be held in Halifax, September 26-29.

## 2010 TAC Annual Conference and Exhibition

### *Adjusting to New Realities*

**September 26-29**  
**Halifax, Nova Scotia**



Photo: Destination Halifax / W. Hayes

**DELEGATES** – Early registration information will be posted on the web. Check out TAC's site in late April.

**EXHIBITORS** – To book your exhibit space, visit the association's website in early April.

**SPONSORS** – For sponsorship opportunities, consult the material already posted on the website.

**[www.tac-atc.ca](http://www.tac-atc.ca)**

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*TAC is a national 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.*

## TAC's Spring Meetings Just around the Corner

Preparations for TAC's Spring 2010 Technical Meetings are proceeding apace. Scheduled for April 8-12, the meetings will be held at the downtown Ottawa Crowne Plaza Hotel.

Almost all of TAC's councils and committees will convene in Ottawa. Aside from individual meetings, an all-participant event is also planned for Saturday, April 10. It will include very brief introductory remarks by TAC's president, followed by a reception.

The spring technical meetings are the association's second largest annual event and offer excellent technical information exchange and networking opportunities. The majority of the meetings are also open to TAC members in general. No registration fees apply.

Two other TAC events will be held in conjunction with the spring 2010 technical meetings. The first is a luncheon jointly organized by the association and the National Capital Section of the Canadian Institute of

Transportation Engineers. It will feature a presentation on the bus rapid transit – Rapibus – project undertaken by the City of Gatineau, Quebec. The second event is a seminar that will serve as an introduction to TAC's upcoming *Guide to Practices for Median Design*. As well, the association's Board of Directors will meet on April 12.

Anyone interested in attending the spring meetings or related events should visit TAC's website for further information, including a meeting schedule and a seminar registration form.

A TAC publication clearance sale is also scheduled to take place during the spring meetings. It will run from April 8 to 10 (see enclosed flyer for more information).

The **Cement Association of Canada** and **Ourston Roundabouts Canada** are sponsoring the April meetings. 

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## Transit Lane Conspicuity Guidelines Coming Soon

TAC will soon be releasing guidelines to enhance transit lane conspicuity through surface treatment.

The new guidelines were developed using four key principles. These were the use of strict conditions for implementation instead of widespread implementation, a focus on restricted areas versus conflicting areas, partial and full-length application, as well as compatibility with other transit lane design elements.



Photo: City of Ottawa

Transit lanes can operate effectively only if motorists comply with the transit lane designation. Although transit lanes are always identified by pavement markings and signage, some motorists end up travelling in bus lanes inadvertently or on purpose.

There are, however, cost-effective approaches to enhance visibility and increase transit lane compliance. These methods include the application of colour, raising transit lanes relative to adjacent mixed flow lanes, the application of different surface materials, texture or pattern, and the use of pavement text.

The new TAC guidelines recommend that red should be used for the coloured surface treatment of transit lanes because of the traditional association between the colour red and prohibition. The intended message of the red lane to motorists is: "Do Not Use This Lane."

Coloured surface treatment does not substitute any of the currently required pavement markings or signage. Road agencies designing transit lanes should follow existing guidelines or standards for transit lane markings and signage. The coloured surface treatment is an additional and optional tool to increase the conspicuity of transit lanes.

During the preparation of the guidelines, comprehensive research on surface treatments of transit lanes was conducted in North America, Europe, the Middle East, Australia and New Zealand.

Initially proposed by TAC's Traffic Operations and Management Standing Committee, the assignment was conducted by **HDR | iTRANS** under the supervision of a project steering committee.

A notice will be posted on TAC's website when the new publication is made available in the spring.

A background document entitled "Transit Lane Conspicuity through Surface Treatments: Knowledge Base" can now be consulted online via the TAC library.

## Changes at TAC's Helm

John Law will be stepping down as president of TAC after having recently assumed a new position with the Saskatchewan government.

Mr. Law was named president and CEO of the Global Transportation Hub Authority. He has been succeeded by Rob Penny in his previous position of deputy highways and infrastructure minister for Saskatchewan.

