

CITE ELECTIONS
CALL FOR NOMINEES

TRAINING
OPPORTUNITIES

AWARDS & SCHOLARSHIPS
OPEN FOR SUBMISSIONS



transportation TALK

Quarterly Newsletter of the CANADIAN INSTITUTE OF TRANSPORTATION ENGINEERS
INSTITUT CANADIEN DES INGÉNIEURS EN TRANSPORTS
(a Canadian Non-Profit Corporation)

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The Safe Systems Approach for Road Safety

A shift in thinking for safer and more sustainable transportation systems

Kid Partners for Great Planning

Improving design outcomes and community conversations

CITE by the numbers

An infographic look at CITE's membership

A Tale of Two Cities and Many Bridges

CITE 2019 Annual Conference Update and Tour Preview



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EDWARD SOLDO, P.Eng., FITE

Canadian District President

president@cite7.org

Looking back at 2018, it was quite the successful year for the Canadian Institute of Transportation Engineers. Incorporation as a registered Canadian not for profit corporation, an outstanding conference in Edmonton, first ever Canadian Student Leadership Summit, training events across the country, corporate financial stability, and many great events at the local section level – all positive signs that the Canadian District is growing, vibrant, and relevant in our industry.

This success could not have been achieved without the hard work of our volunteers across the District. Special thanks to my fellow Executive members for leading and championing the changes to our organization and our Board of Directors for embracing the vision.

So, moving forward, what will 2019 and beyond look like? The definition of transportation mobility is rapidly changing with the introduction of new technologies. Mobility as a service and connected/autonomous vehicles are two technology streams that our profession is working with industry partners to integrate into transportation mobility networks across the globe. Across our organization, there are ITE members leading the way in these areas and you can hear about their experiences at a number of great events in 2019.

In 2019, what can we do as transportation professionals and as an organization to make our communities more sustainable and transportation mobility networks more inclusive for all users?

The CITE Annual Conference will be held June 2-5 and the Local Arrangements Committee is hard at work preparing for a fantastic conference in Ottawa. Check out our new conference website [here](#). Based on the number of abstract submissions received, it is shaping up to be an outstanding technical program. Ottawa in June will be beautiful; I can't wait to do some running and cycling along the canal and in the Gatineau hills.

After Ottawa, Austin will be the place to be for the Joint ITE International and Texas District Annual Meeting held July 21-24. This year, the meeting will also integrate the Annual National Rural ITS conference into the program. Gathering that many transportation professionals together and mixing in some warm weather, hot barbecue, and cool refreshments—that sounds like the ingredients for a great time in Texas.

ite Initiatives

Just a reminder to renew your ITE membership if you have not done so. Your membership provides you with access to products and services in ITE's six focus areas: Vision Zero, Smart Communities, Connected and Automated Vehicles (CV/AV), Transportation and Public Health, Modernizing Trip Generation, and Expanding ITE's Global Reach. ITE membership will help grow your career and create important connections within the transportation community.

I would like to end this message with a challenge for our members across the country. In 2019, what can we do as transportation professionals and as an organization to make our communities more sustainable and transportation mobility networks more inclusive for all users?

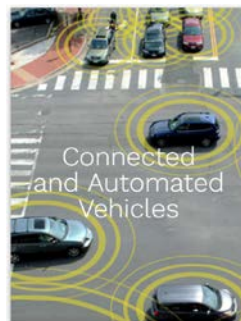
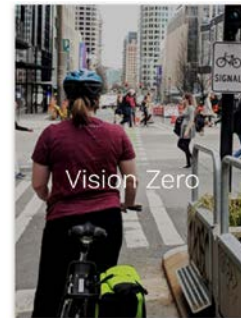
Given the fundamental technical shifts occurring around us, take the initiative to challenge the status quo, ask the critical questions, embrace change, champion continuous improvement, integrate best practices in your work everyday, be a leader and, most importantly, make a difference.

As we enjoy our Canadian winter, remember to drive safely and defensively. Take some time to attend your local section meetings and I hope to see you all at the conference in Ottawa this coming June.

If there is anything you want to share about CITE or have any questions that I can help out with, please feel free to drop me an email at esoldo@cite7.org.

Edward Soldo

Edward Soldo, P.Eng. FITE
Canadian District President



from the district director



JEN MALZER, M.Sc., P.Eng.

Canadian District Director

director@cite7.org

Happy New Year!

January is a great time to try new things and set—sometimes small, sometimes ambitious—goals for the year. For me, it was my pleasure to start out the year by travelling to Washington DC to attend meetings that mark the start of my term as Canadian District Director on ITE's International Board of Direction (IBOD).

For those of you who may be less familiar with this position, there are twelve District Directors who, together with ITE's president, vice president and past president, make up the IBOD. IBOD gives direction to all of the Councils and Committees on technical and policy direction.

Our meetings were very energizing; there is so much happening throughout ITE International. From technical products like the newest edition of the Parking Generation manual to supporting a growing membership through the ONE ITE initiative—it's a great time to volunteer with ITE knowing that the structure and technical excellence of the organization are being carefully managed. Our new Canadian charter was approved in January and it is both consistent with ONE ITE while also recognizing the unique bylaws associated with our new status as an incorporated, not-for-profit organization.

Embracing diversity is important for the future of ITE as we become more international and aware of the unique barriers faced by many of our colleagues. Recognizing this, a new scholarship has been created to support undergraduate students coming from a place of financial need and minority status. Please take the time to encourage students and professionals alike to apply to the many awards offered by ITE, including this new [Diversity Scholarship](#).

Also new is an Industry Council to strengthen ITE's relationship with product and service solution suppliers, as well as several technical initiatives around safety and the *Mobility as a Service* initiative. Acknowledging the role that speed plays in reducing injury and collisions, a new [portal](#) was recently launched to exchange ideas with both members and non-members. This approach builds off the success of ITE Community's pages and that information exchange will help the profession incorporate best practices sooner for better outcomes.

This meeting marked the start of new roles for many Canadian members. Bruce Belmore is ITE International's newest president and it's a pleasure to serve with him once again. Irini Akhnoukh and Mariya (Mars) Otten-Andrew have joined the Coordinating Council to better align CITE members on ITE's Technical Councils. Please look for calls for volunteers in the near future as we look for alignment opportunities for CITE with ITE on key committees.

from the district director



2019 ITE International Board of Direction

Meera Kopp, Madhuri Seera, and Mariya Otten-Andrews are this year's Canadian representation in the *LeadershipITE* program. This year, the *LeadershipITE* program started with teams participating in a shark tank competition to really challenge the class to develop their project ideas and then to gain advice from IBOD members on how to position their work to be most successful and helpful to our industry.

In close, it is an honour to represent you and to follow in the footsteps of Gene Chartier, whose mark has clearly been made on the IBOD. One idea that Gene pushed in particular was a tracking approach to measure progress on the actions that stem from ITE's strategic plan. It was an important element guiding the conversation in Washington, and a good reminder to us all. That it's always great to use January to set goals and then to break them into smaller, manageable actions for the technical and organizational elements work and home life alike.

All the best and please contact me at jmalzer@cite7.org for any other insights into ITE.

Jen Malzer, M.Sc., P.Eng.
Canadian District Director



Swearing in ceremony at the White House for this year's new IBOD members. Left to Right: Randy McCourt, John Davis holding the phone for Jeff Riegner, Cathy Leong, Kristi Sebastian, Jen Malzer



Canadian representation in Washington DC.
Back row: Madhuri Seera (*LeadershipITE*), Ryan Martinson (Chair - Sustainability Standing Committee), Mars Otten-Andrew (*LeadershipITE*), David Thatcher (Traffic Engineering Council)
Front row: Jen Malzer, Irini Akhnoukh (CoCo), Meera Kopp (*LeadershipITE*)



CALL FOR CANDIDATES

Executive Committee Elections

The Canadian Institute of Transportation Engineers (CITE) is seeking candidates to serve on its Executive Committee for the 2019-2021 term. Further information about the duties and responsibilities of the District President, District Vice-President, and District Secretary-Treasurer positions are available at cite7.org/elections.

Individuals interested in serving for these volunteer positions must be ITE members in good standing and willing to commit the time necessary to carry out the duties of office. Reasonable travel expenses to attend meetings on CITE business are reimbursed.

The written nomination submitted in support of the candidate shall include a description of the nominee, their qualifications for the position, and signatures supporting the nomination from the individual and two other ITE members in good standing. **The deadline for nominations is March 1, 2019 at midnight PDT.** Nominations shall be submitted by email to:

Jen Malzer, M.Sc., P.Eng.
Canadian District Director and
Nominating and Elections Committee Chair
Email: director@cite7.org
Phone: 1.403.880.9786

Nominees will be informed of their acceptance and provided further information regarding the election process prior to March 8, 2019. Election results will be announced in the Spring edition of *Transportation Talk* released late April prior to the 2019 CITE Conference and Annual Meeting to be held in Ottawa, June 2-5, 2019.

NOMINATIONS DUE MARCH 1, 2019

PREPARATION AND DISTRIBUTION OF BALLOTS

Once notified of acceptance, each nominee shall prepare a statement of up to 500 words setting forth their aspirations, ideas, and proposal as to the office nominated, and provide a headshot. If supplied by the specified due date, the statement and photo will be distributed with the ballots and made available on the CITE website.

When ballots are prepared for officer election, the name of each nominee will be listed in alphabetical order. Each eligible Canadian District member shall receive the electronic ballot notification with instructions to vote online between April 1 and 12, 2019. This notification will be distributed by email.

CAMPAIGN RULES

Candidates for the District Executive Committee election shall abide by the following campaign rules:

- Any expenses incurred during the campaign are not eligible for reimbursement by CITE, including attendance at the 2019 CITE Annual Conference in Ottawa.
- Communication efforts will be limited to the candidate information that is distributed with the ballots and published on the CITE website. There will be no separate mail-outs or individual email campaign notices to members.
- Any current CITE Executive Committee member who is a candidate shall not take advantage of their position during the campaign.

Any breach of these rules may result in the Nominating and Elections Committee revoking the nomination of that individual for office.



CITE's Training Committee Seeks New Members

The CITE Training Committee's goal is to increase the awareness and availability of training opportunities for Canadian transportation professionals by overseeing the development and delivery of training initiatives. The Training Committee is comprised of CITE members who are responsible for prioritizing, selecting, and organizing training opportunities for transportation professionals across Canada. Since the Training Committee is primarily a coordinating body tasked with providing opportunities for training to CITE members, it typically does not get involved with the development of specific training materials or delivery of the actual training sessions.

In 2018, we offered training sessions on four different topics in ten different cities: Complete Streets, Traffic Calming, Bicycle Facilities Design, and the Canadian Capacity Guide. We anticipate a similar program in 2019.

The term for committee members is a maximum of four years that begins/ends at the CITE Annual General Meeting. Individual members of the Training Committee can be involved in the preparation of materials and delivery of the training sessions as appropriate.

We have team members from Ontario, Newfoundland, and Alberta but are looking for committee members from other areas in Canada to help bring a national perspective to the team. If you are interested in joining our committee, please send a letter of interest, a resume, and a letter indicating support from your employer to training@cite7.org.

More information, including the Committee's terms of reference, is available at cite7.org/training.



Workshop participants get hands-on practice at the Traffic Calming training in Ottawa on Jan 16, 2019.

CITE Training Opportunities

Modération de la Circulation

Formation offerte en français

le 11 février
Montréal, QC

mars
Québec, QC

Traffic Calming

March
Burlington, ON
London, ON
Markham, ON

Complete Streets

May 9
Dartmouth, NS

Register at cite7.org/training

Have your say

What training topics are of interest to you?
Tell what you want to see in 2019 at training@cite7.org.