First elected president of TAC in September 2008, Mr. Law was re-elected for a second one-year term at the association's October 2009 annual conference. Among his many contributions to TAC, he has overseen the development and implementation of the organization's current three-year business plan, which was launched in April of last year.

TAC vice-president Bob Smart, deputy minister of transportation and works for Newfoundland and Labrador, is slated to assume the presidency of the association following the Board of Directors' next meeting in mid-April.



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Movement in Urban Environments

## Historical Climate Data No Longer Good Enough for Transportation Infrastructure

*Editor's Note: In this contribution to TAC News, Peter Dzikowski, senior policy advisor for environmental issues at Alberta Transportation, writes about how the implications of a changing climate are creating a need to look carefully at the use of climate data for transportation infrastructure construction and maintenance. Published on behalf of TAC's Climate Change Task Force, this feature is one in a series of articles to profile climate change initiatives. TAC member organizations are encouraged to contact the newsletter editor with a view to submitting articles or briefs highlighting their own projects in this area.*

Talking about weather and climate is a national pastime in Canada. For many TAC members, however, weather and climate are more than a curiosity or a topic of casual conversation, and have serious implications for the safety of the travelling public and for the cost of designing, building and maintaining the country's transportation infrastructure.

This article is based on a review of climate data needs for the transportation sector, an activity carried out by the TAC's Climate Change Task Force to help association members better understand how climate change might affect the sector. TAC members have noted that changes in regional climates are already impacting the transportation industry.

**“ The changing climate has the potential to impact the safety and longevity of existing transportation structures... ”**

The transportation system has been designed and built to provide decades of service and withstand the impacts of climate extremes and day-to-day weather far into the future. Climate data has always been and will continue to be an important part of the design process for Canadian roads and other transportation system components.

The transportation industry uses the data and analysis products from Canada's climate observation network in design processes and in setting national transportation design standards that support public safety.



Photo: Dale Bray, University of New Brunswick

TAC members have raised concerns about declines in the number of long-term climate stations and in snowfall measurements. They have also noted that statistics on short-duration rainfall intensities are not available from the National Climate Archives of Canada until years after they have been recorded.

Gaps in the climate data record and declining numbers of long-term stations may compromise the ability to track changes in regional climates.



Photo: Peter Dzikowski

The current infrastructure has been designed using climatic design values calculated from historical climate data. The assumption was that the average and extreme conditions of the recent past were the best estimate of conditions expected to occur over the future lifespan of structures.

However, that assumption is no longer valid given the changing composition of greenhouse gases in the atmosphere and the effect this has on the global climate. The growing awareness of the implications of climate change has introduced a new element of uncertainty and has led to concerns that recent past climate data and its use may not be adequate.

The changing climate has the potential to impact the safety and longevity of existing transportation structures, to regionally accelerate premature weathering of structures and to necessitate revisions to climatic design criteria for codes and standards. A changing climate will require developing new approaches for the use of climate data for design, engineering, maintenance and operations.

Canada now faces the dual challenge of how to acquire and apply the most recent climate data available and also how to adjust it in the expectation that the country's climate will be different in the future.

TAC's Climate Change Task Force is working to ensure that the climate design values used in standards are regularly updated to reflect the most recent data available and a potentially changing climate. For example, the CSA's Canadian Highway Bridge Design Standard (CAN-CSA-S6-06 CSA Standard) contains climatic design information dating from the 1960s. The goal is to provide transportation professionals with not only the most recent data but also information on how a future climate might differ from historical data.

(cont'd on p. 6)

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In addition to mitigating climate change and reducing greenhouse gas emissions, TAC's task force realizes that adaptation solutions need to be developed and implemented in many regions of Canada and that the North has its own unique adaptation needs.

There is a need to find new tools and approaches, such as using results obtained from global climate models and trend analysis, to better understand the climate risks that inform infrastructure-related decision processes. The transportation sector also needs scientific expertise to support its potential application of results generated by the latest climate change models.

In the end, all those working in the field of climate change have a role to play in dealing with the infrastructure issues that Canada must confront. 