2019 EXCELLENCE IN TRANSPORTATION AWARDS

CALL FOR NOMINATIONS

Member Awards

Each year, CITE sponsors an awards program to honour outstanding achievement in the transportation profession and distinguished service to CITE. The deadline for nominations is **March 1, 2019**. For more details, visit cite7.org/awards.



CITE Rising Star Award

for a member under the age of 35 who has made an impact on the profession, demonstrated the ability to lead the next generation, and implemented innovative techniques to solve transportation problems



H. Robert Burton Distinguished Service Award

honours an individual with a notable career in the field and a record of service with CITE as the organization's most prestigious award



Outstanding Voluntary Contribution Award

celebrates a member or members who have made an outstanding voluntary contribution to CITE or its projects over the course of several years



Stan Teply Outstanding Technical Project Award

recognizes an outstanding transportation project that has shown significant and proven technical achievement

CITE Activity Awards

These annual awards acknowledge all of the tremendous work done at the local level of CITE. All section and chapter activity report submissions are automatically considered for both the Activity Award and Delta Activity Award in their respective categories. For more information, go to cite7.org/awards.

Section Activity Award

recognizes the overall quality of section activities, either technical or non-technical in nature

Student Chapter Activity Award

recognizes outstanding accomplishments in student chapter activities that achieve the objectives set forth in the Charter

Section Delta Activity Award

celebrates those Sections who have achieved overall improvement from year(s) past

Student Chapter Delta Activity Award

celebrates those Student Chapters who have achieved overall improvement from year(s) past

For eligibility requirements, nomination guidelines & submission

STUDENT AWARDS & SCHOLARSHIPS



APPLY BY
MAR 1, 2019

Awards and scholarships offered annually by CITE for students at accredited Canadian universities and colleges. Winners receive free registration and travel to the CITE Annual Conference and recognition at the CITE Awards Luncheon in Ottawa, 2-5 June 2019.

■ **Dr. Michel Van Aerde Memorial Scholarship**

\$3,000

For full time students in a transportation doctorate-level program at a Canadian university.

■ **John Vardon Memorial Scholarship**

\$3,000

For full time students in a transportation master's-level program at a Canadian university.

■ **CITE WSP Undergraduate Scholarship**

\$3,000

Scholarship and potential internship with WSP for an undergrad student in planning, geography, or engineering.

Sponsored by:



■ **Canadian Capacity Guide Competition**

An undergraduate student competition based on the Canadian Capacity Guide for Signalized Intersections.

Deadline for this award to be finalized. See website for info.

■ **Student Paper Competition**

\$1,500

For students in accredited transportation programs, awarded based on the quality of a paper addressing a transportation engineering subject.

Sponsored by:



■ **CITE Watt Consulting Group "Transportation in a Sustainable World" Student Award**

\$1,000

Awarded based on the quality of writing and demonstrated appreciation of inter-disciplinary collaboration in a 1,000+ word paper.

Sponsored by:



■ **Student Presentation Competition**

Participate in your local CITE section competition and you could be chosen to present at the CITE Annual Conference.

instructions, visit cite7.org/awards or click on an award name above

bold & transformative solutions

CITE ANNUAL CONFERENCE
WESTIN OTTAWA ► 2-5 JUNE 2019

CITE and the National Capital Section are thrilled to welcome you to Ottawa this June. With an exciting technical program, quality technical tours, and a range of social activities and special events, CITE 2019 is not to be missed!

► **conference program**

TECHNICAL SESSIONS, TOURS & SPECIAL EVENTS

CITE 2019 is shaping up to offer the high quality **technical program** our delegates have come to expect with 125 submissions received in response to our Call for Abstracts. The anticipated 24 sessions plus keynote speakers will offer plenty of choice for attendees to delve into **bold & transformative solutions**.

The ever-popular **technical tours** will give delegates a chance to experience several projects coming to life in Ottawa including the new LRT, cycling facilities, AV technology development, and transformative corridors. Modes of travel for the different tours will include foot, bike, transit, or bus, ensuring there is an option for everyone to enjoy.

Returning and new attendees alike will look forward to the **special & social events** that make our event one to remember like the Traffic Bowl, Street Hockey Challenge, Student Mixer, and Annual Banquet. check out our [website](#) and follow [#2019CITE](#) and for updates.

► **put yourself in the picture**

REGISTRATION & HOTEL

Early bird registration will open in March—keep an eye out for a notification in your inbox.

Our conference venue and hotel, the Westin Ottawa, is located in the heart of downtown Ottawa and a quick walk from Parliament Hill, the Byward Market, and the Rideau Canal, a UNESCO World Heritage site. Discounted room rates are available starting at \$259/night. [Click to book now.](#)

► **put your company in the picture**

SHOW YOUR LEADERSHIP AS A CONFERENCE SPONSOR OR EXHIBITOR

Conference sponsorship and exhibition offers you a unique platform to connect with hundreds of leading decision-makers in the industry and practicing transportation professionals.

With options ranging from the marquee Diamond \$10,000 sponsor to Bronze \$1,000 supporters to Exhibitor Booths, you're sure to find an opportunity that connects your business goals to CITE 2019.

[Become a sponsor or exhibitor today!](#)



CREDIT: SAFFRON BLAZE

The **Capital Region Bridge Tour by Bus** at CITE 2019 will highlight the multi-use pedestrian and cyclist **Flora Footbridge** (opposite page, City of Ottawa), the **Vimy Memorial Bridge** connecting suburban Ottawa neighbourhoods (left), and the recently retrofitted **Pont Noir** in Gatineau, Quebec (below).



CREDIT: ANDRÉ VANDAL

► A Tale of Two Cities and Many Bridges

A PREVIEW OF THE CAPITAL REGION BRIDGE TOUR

BY JUSTIN GOULDING,
MOBYCON & LOCAL ARRANGEMENTS COMMITTEE

The waterways that make the National Capital Region so wonderful and unique are also the reason that bridges are so important to tying the two cities together as well as for moving around within them. The Ottawa River, Rideau River, Gatineau River, and Rideau Canal are all integral focal points for the region, but they also pose significant transportation challenges—and sometimes opportunities. In order to address some of these challenges, bridges are critical connection points that always seem to be in short supply. However, particularly in recent years, both Ottawa and Gatineau have been working hard to create bold and transformative connections—especially for active transportation—that make these beautiful waterways less of a barrier and more of an asset.

In order to help explore the context and impact of these bridges, CITE will be offering conference delegates the opportunity to take a bus tour of bridge projects across the Capital Region. This unique tour will showcase points of interests for practitioners with a variety of interests. The tour will include a variety of bridge types creating an opportunity to explore planning and design challenges and wins, as well as a discussion of construction obstacles.

Tour stops will include the Vimy Memorial Bridge built in 2014 and the 2015 winner of the Gustav Lindenthal Medal. This bridge provides a valuable connection

between the rapidly growing neighborhoods of Barrhaven and Riverside South. It includes facilities for a growing share of active transportation users and adds to the expanding network throughout the suburban neighborhoods of Ottawa.

In a more urban context, the tour will visit the newest addition in Ottawa, the multi-use pedestrian & cyclist Flora Footbridge. Increasing the connectivity across the Rideau Canal between two of Ottawa's downtown neighborhoods and featuring a lookout area and bold architectural design, this bridge is poised to quickly become an Ottawa landmark.

From the brand new to the quite old, the Pont Noir in Gatineau is a 100+ year old bridge that has recently been retrofitted to better support bikes, pedestrians, and buses at the same time in the same space. This project is sure to inspire those who wish to improve multimodal connectivity while conserving the inherent value of historic structures within our cities.

This tour will provide an incredible view of both cities in the National Capital as well as the diversity of bridges across them both. With many points of discussion along with a variety of facilities and design configuration, it will be a highlight for any participants interested in creating connections in their city. Sign up for this and many other tours and events when you register for CITE 2019!



The Safe Systems Approach for Road Safety

BY NEIL ARASON, AUTHOR OF *NO ACCIDENT: ELIMINATING INJURY AND DEATH ON CANADIAN ROADS*

Land transportation deaths and severe trauma represent an enormous problem. Unfortunately, it is rarely given the priority commensurate with the size of the issue and the large number of solutions available, often at low cost. Massive change can be achieved if we shift our thinking, make road safety a priority, and adopt vision zero and the safe system approach.

When it comes to land transport, the numbers speak for themselves. In Canada, over 235,000 people have been killed in motor vehicle crashes since 1950. In the last ten years, around 187,000 people have been hospitalized from traffic crashes. There has been no recent progress in reducing fatalities and major injuries to pedestrians and cyclists. And even though road deaths are the number one killer of young people in Canada up to age 24, the overall topic gets little political traction or serious public discussion.

What we first need to understand about the road safety problem is that humans are imperfect. Consider just some of the human factors associated with millions of drivers over billions of hours of driving time: alcohol, drugs, distraction, fatigue, complacency, speeding, high testosterone levels, low maturity levels, low self-control, vision issues, cognition issues, weak motor skills, mental health issues, drivers who feel rushed or agitated, and the seeping proliferation of ordinary human error. Indeed, Johnston, Muir, and Howard reveal in their book *Eliminating Serious Injury and Death from Road Transport* that about 60% of fatalities and 90% of serious injuries from road crashes do not involve a driver

purposefully breaking an overt law. The authors hit home the point that road crashes and their horrific outcomes happen to ordinary people in ordinary circumstances.

At the same time, the distribution of road trauma is not entirely random. Researchers in British Columbia reviewed child pedestrian deaths and found that aboriginal children and those from low-income families were significantly over-represented. US studies reveal that higher socioeconomic status is associated with better vehicle safety features and that, despite long-term declining overall road crash mortality rates, the resulting benefits are disproportionately impacting the wealthy.

But enough about the road safety problem – what about the solutions? To achieve meaningful changes, the first thing we need to do is make road safety a priority.

To see the change that can result when governments take action, we can look to France. In July 2002, President Chirac announced “The fight against road un-safety” as one of its top three priorities. As a result of the ensuing actions, France achieved some of the steepest declines in road trauma of any OECD-member country – a yearly average 7.6% decrease in fatalities for 10 consecutive years starting in 2000. Canada, on the other hand, has not made road safety a priority. In 2016, Canada ranked only 14th in road safety performance as measured by motor vehicle deaths per 100,000 persons. Countries with the best road safety performance have about half the road trauma that Canada has.

Cutting road trauma by half is only a start as more are calling for vision zero – the complete elimination of deaths and severe injury from land transport. Implementing vision zero is realistic, in part because it involves responding to the human-made problem of severe injury with human-made solutions. Sweden, the country most associated with this movement, enshrined in its legislation a commitment to remove death from road transport. Its thinking is centred on the idea that the mental and physical capacities of humans are known and understood and should be used to guide the way forward.

THE SAFE SYSTEMS APPROACH

The only way that vision zero can be adopted in a meaningful form, however, is when accompanied by a steadfast commitment to safe system thinking. What exactly, then, does that mean? It is often said that 90% of crashes are caused by drivers; however, this is because we have designed a system that allows 90% of crashes to be caused by drivers. Instead, vision zero and safe system thinking are about creating a system that works automatically by design to make road user deaths and serious injuries nearly impossible outcomes. This is the safe system approach and it represents the leading thinking in the world in road safety.

This approach means implementing evidence-based measures for safe drivers, safe speeds, safe roads, and safe vehicles. This entails viewing each of these layers as imperfect and then strengthening each one or “plugging its holes” so that a serious injury crash cannot get through all the layers. Johnston, Muir, and Howard describe air travel, where the international *Aviation Safety Reporting System* captures over 60,000 reports of human error made by air and ground crew each year. The key difference here is that the aviation system is designed so that various other checks and balances do not allow these errors to result in serious repercussions.

The safe systems approach is so realistic that the European Commission adopted the goal that they will move to zero fatalities in road transport by 2050. Many national, regional, and city governments the world over have also adopted vision zero, many with even more aggressive timelines. Whether these governments adopt this goal along with the requisite safe system thinking, however, is cause for concern. In some places, vision zero is adopted in name only and implemented with little more than an elaborate educational campaign. This is a real threat to potential progress.

To implement vision zero and the safe system approach fully then we will need to understand the direct role of each of its four layers beginning with what is perhaps its weakest layer.

Layer #1: The Driver

Traditionally, we have focused a great deal on getting drivers to drive better. A systematic review points out that driver error is a contributing factor often cited in traffic crashes and driver education and training is oftentimes used to respond. This review of trials, however, found strong evidence that no type of driver education leads to a reduction in traffic crashes.

At the same time, not insignificant amounts of road safety progress have come from programs that impact driver behaviour. An excellent example is better overall attitudes today around drunk driving. In BC, a [study](#) found that revolutionary and tough new laws for drunk driving introduced in 2010 resulted in reductions to alcohol-involved fatal and injury crashes of 40.4% and 23.4% respectively.

Additionally, aggressive police enforcement of the rules of the road is an injury prevention program that is relatively easily implemented. Ramped up enforcement consistently reduces the number of injury and fatality crashes both immediately and for as long as three to six months after such stepped up enforcement ends. These safety benefits are only outdone, according to mounds of research, by automated enforcement. The United Kingdom started to implement automated speed enforcement in the early 1990s and currently has over 5,000 speed-checking units, making it one of the largest programs in the world. It is estimated to save 1,745 people from being killed or seriously injured each year and to generate considerable monetary savings to British society.

Ultimately, strong traffic safety legislation that police have the tools to enforce, like drunk driving and speeding, can make an important dent in reducing road trauma. However, using generic public safety messages and even driver training to get drivers to drive better is not well supported by research. To make more progress still, we must consider the physics of speed.

Layer #2: Safe Speeds

The central tenet of the safe system approach is safe speeds. This is because appropriate speeds provide an almost magical safety buffer that reduces the likelihood of a crash, by shortening stopping distances, while lessening the amount of raw kinetic energy released on people when crashes occur. This is because the quadratic non-linear

relationships involved translate small differences in speed into large differences in injury outcomes.

Safe system thinking involves setting speeds with the expectation that crashes will happen and contemplating the injury severities likely to result from such crashes on any given type of road.

In cities where pedestrians or cyclists mix with vehicles, the safe speed is 30 km/h. This is because when the crash impact speed rises from 30 km/h to 50 km/h, the fatality risk to a pedestrian increases five to eight times. Where there is potential for a vehicle-to-vehicle side-impact crash, the safe speed is 50 km/h because this is the speed that serious injury is far less likely to result. On an undivided rural highway where a head-on crash is possible, a safe speed is around 70 km/h. If we want higher speeds than this, we must separate opposite-flow traffic. See Table 1.

But on roads where cars and people mix, do lowered speeds really work? A 20-year time-series study examined 20 mph (32 km/h) zones in London with traffic calming and found that these areas were associated with a 41.9% reduction in road casualties.

And what about highway speeds? Kloeden, a vehicle speed and crash risk expert, identified in a seminal paper five low-cost measures to improve road safety outcomes, three of which involved reduced speeds, and stated that “the lowering of speed limits is potentially the most effective road safety measure available.” Around the same time, Swedish researcher Nilsson developed and published the “Power Model” which found that even a 5% increase in mean speed leads to roughly a 10% increase in all injury accidents.

In BC, speed limits were increased on over 1300 km of highway in 2014, some increased to 120 km/h – the highest in Canada. Two separate studies, with distinct methodologies, assessed the impact of these speed increases and revealed

average serious injury crash increases of just over 11%. As a result, over half of those speed limit increases have since been reversed.

When setting speed limits, the 85th percentile is used at times but is this appropriate? Bella Dinh-Zarr, board member of the US National Transportation Safety Board, pointed out at a road safety conference in 2018 that this method is now squarely refuted by a report from her own organization. The reason is that it is not drivers who should set speed limits, but road engineers. And those speed limits should be set based on the biomechanical tolerance of humans to blunt-force expected from inevitable crashes.

The setting and managing of safe speeds that are appropriate for each type of road and its injury potential is of no small importance. Building on this, we can move further into safe system thinking by designing safe roads.

Layer #3: Safe Roads

Safer roads, in both urban and rural settings, play a massive role in reducing serious injuries and deaths to people. Roads can function to help manage speeds, reduce complexity and allow for human error, guide drivers to do the right thing, and reduce crash forces on people.

In cities, we can reduce speed limits but we can also deploy roadway measures that generate safe speeds using innovative methods like giving streets attributes that correspond with their speed limit; removing slip lanes; making turning radii shorter; narrowing vehicle lanes; converting two-way stop intersections to four-way; and implementing traffic calming measures like chicanes, speed humps, and raised pedestrian crossings.

Next comes road and signalization measures that separate vulnerable road users from vehicle traffic through time or space. Temporal separation can take various forms of

Table 1: Road User Injury Risk by Speed

Injury Potential	Safe Speed	Typical Road Type
Potential for impact with a pedestrian or cyclist	< 30 km/h	Local neighbourhood roads (home zones, liveable streets, and complete streets)
Potential for a side-impact collision with another vehicle	50 km/h	Collector roads
Potential for a front-end impact with another vehicle	70 km/h	Minor arteries
No potential for any of the above collision types	~100 km/h	Major arteries with opposite-flow traffic separation

Source: No accident: Eliminating injury and death on Canadian roads, Waterloo: Wilfrid Laurier University Press.



safe systems approach

dedicated traffic movements like leading pedestrian intervals, pedestrian scrambles, channelized turns, elimination of permissive left-turn, and a ban on the right-turn-on-red. Current unpublished research I am part of is finding that, at intersections, serious trauma to pedestrians is four times more likely to result from a left-turning vehicle than a right-turning one. Giving vulnerable pedestrians a WALK signal at the same time as a green permissive left-turn to a 2,000 kg motor vehicle is an example of what safe system thinking is not.

Then there are the measures that separate vulnerable road users from vehicle traffic through space. These take the form of wide sidewalks located well away from roads, floating bus stops, sidewalk bulges and crossing medians, reduced crossing distances, and tunnels and overpasses that provide complete separation of pedestrians from cars. For cyclists, we can embark on connected and protected bike lanes and “rails-to-trails” initiatives that turn over former railroad tracks to active transport modes. A [study](#) from the University of British Columbia found that protected cycle tracks have just one-ninth the risk of cycling injury compared to major streets with parked cars and no bike infrastructure.

And there is the role of nudged decision-making. We can help road users make safer decisions at the actual locations and times that their decision-making can be aided. Examples of such measures include the Danish offset crosswalk, more

vivid crosswalks, rectangular-rapid flashing beacons, better signage, advance stop lines, better lighting and improved sight lines, removal of on-street parking where needed, carefully placed bus stops, and brightly coloured bike lanes.

For major innovation that encompasses many of the above safety principles into a single design, we can turn to cities like Vancouver with their protected intersections or New York with their [rubber bumpers and vertical posts](#) at intersections designed to slow left-turning vehicles while also reducing the size of vehicle-pedestrian conflict zones and improving driver sight lines.

To help prevent rural road crashes, we can implement variable speed limits, high-friction pavement surfacing, self-explaining road design, more vivid warnings of things to come on the road ahead, better lighting, improved sight lines, juddering rumble strips, wildlife detection systems, rest stops spaced no more than 50 kilometres apart, and better access management to avoid giving motor vehicles on secondary roads unfettered, costly, and dangerous access to fast-moving highways.

To vastly mitigate serious trauma on higher speed rural road crashes, the most important thing we can probably do is separate opposite-flow traffic from one another through a concrete, steel or high-tension cable barrier. A separate unpublished study that I am part of is finding that, in BC,



Hardened centerline in Washington, D.C.

almost one-half of fatal highway crashes involve a head-on crash configuration. We can also install side crash barriers to prevent right run-off-the-road crashes, affix crash attenuators in front of hard highway objects, and design in space for clear zones.

We must also make more roundabouts: this is the intersection design that provides unparalleled levels of safety. Roundabouts reduce speeds, eliminate deadly right-angle crashes, demand that all vehicles travel in the same direction as one another, have only eight points of skirmish unlike a traditional signalized intersection with its thirty-two points of conflict, and increase alertness since drivers understand intuitively that they must be on the lookout and make decisions as traffic lights will not be doing that for them. At the same time, the roundabout has no red lights to run and no traffic lights at risk of failure. Other benefits include fewer traffic delays and a more continuous movement of vehicles that often do not come to a stop. Roundabouts crashes that do occur typically result in little human injury.

An unfortunate reality, however, is that we have inherited countless kilometres of roadway that was designed in a very different era. In the 1950s, vehicle speeds and throughputs reigned supreme in the minds of road designers. We have been passed down the arduous job of needing to undo much of the past. As we continue to do so, however, we will gain even more synergies associated with another layer of the system – the automobile.

Layer #4: Safe Vehicles

The role of the motor vehicle in a safe system is massive and is comprised, in turn, of two parts: passive and active safety.

Passive safety has been understood for some time. In 1952, De Haven, the sole survivor of an aircraft collision as a cadet in the Royal Flying Corps Canada, laid out the basics of crash protection and put forth four fundamental “packaging principles” for motor vehicles that today translate into the following:

- The passenger compartment must have integrity so that there is no intrusion into it during a crash,
- Effective crumple zones work to absorb crash forces away from the passenger compartment area,
- There are seat belts and soft surfaces, or air bags, to cushion people from crash forces, and
- Seat belts are indomitably attached to strong structures within the automobile.

Table 2: Safe and sustainable land transportation

Old style thinking	New thinking
The responsibility to prevent crashes, injuries and deaths rests with individuals	The responsibility to prevent crashes, injuries and deaths rests with system designers
Focuses on what causes accidents	Focuses on what causes safety
Allows individual errors to kill and harm	It is unethical to allow individual failures to lead to death or serious injury
90 percent of the problem is people and driver error	90 percent of the solutions involve speeds, roads and vehicles
Studies the effects of single road safety interventions one at a time	Understands that road safety interventions work best together or in “bundles”
Can only justify making improvements based on a “cost-benefit” analysis	Understands the default is to make the motor vehicle and the road system safe
Only works on problems with large numbers or high crash locations	Makes the system safe everywhere
Believes in the need for further “study” - waits for crashes and coroner reports to identify problems	Recognizes that the evidence to act already exists. Proactively takes actions using data, crash testing, simulations, physics, etc.
Ignores exposure to the motor vehicle as an injury risk factor. Ignores the carbon and pollution by-products of transportation.	Embraces multi-modal transportation for better safety and environmental sustainability

These four principles of safer vehicle design would be implemented in the real-world over the decades to follow largely because of star-rating crash programs. Such improvements to vehicle safety standards and technologies have saved hundreds of thousands of lives since the 1960s.