Photo: Peter Dzikowski

## Major Donors Renew Multi-year Commitments to TAC Foundation


The 2010-11 TAC Foundation funding program is well underway.

**EBA Engineering Consultants Ltd.** and **MMM Group Limited** have renewed their multi-year commitments as major donors starting in 2010, in addition to those who have previously committed. As well, **LEA Consulting Ltd.** has recently joined the major donor list to help support the next generation of transportation professionals.

Thanks to the generous support of these donors and others, the TAC Foundation continues to address the issue of shortages of skilled

personnel in the transportation industry and to foster the education and development of transportation professionals.

The TAC Foundation, a registered charitable organization, was established by the association in 2003 to support and encourage a sustainable transportation sector.

There are a variety of direct donation and planned giving opportunities to support the Foundation. For additional information on its activities or to become a donor or volunteer, contact the Foundation at [foundation@tac-atc.ca](mailto:foundation@tac-atc.ca). 



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## Roadway Median Design Practices Guide to Be Released

TAC will soon publish a comprehensive guide to the design of medians for urban and rural roadways in Canada.

As well, a special one-day seminar providing an introduction to the guide will be held in Ottawa, on April 12, in conjunction with the association's Spring Technical Meetings (consult TAC website for more information).



On higher speed arterial roadways or highways, opposing traffic is usually separated by a centre median. This applies to both urban and rural road cross-sections but has more significant implications in urban areas where pedestrians at controlled and uncontrolled crossings often use medians as a refuge halfway across an arterial road or highway.

Adjacent landowners are increasingly concerned by the effects medians might have on their business and property values. Efficient design of a median therefore needs to address not only vehicular safety and efficiency but also the safety of vulnerable road users and other users.

Various treatments such as barrier curbs, rolled or mountable curbs, depressed medians, painted – flush – medians and centre median barriers have been used as methods to separate traffic. The new TAC guide highlights the advantages and disadvantages of these methods for various traffic volumes and speeds.

The guide provides comprehensive guidelines or warrants for:

- ◆ the design and application of medians for different traffic volumes, functional classifications and speeds encountered in Canada on both rural and urban roadways,
- ◆ the location of medians, edge treatments and features considered for application to particular design situations,
- ◆ the provision of median barriers in various situations, including the protection of non-motorized road users, and
- ◆ the inclusion or consideration of active transportation modes and accommodation of transit modes in relation to median treatments.

In addition, the publication offers, where possible, specific guidance on the explicit evaluation of road safety outcomes with various median design treatments.

Proposed by TAC's Geometric Design Standing Committee, the project was conducted by **McCormick Rankin Corporation** under the supervision of a steering committee.

The guide is expected to be published in the spring. A notice will be posted on the association's website when the publication becomes available. 

## Bridge Hydraulics Learning Material to Be Prepared in Partnership with CSA

TAC and CSA, through its municipal infrastructure solutions program, will partner to develop learning material about bridge hydraulics.

Floods and erosion continue to be important causes of bridge damage and failures worldwide and are key considerations in bridge design, construction and maintenance. In some jurisdictions, concern over the security of bridges against the action of water has led to extensive re-evaluation of existing foundations.

The second edition of TAC's *Guide to Bridge Hydraulics*, published in 2001, aims to assist bridge designers by outlining the factors to be considered in the location, layout and hydraulic design or re-evaluation of bridges and by suggesting criteria and procedures to do so.


As there has been no training provided to date based on the *Guide to Bridge Hydraulics*, the association's Structures Standing Committee recommended this gap be addressed.

With TAC's support, CSA will lead the development of a training product directed at civil engineers and other professionals responsible for bridge design, construction and maintenance.

Specific course content remains to be developed. However, it is expected to include some information about basic hydraulic considerations and hydrologic estimates, and focus on waterway design, scour protection

and channel control, as well as hydraulic aspects of construction, inspection and maintenance.

Upon completion of the training product, further work will be planned to organize sessions and deliver the material to practitioners in various Canadian cities.

TAC members sponsoring this work are **Alberta Transportation**, the **British Columbia Ministry of Transportation and Infrastructure**, **Manitoba Infrastructure and Transportation**, the **Ministry of Transport of Quebec** and **Saskatchewan Highways and Infrastructure**. 