Other aspects of passive safety include vehicle-to-vehicle crash compatibility, rearguards and sideguards on big trucks, inflatable seat belts and centre air bags. But the safety potential of these measures, and many others like them, falls short as they are not yet widely enough diffused across the new vehicle market.

Something else that falls short in North America is pedestrian protection. Europe and Japan adopted binding pedestrian passive safety regulations in 2005. In Canada and the United States, 80,000 pedestrians are hit every year – the majority of whom survive. Given that, why would we not design the front of automobiles to reduce crash forces on people





FURTHER READING

- N. Arason (2014), *No accident: Eliminating injury and death on Canadian Roads*, Waterloo: Wilfrid Laurier University Press. <http://www.wlupress.wlu.ca/Catalog/arason.shtml>
- I. Johnston, C. Muir, & E. Howard (2014), *Eliminating serious injury and death from road transport: A crisis of complacency*, Boca Raton, FL., CRC Press. <http://www.crcpress.com/product/isbn/9781482208252>
- International Transport Forum (2018), *IRTAD Road safety annual report 2018*, Paris: OECD Publishing

outside of cars? It is simple to do and some car-makers like Volvo and Honda already design this way. They accomplish it by considering the frontal shape of the car; providing adequate space (10 cm) between the hood and all hard points underneath the hood including the engine block; and by softening up any stiff areas around the hood and along the A-pillars. What we do not want is to equip the fronts of cars with steel bull bars that produce the opposite effect: a force to the human head that is as much as three times greater than that from a vehicle with no bull bars.

The second part of vehicle safety is active safety. Active safety is comprised principally of technologies that work to help avoid crashes or take control of a vehicle in crash-like situations.

Crash avoidance systems use many different types of sensors, including radar, lidar, and cameras to extract large amounts of data and assemble it into meaningful patterns of information to ensure that crashes are avoided or mitigated. Drivers can be warned of an imminent crash or auto-braking can simply kick in and do what the driver should have done had they been paying attention. These systems can include forward-collision warning, traffic-sign recognition, adaptive headlights, lane-departure systems, intelligent speed-assistance, fatigue-monitoring, pedestrian detection and more.

What is more, the cost of these systems is plummeting. The industry is abuzz about integrating and standardizing multiple types of technologies, making them more powerful and more compact, maximizing reliability, minimizing development time, and cutting costs to get these systems into more cars and trucks. There has even been talk of making an \$8,000 car so technology-enabled it will be hardly possible to crash it. To see the future, we need look no further than car companies like Volvo and Honda. Volvo has the goal of having no person, not even a pedestrian or

cyclist, killed or seriously injured by any Volvo of model year 2020 and later. Honda has also set a vision zero goal for its cars.

Of course, there will be the autonomous vehicle which, despite a patchwork of controversies, will in the end produce colossal road safety benefits. This is because the car-makers will be forced to assume massively more responsibility and liability for the crashes stemming from such cars.

Even though active safety technologies and self-driving cars will outperform humans for safety by a wide margin, unanticipated failures will still result and problematic outside conditions will persist like poor weather, ice on a road and the unexpected. In addition, older vehicles, including antique or collector cars, will likely remain on our roads for decades to come. For these reasons, and others, the role of technology-enabled vehicles will likely never entirely unseat the need for the safe system approach.

CONCLUSION

Ending death and serious injury to people from the traffic system is more achievable today than ever. The road safety problem, however, cannot be solved by tackling only certain layers of the safe system model. Instead, we must continually build up each of the layers to block more of the holes that too often line up to allow serious injury crashes to get through. If we stick unwaveringly to the safe system approach, and build up all four protective layers, we can expect to see a more ethical land transport system that is over time increasingly free of human trauma.

Neil Arason is author of the book *No accident: Eliminating injury and death on Canadian roads* and teaches a module in safe system thinking and multi-modal transportation at Simon Fraser University.

Kid Partners for Great Planning

Improving design outcomes & community conversations

BY JEN MALZER, THE CITY OF CALGARY & MARIANA BRUSSONI, UNIVERSITY OF BRITISH COLUMBIA

Design guides available to today's transportation professionals are highly sophisticated when it comes to almost all design elements: every truck turn can be sketched, industry accessibility guidelines wrestle through a myriad of competing treatments for different needs, and all land uses (Tim Hortons excluded!) have a well documented trip pattern.

Despite this, transportation design sensitivity seems to stop at children. And though children's needs are arguably unique and important, many of the fundamentals are non-existent. For example, what is the perception reaction time for a child? Is it faster than a dinosaur's and slower than a wolf's? Faced with working with little to no design advice explaining the world from a child's height and cognition, professionals may instead choose to work with children. Calgary's examples of working with small stakeholders suggest there can be great returns. This article examines these examples to show the potential of designing for and with kids and argues that engaging children on transportation projects can lead to improved design outcomes and better community conversations.

KID PARTNERS IN CALGARY

Calgary projects have looked to kids to both gain greater insight and reach a broader community than traditional public engagement typically does. Here are a few examples covering diverse project types and stages that show the benefits to Calgary. Following, we offer useful tools to help practitioners incorporate a child's perspective in planning and design plus insight on why improved design for kids is so critical today in Canada.

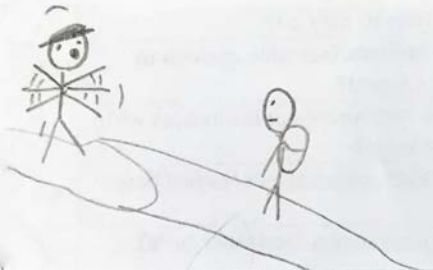
Main Street Walk Audits

The City of Calgary conducted walking and placemaking audits in 2018 to inform main street retrofits and learn about the benefits of different LRT stations activations. The Main Street walk audits were performed using an adapted version of Gehl Institute tools that included more questions around community play and navigation. Local community leaders and Mount Royal University business students together with two local grade seven classes conducted the measurements over three days. The results were a demonstration of the extent of pedestrian problems to be addressed in the main street reconstruction. More specifically, the audits showed issues with snow removal, accessibility barriers, pedestrian

kid partners for great planning

Your funniest story of walking on 37 Street

sombody could
not stay onice



Your best wish for the future of 37 Street



Above: A community event with bike buffer painting draws neighbours to play on the street and participate in public engagement. **Left:** Extract from a child's response to Gehl Institute tools used during the Main Street Walk Audits highlights several issues with sidewalk design and operations in the area. **Opposite Page:** Students create temporary enhancements with chalk art to engage the community and improve the space until funding is available for a full project build.

storage issues at intersections, and issues with cars yielding at school crosswalks. These kind of project data aren't normally collected and yet are so vital to correct barriers in the pedestrian realm, a fundamental focus of the project. An added benefit was that the youth were a respected voice in the community and helped residents keep the purpose of the project front of mind.

4 Avenue Flyover

In 2017, a community was in touch with The City of Calgary to reimagine the space beneath an inner city flyover that has for decades been a barrier to walking to the downtown and Calgary's river pathway network. To tackle this unfunded project, University of Calgary Landscape Architecture students were invited to run design charrettes with local grade six students to turn the space into a community asset. The City of Calgary's role included hosting public engagement around values and then to vet the students' temporary and permanent concepts. This approach built enthusiasm in the community and gave hands on experience to both elementary and University students while allowing The City to enable and listen. The final design, which is now funded, included fun elements for all ages. The elementary students

were asked to role play different community members, including thinking about animals and nature. In this project, the kids demonstrated the empathy and observation needed to design community space.

Erin Woods Traffic Calming

The Erin Woods Traffic Calming project started following a fatal pedestrian collision involving a local teenager. Though the project was important in the media and to community members, public engagement opportunities were not attracting residents: language and time were among the barriers. To overcome these barriers, on-the-street engagement was organized to hear from residents about the new bike lanes that were implemented to narrow the street. The engagement involved closing one side of the road to cars and instead offering painting within the bike buffer, outdoor games, face painting, community information, and the chance to try wheelchairs or blackout goggles. The event attracted hundreds of community members and also built community capacity and cohesion. Six weeks later the community repeated a similar event on the other side of the street with minimal support from City staff.

Continued on page 19...

Community Leaders

The above examples came about by reaching out and partnering directly with kids. In these cases, schools and community associations were able to work with city staff to align individual goals around a collective undertaking. That said, there may be times when working directly with kids isn't practical. Reaching out to community leaders may still provide you with valuable information on children's needs. As an example, **Vivo** in north Calgary is expanding their recreational facilities. They are co-creating programming and moving outside their walls to encourage spontaneous play on community streets and parks. These experiments in play, branded the Gen H Play Project, will soon be paired with a social impact dashboard tracking their population-wide impact in north central Calgary. Individuals and families will be able to see personalized wellness data through a first-of-its-kind app and wearable technology. By partnering with Vivo, The City of Calgary gains insight into what kinds of activations result in measurable difference for residents. This is also an opportunity for The City to reinvent its play streets application process in a real world scenario with a trusted partner.

The City of Calgary is also partnering with **Brookfield Residential**, a leading land developer and homebuilder in North America, to look at how the experiences and public spaces they design have the potential to make a real difference in people's lives. For example, while a standard park or tot lot may meet the needs of a community's first residents, especially those with young children, over time those tots age and public spaces must also evolve. Through multidisciplinary **Tiger Team** workshops including both internal and external stakeholders, the teams hope to reimagine and maintain play in communities over the long run.

TOOLS AND RESOURCES

Adding kid partners to projects means finding genuine ways they can inform and affect project decision making. Engagement specialists are key supports in finding these alignment opportunities. Once these decisions are narrowed down, there are many tools to help guide activities, many of which will be around technical aspects of the project. Here are some tools that are readily available to learn more or start engaging for better designs. The tools are organized around several themes that are pertinent to working with and for kids. *(Click on resource names for more information.)*

Activation

- **Play Streets** are initiatives that can encourage children's outdoor play and promote social cohesion locally.
- The **Urban 95 Starter Kit** offers ideas to activate and design cities for children under 5.

Urban Design and Parks Planning Tools

- Scotland's **Place Standard Assessment** tool helps you think about the physical elements and social aspects of place, provides prompts for discussions, and helps identify things that are working well, as well as those that need more attention.
- Denmark's **Gehl Institute** provides tools for measuring public life.
- Calgary's **Play Charter** lays out the city's commitment to supporting and encouraging play.
- UNICEF provides a framework for developing a **Child Friendly City**.
- UNICEF's **handbook on child-responsive urban planning** outlines tools and promising practices to create thriving and equitable cities for children.

Risk Perception and Management

- A **Risk Benefit Assessment framework** has been adopted in the UK to consider children's play provision. A project is currently underway led by the **Child & Nature Alliance of Canada** for a Canadian version.
- The **Go Play Outside** risk reframing tool helps parents think differently about perceived dangers and risks involved in kids going outside to play and make a plan for supporting their children's play.



Grade 7 students conduct walking and placemaking audits.

kid partners for great planning

WHAT'S AT STAKE?

Kids are important stakeholders. They inherit the communities designed by today's professionals and they can offer a kind of empathy and observation that lend to good design for all. And while kids may gladly participate in transportation design, it's important to remember that their individual potential is also very tied to community design.

Research points us to many urban features that link with positive outcomes for kids: compact urban neighbourhoods with traffic calmed streets encourage walking and biking while features such as benches and trees encourage hanging out and chance encounters with friends (Lambert, Vlaar, Herrington, & Brussoni, 2018).

That said, at a high level, we know that Canadian communities may not be evolving in the ways kids need. In Canada, the number of motorized vehicles, a major barrier to children feeling safe playing outside in their communities (Marzi & Reimers, 2018), has more than doubled in the past 30 years (Richmond et al., 2016).