## Early-bird Annual Conference Sponsors

The call for national sponsors has been launched for the 2010 TAC annual conference, *Adjusting to New Realities*, which will take place in Halifax, September 26-29.

The following sponsors have committed their ongoing support to Canada's preeminent transportation event and will raise their corporate profile among delegates from a broad range of select organizations at the 2010 conference.

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To obtain additional information on conference sponsorship opportunities and key benefits, visit [www.tac-atc.ca](http://www.tac-atc.ca) or contact Deb Cross ([dcross@tac-atc.ca](mailto:dcross@tac-atc.ca)) at the TAC secretariat.

## MEMBERSHIP HAPPENINGS

**International Road Dynamics (IRD) Inc.**, a leading world-wide provider of weigh-in-motion and intelligent transportation systems (ITS), had strong results for the year ended November 30, 2009. Revenues were up more than 26 per cent to a record \$49 million. Offshore sales grew 43 per cent on strength in Asia and Latin America while U.S. sales rose 23 per cent thanks to product, weigh station, and maintenance and data collection revenues.

IRD president and CEO Terry Bergan said that 2009 was a record year on a number of fronts for his Saskatoon-based company. "We achieved our highest sales levels ever as a result of our decision seven years ago to leverage our strong reputation and installed base to enter new overseas markets... Most importantly, we generated record earnings for the company, and we expect to build on this progress in 2010 and beyond," Mr. Bergan added.

The Ready Mixed Concrete Association of Ontario and the **Cement Association of Canada** recently announced the launch of CANPav™ – an online software modeling tool that quickly determines the cost advantages of using concrete as a paving material for municipal streets and roads and commercial parking lots. CANPav is unique because the user has complete control over the concrete and asphalt cross-sections and the material cost inputs used to arrive at the street or parking lot estimates. The tool has been created for use throughout Canada and currently includes default cost values for Ontario and Quebec. These values can be replaced for other municipalities across Canada. Users may access the program at [www.canpav.com](http://www.canpav.com). 



## New Traffic Signs Approved

Five new signs will be added to TAC's *Manual of Uniform Traffic Control Devices for Canada* as part of the next manual update planned for the coming months.

The signs resulted from volunteer projects conducted under the auspices of TAC's Traffic Operations and Management Standing Committee.

### "Cross Other Side" Sign

This sign is used when it is determined that crossing one leg of an intersection should be prohibited for safety or intersection operation reasons. It is typically installed on the near side of the crossing, facing pedestrians, and normally on a signal pole or on a rail barrier blocking the normal access point to the crossing. If used on the far side of the crossing, the sign size may be increased to improve visibility. The intersection leg where crossing is prohibited should have no crosswalk lines. The lines should instead be placed at the crossing location where pedestrians are being directed. The "Cross Other Side" sign would typically be installed for the benefit of pedestrians only.

### Engine Brake Signs


Two signs are recommended to indicate proper use of supplementary braking systems that are often installed on heavy vehicles. One sign, prohibitive in nature, is for use in jurisdictions that have local laws governing the use of engine brakes. The other sign, non-prohibitive in nature, is intended for jurisdictions that do not have these laws.

The "Engine Brake Prohibited" sign is a regulatory sign that can be installed to indicate to drivers that the use of an engine brake is not allowed under normal circumstances. The "Avoid Engine Brake" sign is a non-prohibitive regulatory sign. It can be used to indicate to drivers that they are in an area where the use of an engine brake is not normally required and where its use may be disruptive to area residents. Tabs have also been recommended for use with each sign in order to identify an area or zone to which the sign applies.

### Tipping Truck Sign

This sign warns truck drivers of the rollover potential so they can negotiate a ramp or horizontal curve at an appropriate speed. The right or left version of the warning sign indicates the direction in which trucks may tip. An advisory speed tab sign may be used in conjunction with the sign. A supplementary tab sign – "Truck Speed" – may also be installed.

### Wind Gust Sign

The purpose of this sign is to warn truck drivers of strong winds or wind gusts that may cause a driver to lose control of a vehicle. The left and right versions of the warning sign indicate which direction the truck may tip due to wind gusts. An educational tab sign – "Wind Gusts" – may also be used. 

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## Road Network Performance Measures Project Sponsors

The last issue of *TAC News* carried an article on a recently launched association project aimed at developing performance measurement guidelines for road networks. As the list of sponsors of this project has since been substantially updated, a new list is being published: **Alberta Transportation, Manitoba Infrastructure and Transportation, Northwest Territories Department of Transportation, Nova Scotia Department of Transportation and Infrastructure Renewal, Ministry of Transportation of Ontario, Saskatchewan Highways and Infrastructure, Transport Canada and City of Montreal.** 

## PEOPLE IN THE NEWS

Hon. **Steve Ashton** has been appointed minister of infrastructure and transportation for Manitoba.

Hon. **Ron MacKinley** is now minister of the new Department of Transportation and Infrastructure Renewal of Prince Edward Island.

**Rob Penny** is Saskatchewan's new deputy minister of highways and infrastructure. He was previously assistant deputy minister of environmental management for Alberta Environment.

At Alberta Transportation, **Bruno Zutautas** has been appointed to the position of assistant deputy minister responsible for transportation and civil engineering.

**Robert Pratt** will be named national manager of transportation and marine structures at Public Works and Government Services Canada, following the retirement in April of **Donaldson MacLeod**, manager of highways and bridges, whose responsibilities will be included in Mr. Pratt's new role.


**Mike Labrecque** has been promoted to the position of deputy chief administrative officer, corporate services, at Halifax Regional Municipality. He was previously director, transportation and public works.

**Brian Wood** has replaced **Kenn Rosin** as manager of transportation for Stantec Consulting Ltd. in Winnipeg. Mr. Rosin has returned to the City of Winnipeg to oversee the development of its new transportation plan.

**Peter Leung** is retiring from the City of Edmonton as general supervisor, neighbourhood renewal design, and will join the Focus Corporation as manager of urban transportation in the company's Edmonton office.

**Glen Furtado** has accepted a new challenge as transportation practice leader, Alberta, with Urban Systems Ltd.

At Transport Canada, **Katherine Forster** has been named senior analyst, freight environmental initiatives.

**Bob Margison**, a long-time supporter of TAC, passed away in December. A member of TAC's Traffic Operations and Management Standing Committee, he worked for the 3M Canada Company for more than 36 years before retiring at the start of 2008. 

## NEW MEMBERS

TAC is pleased to welcome the following new members:

**Beau-Bay Consulting Ltd.**  
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**Can-Traffic Services Ltd.**  
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**Clifton Associates Ltd.**  
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**Philippe Brisson**  
St. Lambert, QC

## Urban Goods Movement Data Report Available Online

A report entitled *Framework for High-quality Data Collection of Urban Goods Movement – Phase 2* is now available as a free download in the association's online resource centre.

An article on the report, which was prepared under the auspices of TAC's Transportation Planning and Research Standing Committee, appeared in the last issue of *TAC News*.

Translation of the report is in progress and the French version will be posted on TAC's website in the near future. 