As a result, kids are not benefitting from the kind of independent outdoor play that has been linked with positive effects on their physical activity, development, cognitive skills, sense of well-being and resilience, and feeling connected to their community (Brussoni et al., 2015; Cook, Whitzman, & Tranter, 2015). [ParticipACTION's latest report card](#) gives Canadian kids a D+ on overall physical activity levels. A major focus to change this low grade has been looking at ways to encourage children to go outside and play. We're already seeing the effects of a generation growing up with less time spent playing outside. Helping kids reach their full potential involves all of us working together to help bring children and outdoor play back to our cities and streets. Fortunately, Calgary shows that this may be as easy as professionals literally getting outside to play and be creative with kids.

CONCLUSION

The design and operations of our streets is an important factor in determining how kids use their neighbourhoods. Without freedom to travel and play, kids experience serious consequences to their mental and physical well-being. Kid-friendly designs and updated transportation guidelines can come about by hearing directly from kids on their ideas for change. Further, partnering with kids in a meaningful way can mean design insight for all users and better community conversations.

Continued on page 21...



A graduate student and grade six partners exchange ideas for improving community spaces at a design charrette.

A **child friendly city** would have: pop up play opportunities, play streets, chance encounters, flexible or wild spaces, pedestrian priority, and intergenerational spaces.

REFERENCES & FURTHER READING

- Brussoni, M., Gibbons, R., Gray, C., Ishikawa, T., Sandseter, E. B. H., Bienenstock, A., ... Tremblay, M. S. (2015). What is the relationship between risky outdoor play and health in children? A systematic review. *International Journal of Environmental Research and Public Health*, 12(6), 6423–6454. <http://doi.org/10.3390/ijerph120606423>
- Cook, A., Whitzman, C., & Tranter, P. (2015). Is 'Citizen Kid' an independent kid? The relationship between children's independent mobility and active citizenship. *Journal of Urban Design*, 20(4), 526–544. <http://doi.org/10.1080/13574809.2015.1044505>
- Lambert, A., Vlaar, J., Herrington, S., & Brussoni, M. (2018). What is the relationship between the neighbourhood built environment and time spent in outdoor play? A systematic review. *Under Review*.
- Marzi, I., & Reimers, A., (2018). Children's independent mobility: Current knowledge, future directions, and public health implications. *International Journal of Environmental Research and Public Health*, 15(11), 2441. <http://doi.org/10.3390/ijerph15112441>
- Richmond, S. A., D'Cruz, J., Lokku, A., Macpherson, A., Howard, A., & Macarthur, C. (2016). Trends in unintentional injury mortality in Canadian children 1950-2009 and association with selected population-level interventions. *Canadian Journal of Public Health*, 107(4–5), e431–e437. <http://doi.org/10.17269/CJPH.107.5315>

In summary, be ready to partner! Get in touch with progressive community partners, educators, researchers, developers, and especially kids themselves. Remember that anything to do with kids should be fun. Kids are also plentiful and can be locally sourced (!) for your next transportation project. They have great insights and will also help bridge conversations with the greater community. Consider a local classroom as a “free” sub; you’ll find their teachers are excited to let you teach for a bit. And the kids? They’ll be thrilled to make a difference in their community and will hardly notice they’re learning via a hands-on, adapted curriculum (math from parking studies or social studies from role playing different community users). The possibilities are limited only by your imagination!



Jen Malzer, MSc., P.Eng. is a transportation engineer for the liveable streets division of the City of Calgary where she is currently reimagining Calgary’s traffic calming program to include new principles around shared decision making and tactical urbanism. She is a proud volunteer with the Canadian Institute of Transportation Engineers currently serving as Canadian District Director / Past President.



Dr. Mariana Brussoni is a developmental psychologist and Associate Professor in the Department of Pediatrics and the School of Population and Public Health at the University of British Columbia. She is an investigator with the British Columbia Children’s Hospital Research Institute and the British Columbia Injury Research & Prevention Unit. Dr. Brussoni investigates child injury prevention, parenting and children’s risky play. Learn more at brussonilab.ca.

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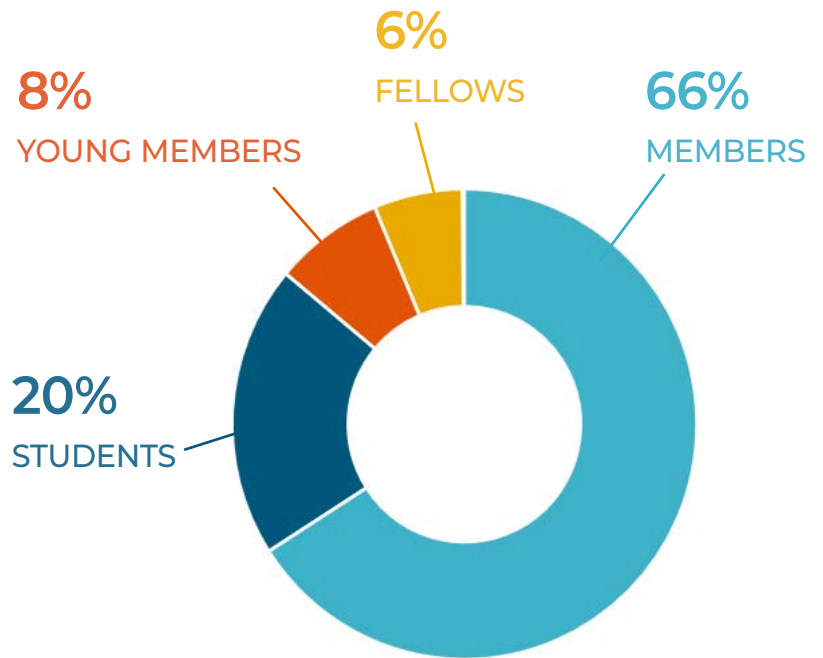
Who We Are CITE by the Numbers

At the end of 2018, CITE counted **2040 members**

Note: Membership data provided by ITE International.

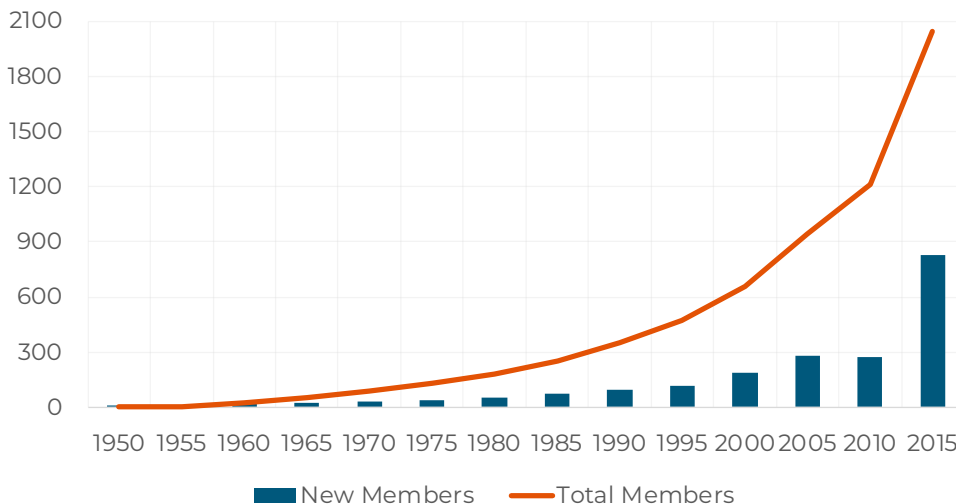
Membership

Membership Type	Members
Honorary	3
Fellow – Private	79
Fellow – Public	30
Fellow – Retired	17
Member – Private	467
Member – Public	845
Member – Retired	33
Young Member – Private	118
Young Member – Public	37
Student	411
Total	2040



Our District is the proud home of **3 Honourary ITE Members** Samuel Cass, H. Allen Swanson, and Stan Teply.

Membership Growth

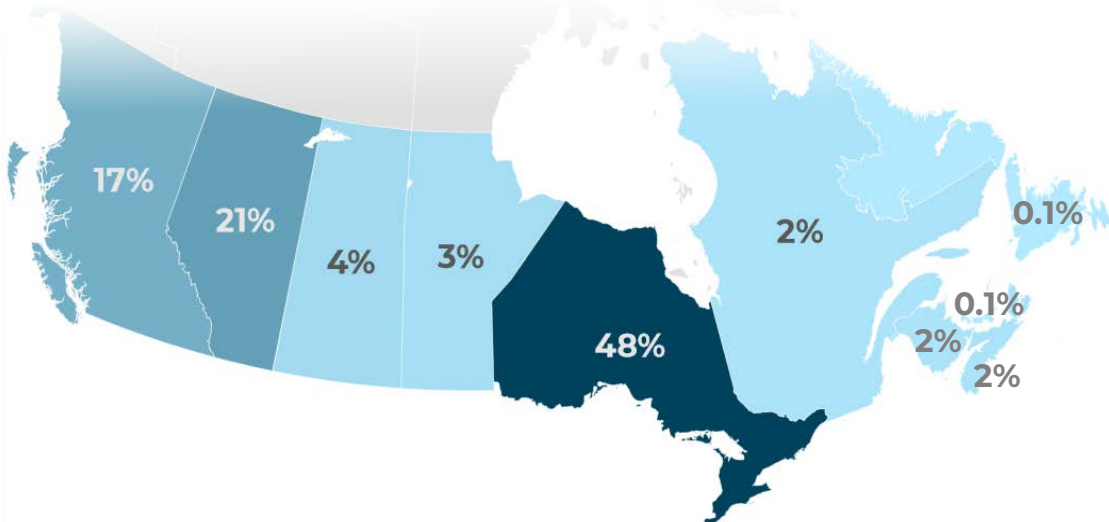


CITE has experienced tremendous growth over the past decade.

43% of our members joined in the last five years. **Welcome!**

Continued on page 23...

Geography

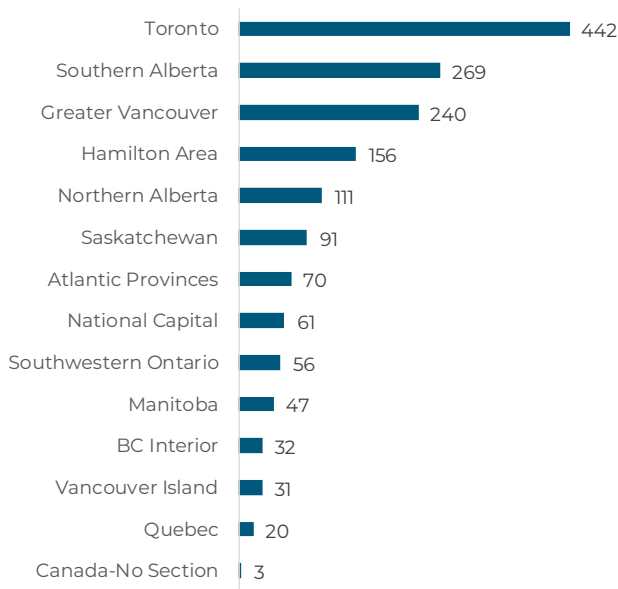


Our membership spans the provinces but doesn't reflect Canadian population distribution.

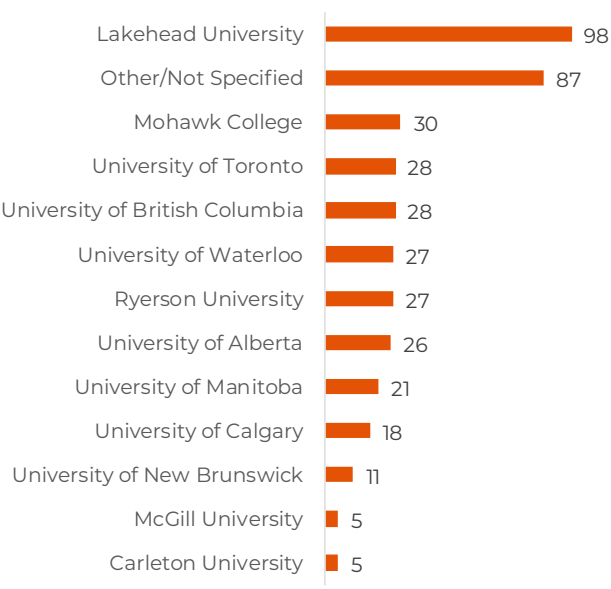
48% of our members call Ontario home. With four sections, it has the most of any province.

Conversely, you can count the members from Newfoundland + PEI on one hand!

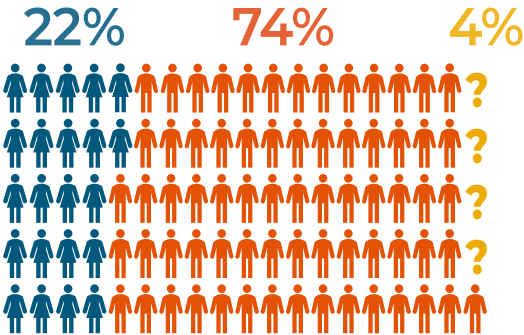
Professional Members by Section



Student Members by Chapter

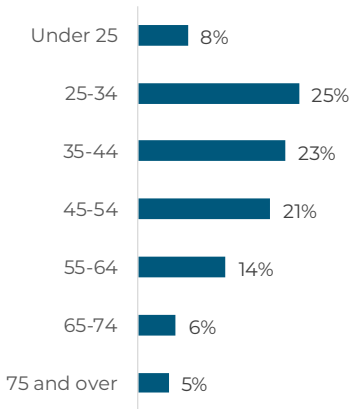


Demographics



For every 100 members, 22 identify as women, 74 as men, and 4 are unknown or another identity.

Age (where provided)



Industry Representation



43%
PUBLIC SECTOR



21%
ACADEMIC



32%
PRIVATE SECTOR



4%
RETIRED/OTHER

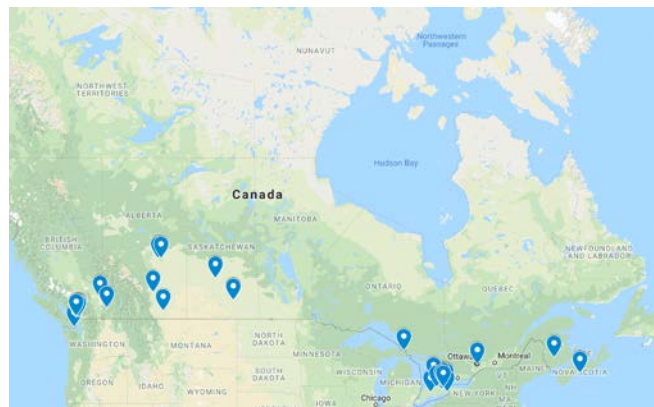
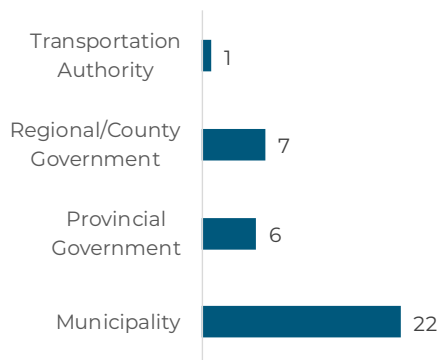
Over **360 organizations and companies** are represented by our membership.

The two largest employer types are nearly equal, with **31%** of our members employed at **consulting firms** while **30%** are with **local governments**.

Agency Members

The Canadian District is home to **36 Agency Members** where **34%** of our members are employed, with the vast majority of agency members being **Municipal Governments**.

Agency Members by Type



Interested in who CITE's public agency members are? Click to see [this interactive map](#) to learn more.

LUIS ESCOBAR P.Eng., PTOE



Family

Wife—Jeannette Montufar, Daughter—Victoria (18)

Personal hobbies

Cycling, running, pretending to play hockey

Current employment

Stantec, Managing & Discipline Lead – Transportation Group

Education

University of Manitoba, BSc Civil Engineering, 1996

First job in transportation engineering

City of Winnipeg, Traffic Studies Engineer – Public Works Department

What positions have you taken on as a member of ITE?

- Local Arrangements Committee
- Executive Member, Road Safety Committee
- Member, Traffic Operations Committee
- CITE Appointee, Transportation Association of Canada (TAC) TOMSC Committee

CITE INVOLVEMENT

When did you first attend a CITE event?

Manitoba Section Monthly Luncheon meeting in 1996

What is your CITE involvement (past and present)?

I have been involved in various events with CITE and ITE, including being a member of the Local Arrangements Committees for the conferences held in Winnipeg in 2003 and 2012. I have been a member and executive member of ITE councils (Road Safety, Traffic Engineering) and I was a member of the steering committee that guided ITE's Traffic Signals Maintenance Handbook publication.

What do you value most about your CITE membership?

Being connected with the transportation industry across Canada and sharing ideas and information with peers is probably the most valuable part of being a member of CITE.

PROFESSIONAL EXPERIENCE/ACHIEVEMENTS

How would you describe your job to someone you just met at a party?

I help people get to work, live better, and have fun by designing good transportation solutions that meet their needs and respect their values.

What is one aspect of your work that you particularly enjoy?

Transforming the fabric of a community as a result of a transportation project that reflects the community's values.

What are one or two projects that you're most proud to have worked on?

Shepherding the creation of the City of Winnipeg's first Transportation Management Centre (TMC). This was a project that was many years in the making. It started back in 2004 when I became the Traffic Signals Engineer; that is when I first planted the idea with decision makers that investing in technology will make the transportation system better. This resulted in securing Capital funding for the first time in decades to upgrade traffic signal equipment. This was then followed with the deployment of a better communication network and better equipment in 2008 and culminated with the construction of the transportation management centre and major upgrades to field equipment including a fully-wireless communication network for traffic signals and video network in 2016. This is one of the most connected and data driven TMCs across North America and key staff involved are now sharing the story of this accomplishment across North America and Europe.

During your career to date, have you pursued any professional designations through ITE (such as PTOE), and describe why?

Yes, I was the first certified PTOE in Manitoba back in 2004. I consider this an important certification that elevated the qualifications and public trust in my capabilities to provide sound technical advice to the public.

Projecting yourself into the future, from an end-of-career perspective, what will you hope to have accomplished?

I would like to be remembered as someone that helped others achieve their career goals in transportation engineering and helped make a community better.

What is the single greatest satisfaction you take from your job as a transportation professional?

Allow those that work for me to push the limits of transportation engineering and keep me on the edge of my seat. It is only through pushing the limits that we will make advances in transportation.

What is the first thing people most commonly ask or say when they find out you are a transportation professional?

How come the traffic signals at this intersection always stop me? Can you do something about it so that they always are green when I drive by?

GETTING TO KNOW YOU

What attracted you to the transportation profession? Did you have another career in mind?

I had an interest in Structural Engineering but as a result of my advisor leaving the university, I had to switch to a different undergrad thesis project... and that is how I got into transportation engineering. The rest... is history.

What is the most daring thing you've done in your lifetime?

It's a coin toss between coaching basketball to a group of 7 year-old kids for the first time and riding a bicycle at speeds exceeding 80 km/h along portions of the Cabot Trail.

What is the last book that you read or are currently reading?

Concurrently reading *Dharma Punx* by Noah Levine & *A Movable Feast* by Ernest Hemingway

What is your favorite mode of transportation?

Cycling

INTERESTS & PERSPECTIVES

Who has had the greatest influence on your life and career?

My daughter – my career and life has revolved around the idea that I need to be someone that she will be proud of.

If you could change one thing about the transportation practice, what would it be?

For practitioners to be risk flexible, meaning that some problems do not require to consider safety as an absolute term or discreet variable. Some problems provide room for solutions that have levels of safety adequacy – that allow for a range of safety. Sometimes implementing solutions within a safety range can result in a more elegant, cost effective, and appealing solution that meets safety levels.

What is the greatest opportunity you see for the field?

Transportation is a catalyst for change and, as such, embracing technology in transportation to improve efficiency will be the key to energy efficient and economically-conscious improvements in the lives of people through transportation.



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Lynn A. LaMunyon, P.E., PTOE, IMSA II, FITE

Senior Principal, Maser Consulting | Hamilton, NJ USA

llamunyon@maserconsulting.com | Let's Connect!   

ITE has been one of the most important elements in my career as a transportation professional. Whether providing me with tools to improve my technical abilities, opportunities to hone my leadership skills, or the ability to develop an international network, ITE has profoundly shaped my career. Now, with over 33 years of active ITE participation, I am excited by this opportunity to further serve our membership.

My vision of ITE is a globally relevant and inclusive organization of transportation professionals.

Momentum – Over the last few years, many significant initiatives have been introduced and it is important to capitalize on this momentum. ONE ITE is taking the organization in the right direction through unification and standardization across the globe. The efforts with STEM outreach currently underway are a great start to steer young talent to the transportation profession. Our Councils are working collaboratively, both with each other and other organizations, to deliver better and more timely products to our membership. As an organization with thousands of members, we now need to maximize these efforts into further member engagement.

Inclusion – We've come a long way from a time when our organization consisted primarily of traffic engineers from the U.S. With our industry undergoing a paradigm shift, we all know how critical it is to bring professionals from all sectors and demographics to the table as we make our transportation decisions. This not only means efforts to include different industry sectors such as technology disciplines or healthcare professionals, but also opening these discussions to include emerging professionals and the global community. ITE must truly become a global organization and determine how to meaningfully engage our colleagues around the world. It is important to identify and develop solutions to barriers that keep us from being the diverse group we strive to be.

Leadership – I have passionately served ITE since 1985 including over 30 leadership positions throughout the Section, District, and International level. My service has been highlighted by my term as the Northeastern District representative to the International Board of Direction (2008-2010), as well as my current position as Chair of the Traffic Engineering Council. Knowing where you've been helps pave the path to where you are going, and each of these positions has helped me become the person I am today. Growth is vital to any successful organization, and changes are necessary to meet the needs of our members. I think of myself as an informed decision maker who values different perspectives and seeks out knowledge from those affected, however, I am not paralyzed by consensus and understand that hard decisions and action are necessary to benefit the organization.

ITE has been a place where I have forged lifelong friendships. I have interacted with many wonderful people across the world. The willingness of people to devote their time to volunteer positions is remarkable. It is our duty to ensure that their efforts provide the maximum output. It is on this foundation that we continue to build an amazing ITE for the future.

2019 vice president candidates



Alyssa A. Reynolds
Rodriguez, P.E., PTOE (F)
City Traffic Engineer
City of Henderson,
Henderson, Nevada, USA
Alyssa.rodriguez@cityofhenderson.com

ITE IS POISED FOR GROWTH.

We've experienced significant change over the last four years, and now it's time to capitalize on the strong base our leaders have established. The following elements are the recipe for sustainable expansion.