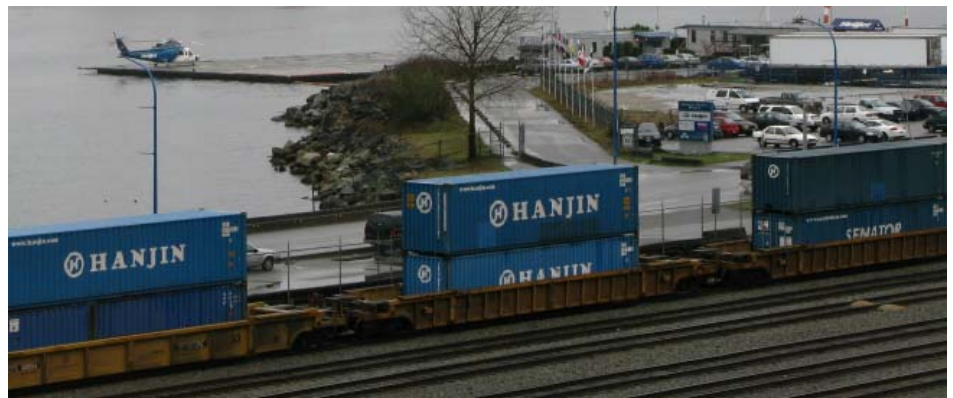


Photo: Donald Cleghorn, HDR | iTRANS

## TAC Developing Knowledge Management Primer

TAC has launched a technical project to develop a primer on knowledge management within transportation agencies and knowledge-sharing across the transport sector.

The management of knowledge involves people, information and technology. A key requirement in this process is sustainability, which means that effective knowledge transfer over time is essential. Beyond recruitment and retention of staff, this process for ensuring the orderly planning of renewal, upgrading and continuity of resources has become critical as the workforce ages and retirements occur at increasing rates.

A number of key challenges are faced by Canadian transportation agencies attempting to develop a sustainable policy and practice of knowledge management. Senior staff retirements are leaving experience gaps, information is being lost and technology improvements and updates are not being carried out. In addition, expanded missions, program growth and outsourcing require adequate staffing, as well as in-house expertise to manage outsourcing and workforce training.

As transportation agencies face these challenges, innovative approaches are needed to address retention of core competencies and develop succession strategies.

The intent of a primer is to provide the basics on a major subject, including the definition, importance, benefits, key strategic elements, how-to processes, challenges, corporate responsibilities and costs, implementation aspects and long-term sustainability. Essentially, a primer gives agency management a summarized information foundation to understand the scope of a subject and to undertake further initiatives in their organization.

The project was recommended by TAC's Education and Human Resources Development Council, which formed a working group to develop the knowledge management primer.

The working group has chosen NEXT Solutions as the consultant to conduct this assignment. The primer is expected to be released by the fall of 2010. 

## Pedestrian Crossing Control Manual Update in the Works

TAC has launched a new project aimed at updating its current *Pedestrian Crossing Control Manual*, originally published in 1998.

New pedestrian crossing control devices have been introduced since publication of the TAC manual. Information gaps and areas in need of improvement have also been identified. Revisions are therefore required to ensure that transportation practitioners have an accurate and practical guide to carry out their work.



Key updates to the manual will cover:

- ◆ pedestrian crossing requirements in urban and rural settings
- ◆ appropriate crossing treatments for young, old and vulnerable road users
- ◆ pedestrian crossings at roundabouts and railway crossings
- ◆ pedestrian walking speeds considered for signal timing
- ◆ issues relevant to the disabled community and related accessibility issues and aids
- ◆ crossing treatments for high speed, low pedestrian-volume crossings
- ◆ most effective means of implementing pedestrian crossing control

- ◆ effectiveness of new methodologies and technologies
- ◆ safety benefits of different categories of pedestrian crossing control devices when applied appropriately or required by warrants, and
- ◆ evaluation of warrant models for installation of pedestrian traffic control devices in terms of applicability and comprehensiveness.

Existing pedestrian crossing control guidelines in Canada, the United States and other countries will be reviewed during this project. Recommendations for updates to TAC's *Manual of Uniform Traffic Control Devices for Canada* will also be made.

Recommended by TAC's Traffic Operations and Management Standing Committee, the project will include a review of existing pedestrian crossing control guidelines, practices and research.

A project steering committee has developed the terms of reference and will choose a consultant in the near future. The production schedule calls for completion of the work in the summer of 2011.