FOSTER OUR LEGACY

We need to nurture the energy, diversity, and enthusiasm seen within the student chapters and facilitate student transition into full membership. Our duty is to create an environment where current leaders help develop future leaders and where opportunity is distributed across the Institute.

EMBRACE DIVERSITY

Variety in experience, opinion, and thought generates well rounded, whole ideas that support our goal of transportation for all. In addition, we need to create products that are useful to a diverse local and international membership and in a format they prefer. For instance, YouTube tutorials and Ted Talk style presentations, in support of our current webinar materials, may appeal to a broad range of members.

CREATE OPPORTUNITY

ITE is most valuable to those who fully partake in what the Institute has to offer. This can be achieved by offering numerous, varied volunteer opportunities with a duration range that matches the availability of our members. Delivering products in a timely fashion shows participants that their efforts are immediately valuable and useful.

SPONSOR AND ENCOURAGE

It's not enough to get people to a conference or a luncheon, they must feel welcome and want to return for the next event. That requires leaders to encourage event attendee participation, actively match members with projects, and sponsor promising individuals for roles in the organization. Reaching even just a few people can have a large effect on long-term participation.

From professional development to the creation of life-long friendships, ITE has been the catalyst for so much personal growth and opportunity. I've been fortunate to serve in elected positions at the student, chapter, section, district, and international levels and to work in academia, consulting, and public service. That offers a perspective into ITE membership of all types. Now it is my turn to give back to the Institute.

PROFESSIONAL HIGHLIGHTS

ITE ACTIVITIES

Diversity & Inclusion Committee Chair
Western District Annual Meeting Local Arrangements Committee Member
Membership Task Force
Task Force for Leadership
Fall Transportation Conference Committee
Western District Student & Faculty Initiatives Chair
Eno Transportation Foundation Fellow

ITE AWARDS

2012 | Intermountain Section
James L. Pline Award
2009 | Nevada Chapter Engineer of the Year
2006 | Western District Young Professional Award

EDUCATION

1999 | Montana State University
Bachelor of Science - *Civil Engineering*
2001 | Montana State University
Master of Science - *Civil Engineering* (Transportation Emphasis)

OTHER ACTIVITIES

2015 | Leadership Advance Graduate, Las Vegas Metro Chamber of Commerce
2014-2018 | Montana State University Alumni Foundation, Alumni Relations Advisory Board
Nevada Society of Professional Engineers E-Week Committee and K-12 Outreach Program

CITY TRAFFIC ENGINEER

City of Henderson, Nevada

CITY TRAFFIC ENGINEER & FLEET MANAGER

City of Las Vegas, Nevada

PROJECT ENGINEER

City of Henderson, Nevada
Orth-Rodgers & Associates
Las Vegas, Nevada

RESEARCH ASSISTANT

Western Research Institute
Bozeman, Montana

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- Transit Management Systems

Associated Engineering provides consulting services in planning, engineering, landscape architecture, environmental science, project management, and asset management. We specialize in the transportation, infrastructure, water, environmental, energy, and building sectors. Our holistic approach considers climate change impacts to create sustainable and resilient solutions.



GREATER VANCOUVER SECTION

The Greater Vancouver Section held a number of events throughout the end of 2018, including a section meeting and our Annual General Meeting.

On November 6th, the Greater Vancouver section hosted a breakfast meeting which included a presentation from Floris van Weelderen and Tyler Thompson from Bunt & Associates Engineering Ltd. The presentation covered the "Residential Shared e-Bike Program" highlighting the significant evolution in the public bike share industry, the emerging trends in shared e-bikes and dockless bikes, the data availability due to GPS-enabled bikes, and the advancing creativity in smart phone "apps", which have created an opportunity to help address the impacts of densification. The presentation also described the benefits that such program brings to residents, municipalities and developers; the underlying magic/technology of shared e-bikes; potential business models; fleet recommendations; as well as potential parking credits for providing this TDM measure.

On November 28th, the Section held its AGM where the annual section awards were presented to the following recipients:

Bill Curtis Award (Transportation Project of the Year):
Abbotsford Transportation and Transit Master Plan – City of Abbotsford and Urban Systems



Mavis Johnson Award (Road Safety Project of the Year): BC Community Road Safety Toolkit – TranSafe Consulting Ltd. and RoadSafetyBC



Lifetime Achievement Award:
Larry Parks, ASCT – Great Northern Engineering Consultants Inc.



Young Professional Award:
Christopher Darwent, P.Eng. – City of Vancouver



Please join us in congratulating these individuals and project teams on their outstanding contributions to the local transportation engineering industry and communities.

Looking forward to 2019, we are pleased to welcome Jael Lumba as our new treasurer. The returning members of the executive team include Niraj Sunuwar as President, Amy Do as Vice-President, Cameron Perkin as Secretary, and Sam Young as Webmaster. We would like to thank Jared Duivestain for his hard work and dedication to the GVITE chapter as he leaves his executive position in 2018.

The UBC Student Industry Night will be held in February 8th, which is an opportunity for students and industry professionals to interact and showcase student projects. We anticipate a strong turnout and look forward to a busy year ahead.

BC INTERIOR SECTION

The BC Interior Section co-hosted their annual joint technical conference with the Planning Institute of British Columbia (PIBC) Okanagan Interior Chapter in Vernon, BC on October 26, 2018. Five sessions and a walking tour were provided under the theme "Collaboration and Local Innovation." Topics ranged from partnerships for the establishment of a multi-jurisdictional railway trail, implementation of active transportation corridors, performance and lessons learned on a bike share project, retrofit of a provincial highway to a local multi-use corridor, and transportation impacts of hillside development sprawl.

The Annual General Meeting was held during the conference and saw Tom Baumgartner take over as President, Peter Truch as Vice President, Christine Benedek as Treasurer, Nini Nytepchuk as

Secretary and Ian Roth as Past President. The following Members at Large are also part of the Executive: Avi Thiessen, Chad Williams, Ellen Croy, Amanda Watson, and Elnaz Ansari.

The Section is planning another co-hosted event with PIBC for the spring.



SOUTHERN ALBERTA SECTION

The Southern Alberta Chapter held its annual elections and has two new members joining the Executive: Madhuri Seera as Secretary and Kari Fellows as Publicity Coordinator.

At the November luncheon, Marcia Eng and Brian Patterson from Urban Systems presented on their work developing the Alberta Bicycle Facilities Design Guide. The project team includes representatives from The City of Calgary, Alberta Transportation, City of Edmonton, City of Red Deer, Town of Canmore and Rocky View County working to develop an Alberta-specific design guide for bicycle facilities.

The overall project goals include:

- Adding consistency to bicycle facility design across the Province, including tie-ins between jurisdictions;
- Alleviating pressure on jurisdictions to justify final designs of bicycle facilities; and
- Providing useful information for jurisdictions of all types and sizes on building world class bicycle

facilities in Alberta that allow cyclists to feel fully accommodated.

The guide is being developed through multiple phases of stakeholder engagement and should be available later this year.

In December, Irini Akhnoukh from McElhanney and Associates presented on the 25 Avenue SE LRT Grade Separation Study. The City of Calgary conducted a functional planning study to grade separate 25 Avenue S.E. and the Red Line LRT tracks. The technical report identifies short-term and long-term improvements in the study area. The objective of the study is to improve travel through this area for people driving, walking, cycling and taking transit. The report was approved by Council in May 2018.

We will kick off 2019 with our AGM and a presentation from Michael Thompson, General Manager of Transportation at the City of Calgary.



NORTHERN ALBERTA SECTION

The Northern Alberta Section of CITE wrapped up 2018 with the annual Year End Social event and December luncheon hosted by Bunt & Associates. Then, we got right back to work in 2019 by hosting a panel discussion on how to change parking.

Our annual Year End Social was hosted at Salz Bratwurst Co. While we celebrated another great year with the usual festivities—food, drinks, and catching up with friends and colleagues—the highlight of the evening was the Pecha Kucha presentations by Wayne Gong, Karl Tracksdorf, and Sid Ahuja. Thanks to all that attended and thanks to our presenters!

The Northern Alberta Section officially closed out 2018 with our December luncheon hosted by Bunt & Associates, in which Tyler Thompson of Bunt & Associates made the trip from Vancouver to present on Residential Shared eBike Programs. Thanks to Tyler and Bunt & Associates for a wonderful presentation on such a trending topic.

To kick off 2019, the Northern Alberta Section of CITE hosted a panel discussion on parking at BIERA at the Ritchie Market. The signature event for the Northern Alberta Section featured a panel that included Councillor Mike Nickel (City of Edmonton), Mark Huberman (Bunt & Associates) and Chris Dulaba (Beljan Development) with facilitation by Shawn Bravender (City of Edmonton). During the hour-long discussion, the panel answered and discussed questions such as: Is parking congestion good or bad? Should municipalities regulate how much parking is required for new development? How do we change the culture of free parking? The panel discussion was very entertaining and the discussions afterwards amongst attendees seemed to be just as enjoyable. Thanks to everybody who joined us and participated, and a special thanks to Mike, Mark, Chris and Shawn for making the event a true success!

The Northern Alberta Section's next event will be a luncheon on February 6, 2019 hosted by ISL Engineering and Land Services. Rodney Peacock, ISL Engineering and Land Services, and Ryan Teplitsky, City of Edmonton, will present on building the Walterdale Bridge. Hope to see you there!



SASKATCHEWAN SECTION

The Saskatchewan Section is happy to announce its new Executive for the 2019/2020 term:

- President - Nathalie Baudais
- Vice President - Destiny Piper
- Secretary-Treasurer - Sheliza Kelts
- Past President - Charlie Billings
- Programs Director - Afaf Al Azzawi
- Student Chapter Coordinator - Gloria Bansah
- Communication and Membership Coordinator - Angela Balanga

In November, the Saskatchewan Section hosted their Annual General Meeting and Fall Session at The Willows Golf and Country Club in Saskatoon. The session was kicked off with a transportation trivia ice breaker event so that attendees could work in teams to answer the trivia. A tie breaker was needed to find a winner. The tie breaker question was, 'When was ITE first formed?'

The Fall Session featured several local presenters showcasing some highlights of recent projects:

- Emanuele Sacchi, University of Saskatchewan - Evaluating the Effectiveness of the Intersection Safety Device Program in Edmonton
- Gloria Bansah and Rubia Nones, City of Regina - 9th Avenue North Value Engineering Session
- Jeffrey Holland, Ministry of Highways and Infrastructure - Peripheral Speed Bars

- Patrick Lalach, CIMA+ - Bridging to Tomorrow, North Commuter Parkway Project
- Geoffrey Meinert, Ministry of Highways and Infrastructure - Warman/Martensville Interchanges
- Bruce Belmore, incoming ITE International President - ITE International update

We would like to thank all the presenters for making the session a success. The event had 46 registrants with a mix of government, consultant, student representatives and a surprise visit from a moose!

The Saskatchewan Section is in the midst of planning activities for the 2019 season. The next event is a Pizza & Pint night which will be hosted in both Regina and Saskatoon this year. This event is a great opportunity for students and professionals to network. Watch your emails for details about upcoming events and activities. If you would like to be added to the Saskatchewan Friend's mailing list, please contact Angela Balanga at saskatchewan@cite7.org

Follow us on Facebook: [Institute of Transportation Engineers – SK Section](#)





MANITOBA SECTION

The Manitoba Section closed out 2018 with thought-provoking luncheon presentations in November and December.