The effort is being funded by: **Transport Canada, Alberta Transportation, Manitoba Infrastructure and Transportation, the New Brunswick Department of Transportation, Nova Scotia Transportation and Infrastructure Renewal, the Ministry of Transportation of Ontario, Prince Edward Island Transportation and Infrastructure Renewal, the Ministry of Transport of Quebec, the cities of Edmonton, Hamilton, Montreal and Ottawa, Halifax Regional Municipality and the Canadian Institute of Transportation Engineers.** 

## COMING EVENTS ~ 2010

### Annual Conference of the Association québécoise du transport et des routes

March 29-31  
Quebec City, Quebec  
Tel. (514) 523-6444  
[www.aqtr.qc.ca](http://www.aqtr.qc.ca)

#### TAC Spring Technical Meetings

April 8-12  
Ottawa, Ontario  
Tel. (613) 736-1350  
[www.tac-atc.ca](http://www.tac-atc.ca)

#### TAC Special Seminar on Roadway Median Design

April 12  
Ottawa, Ontario  
Tel. (613) 736-1350  
[www.tac-atc.ca](http://www.tac-atc.ca)

### 1<sup>st</sup> International Conference on Pavement Preservation

April 13-15  
Newport Beach, California  
Tel. (202) 366-2023  
[www.pavementpreservation.org/icpp](http://www.pavementpreservation.org/icpp)

### 2010 Design-Build for Transportation Conference

April 21-23  
Dallas, Texas  
Tel. (202) 686-6614  
[www.designbuildtransportation.com](http://www.designbuildtransportation.com)

### Annual Conference of the Canadian Urban Transit Association

May 15-19  
Ottawa, Ontario  
Tel. (416) 365-9800  
[www.cutaactu.ca](http://www.cutaactu.ca)

### 16<sup>th</sup> World Road Meeting of the International Road Federation

May 25-28  
Lisbon, Portugal  
[www.irf2010.com](http://www.irf2010.com)

### 4<sup>th</sup> Intertraffic China Trade Fair

May 26-28  
Beijing, China  
[www.intertraffic.com](http://www.intertraffic.com)

### Annual Conference of the Federation of Canadian Municipalities

May 28-31  
Toronto, Ontario  
Tel. (613) 907-6212  
[www.fcm.ca/](http://www.fcm.ca/)

### Annual Conference of the Canadian Transportation Research Forum

May 30-June 2  
Toronto, Ontario  
Tel. (519) 421-9701  
[www.ctrf.ca](http://www.ctrf.ca)

### 3<sup>rd</sup> European Transport Research Arena

June 7-10  
Brussels, Belgium  
[www.traconference.eu](http://www.traconference.eu)

### Transports publics 2010

June 8-10  
Paris, France  
[www.transportspubliques-expo.com](http://www.transportspubliques-expo.com)

### Annual Conference of the Canadian Society for Civil Engineering

June 9-12  
Winnipeg, Manitoba  
Tel. (514) 933-2634  
[www.csce.ca/2010/annual/](http://www.csce.ca/2010/annual/)

### Annual Conference of the Intelligent Transportation Systems Society of Canada (ITS Canada)

June 13-16  
Ottawa, Ontario  
Tel. (905) 471-2970  
[www.itscanada.ca](http://www.itscanada.ca)

### 5<sup>th</sup> International Conference on Bridge Maintenance, Safety and Management

July 11-15  
Philadelphia, Pennsylvania  
Tel. (202) 493-3023  
[www.iabmas2010.org](http://www.iabmas2010.org)

### Annual Meeting of the Institute of Transportation Engineers and Annual Conference of the Canadian Institute of Transportation Engineers

August 8-11  
Vancouver, British Columbia  
[www.ite.org/meetcon/index.asp](http://www.ite.org/meetcon/index.asp)

### International Conference on Sustainable Concrete Pavements

September 15-17  
Sacramento, California  
[www.fhwa.dot.gov/pavement/concrete/2010acptpconf.cfm](http://www.fhwa.dot.gov/pavement/concrete/2010acptpconf.cfm)

#### TAC Annual Conference & Exhibition

September 26-29  
Halifax, Nova Scotia  
Tel. (613) 736-1350  
[www.tac-atc.ca](http://www.tac-atc.ca)

### Annual Conference of the Canadian Institute of Planners

October 2-5  
Montreal, Quebec  
Tel. (800) 207-2138  
[www.cip-icu.ca](http://www.cip-icu.ca)

### 8<sup>th</sup> Malaysian Road Conference

October 10-13  
Kuala Lumpur, Malaysia  
[www.mrc.org.my](http://www.mrc.org.my)