In November, Clayton Rudy from Morrison Hershfield presented on the state of roundabout planning and design in Canada. Clayton discussed some of the unique challenges and opportunities practitioners encounter when planning and designing roundabouts, including: decision making in capacity analysis, geometric design philosophy, safety considerations in planning and policy, and consideration of roundabout work during procurement of engineering services. Clayton's presentation included discussion on existing and newly constructed roundabouts within the City of Winnipeg and on the Provincial Highway Network.

Jeremy Finkleman from Urban Systems presented at the December luncheon. Jeremy's presentation highlighted key insights gained from an on-line survey of perceptions of how autonomous vehicles (AVs) might impact respondents' lives. Survey questions were framed to provide insights on how AVs might impact: willingness to

spend more time travelling, land use, vehicle kilometres traveled (VKT), parking, multi-modality (including willingness to use transit in an AV-dominant system), and opportunities for vehicle reduction. The presentation concluded with suggested next steps for municipalities and agencies to proactively plan for this seismic shift to the transportation network.

The December luncheon included the Annual General Meeting (AGM). David Wiebe gave a summary of the Section's activities in 2018. Rebecca Peterniak outlined the Section's finances for 2018, and the proposed budget for 2019. The AGM concluded with an election for the Section Treasurer position for the 2019/20 term. Steven Wood from MORR Transportation Consulting was elected. The other members of the Manitoba Section Executive were acclaimed to their new positions. Our Past-President, Bjorn Radstrom, concluded his service on the Executive.



Jeremy Finkleman of Urban Systems presents at the December Manitoba Section luncheon.

HAMILTON SECTION

The Hamilton Section wrapped up a busy year with a combined luncheon and AGM on October 15th featuring Brian Hollingworth, Director of Transportation Planning and Parking with the City of Hamilton.

Brian presented an overview of Sustainable Transportation Planning within the City of Hamilton with interesting perspective as an outsider working on City projects and as an inside City employee. Brian has had the unique opportunity to have worked on many large scale City transportation planning initiatives and projects for over 20 years, and recently joined the City as the Director of Transportation Planning and Parking. Brian also shared his vision of the updated Transportation Master Plan which was adopted in August 2018.

The AGM wrapped up with elections for the Hamilton Section Executive, with a number of nominations for three vacant positions. All candidates were very strong, and after a close vote the Hamilton Section executive welcomed Jill Juhke, Omar Shams, and Craig Sherwood to the team. We are pleased to have the following members lead the CITE Hamilton Section for the next two years deliver education and provide a voice to the Transportation industry within the Greater Toronto Hamilton Area.

- President: Rob Merritt, City of Hamilton
- Vice President: Sheeba Vasudevan, R.V. Anderson Associates Limited
- Treasurer: Matthew Bilodeau, City of Niagara Falls
- Secretary: Jill Juhke, Paradigm Transportation Solutions Ltd
- Technical Liaison: Omar Shams, City of Hamilton
- Student Liaison: Craig Sherwood, Mohawk College
- Past President: Manoj Dilwaria, City of Thorold





TORONTO SECTION

The Toronto ITE Section had a busy fall season with more exciting winter events to kick off 2019. Toronto ITE Section strives to partner our events with complimentary organizations and municipalities to expand our reach and presentation material diversity. In 2018, ITE Toronto Section partnered with municipalities, private consultants, universities, and peer transportation organizations for a number of engaging training, technical, networking, social and luncheon events.

ITE Toronto Section hosted its annual Christmas Luncheon and Annual General Meeting on December 7th 2018. This year's keynote speaker was Pat Neville, the Vice President of Airport Development and Technical Services. He discussed the progress and some details on the proposed Pearson Airport Regional Transit Hub (Union Station West) project. Some highlights included:

- A delicious buffet lunch and networking with ITE Transportation professionals from many different companies and municipalities.
- The ITE Toronto Section 2018 Project of the Year to the City of Toronto Staff with their King Street Pilot project.
- The 2018 President's Award to Jason Dahl from our Executive Team for his outstanding volunteer contributions.

ITE Toronto Section, in conjunction with the Lakehead University ITE Student Chapter, hosted a networking Luncheon in Thunder Bay on November 30th 2018. The luncheon featured presentations from the City of Thunder Bay on the City's Designated Truck Route project, the Ministry of Transportation of Ontario Northwestern Region on the Thunder Bay Expressway project, and ITE Toronto Section on emerging directions in transportation engineering.

ITE Toronto Section is also excited about our planned upcoming events including:

- Presentation on the King Street Pilot (our 2018 Project of the Year recipient),

- FHWA training session on workzone traffic analysis,
- Airside tour of the Pearson International Airport and talk on the Pearson Airport Regional Transit Hub (Union Station West) project, and
- Many more technical sessions, training opportunities and tours currently being planned by the ITE Toronto Executive for 2019.

In addition to the above, ITE Toronto is pleased to engage in increased outreach and support for our student chapters including funding for student chapter activities, support for student internship opportunities, and partnership with student chapters for events.

Thank you to all our attendees and sponsors. We look forward to another great year.



NATIONAL CAPITAL SECTION

The National Capital Section had the pleasure of hosting a number of exciting events in 2018. The year was kicked off with a lunch & learn in January 2018 where Shawn Doyle (Dillon Consulting) and Carol Franklin (City of Ottawa) discussed the new City of Ottawa Transportation Impact Assessment (TIA) Guidelines. The new TIA guidelines were developed to support the City of Ottawa's goal of an integrated land use and transportation system. The presentation by Carol and Shawn highlighted the new requirements with regards to the transportation review of development application submissions to the City of Ottawa.

In April of 2018, the National Capital Section co-hosted the annual joint TAC/CITE luncheon which is held during the annual TAC spring technical meetings in Ottawa. This year's luncheon presentation was given by Hart Solomon from CIMA+. Hart provided an overview of the latest additions to the updated *Canadian Guide to Traffic Calming (Second Edition)*. The guide was developed as a collaborative effort between TAC and CITE to provide an update on the latest information and guidance related to the planning, design, installation, operation, and

maintenance of traffic calming measures on local, collector and arterial roads in Canada.

In addition to other lunch & learn presentations hosted throughout 2018, the members of the National Capital Section also had the opportunity to attend a *Complete Streets* training session in Ottawa, hosted by the CITE Training Committee and presented by Kate Whitfield and Kirk Paulsen of Alta Planning + Design.

The newly elected NCS executive committee is looking forward to staying active and putting on many more great events in 2019. We are especially excited to be assisting the Local Arrangements Committee with the planning and hosting of the 2019 CITE Annual Conference in Ottawa, Ontario, from June 2nd to 5th. We anticipate a strong group of delegates to explore and discuss topics which fall under this year's conference theme of Bold and Transformative Solutions.





ATLANTIC PROVINCES SECTION

The Atlantic Provinces Section had a busy fall that included technical sessions, training, social events, and an election. Our annual fall meeting was held in November at UNB Fredericton.

We were fortunate to have a technical session that included a full day of interesting and thought-provoking presentations focusing on notable projects from across Atlantic Canada (and beyond). The agenda was truly multimodal, covering a range of topics that included transit, active transportation, traffic operations, parking, goods movement, and transportation data. The session was a well attended success that was made possible by generous contributions from our sponsors including CBCL, Crandall Engineering, exp. Services, Harbourside Transportation Consultants, Streetlight Data, and WSP.

In addition to the technical session, our fall meeting was complemented by the following:

- **Traffic Calming Training:** CIMA+'s Brian Malone conducted a half-day training session on the Canadian Traffic Calming Guide, which was attended by 45 practitioners and students from across the Atlantic region;
- **Evening Social:** More than 40 people came out to attend the increasingly popular evening social, which was held in downtown Fredericton following the traffic calming training session on the eve of the technical session. A special thank you goes out to exp. Services for sponsoring the evening social.
- **Annual General Meeting:** The 2018 AGM, held at the conclusion of the fall meeting, included the swearing in of our new Executive. Congratulations to Mark Gunter, who was elected to the Secretary/Treasurer role. Mike Connors and Tanya Davis assumed the roles of President and Vice-President, respectively, and Roddy MacIntyre ended his two-year term as President, moving into the Past President role. We thank outgoing Past-President Michael MacDonald for his dedication to

the Atlantic Provinces Section over the past several years.

Moving into 2019, the Executive are currently planning our annual spring meeting, which will be held in May in Halifax. We are also considering options for training and other potential events to incorporate into our 2019 plan.



Above: Full day Technical Session held in the fall.

Below: Traffic Calming Training with Brian Malone of CIMA+.

student chapter news

UNIVERSITY OF ALBERTA

It has been a busy fall and beginning of winter at the ITE University of Alberta Student Chapter! We started the year with a kickoff event where executive members set up a stall with free refreshments to introduce ITEUA to the student community and advertise our first two events of the year: a bicycle technical tour and the first speaker of our seminar series, Jill Robertson.

The first major event of the school year was a bicycle technical tour of Edmonton's brand new protected bicycle network. This event was jointly organized by ITEUA, the Civil Engineering Students' Society, and the Northern Alberta CITE Section. Despite very chilly weather, Jen Rutledge (City of Edmonton Supervisor of Building Great Neighbourhoods) and Dallas Karhut (City of Edmonton Senior Transportation Engineer and NACITE President) cheerfully led the tour around Edmonton's south side and downtown.



Bicycle Technical Tour. Courtesy: Dallas Karhut

ITEUA's fall programming also included two guest speakers for our seminar series: Jill Robertson (Principal and Landscape Architect with DIALOG) and Ahsanul Karim (Transportation Modelling Engineer with Alberta Transportation).

Jill presented a very interesting talk entitled X, Y, Z's of Urban Planning - How Changing Demographics Shape our Cities. The presentation included a historical background and various theories of urban planning as well as a discussion of the tensions and opportunities emerging from demographic groups currently interacting in urban spaces, such as millennials and baby boomers.



Seminar series with Jill Robertson of DIALOG

Ahsanul discussed the current Regional Transportation Models maintained by Alberta Transportation and presented the Alberta Spatial Economic and Transportation (ASET model) currently being developed by the governmental agency. ASET is a multi-million dollar province-wide travel demand model which will be coupled with an economic land-use model to create a provincial transportation-economic-land use modelling system. This talk attracted a varied audience, even including some faculty members and interdisciplinary academics.

The ITEUA held its annual elections on November 19th, 2018. The outgoing and incoming executive members collaborated to ensure an effective transition as two major events were planned for January 2019 in addition to some of the ITEUA members' participation at TRB: the ITEUA mentorship program kickoff and our first ever student presentation competition.



Election results; from left to right: Amr Shalkamy, incoming event planner; Connor Bayne, incoming secretary; Mingjian Wu, incoming marketing specialist; Laura Cabral, outgoing treasurer, incoming president; Sabrena Jahan Ohi, outgoing event planner, incoming treasurer; Suliman Gargoum, outgoing president; Bryan Tran, outgoing marketing specialist, incoming vice-president; Lloyd Karsten, outgoing vice-president. Missing: Amanda Gadowski, outgoing secretary; Cai Lin Yang, outgoing event planner, continuing communication consultant.



Some of the new executive members met with ITE executives while attending a reception at ITE headquarters during TRB. Left to right: ITE VP Randy McCourt, Laura Cabral, ITE President Bruce Belmore, Bryan Tran and Sabrena Jahan Ohi.

The mentorship program has been held annually during the summer over the past few years. Responding to industry demand, this year, the program runs from January to May. The kickoff meetings, which allows paired mentors and mentees to meet for the first time, were held in the week of January 28. Fourteen mentors were matched to sixteen mentees and the groups will continue meeting over the next months to discuss disciplinary and soft skills.

Our most recent event was the student presentation competition, which took place on January 25, 2019. This was the first edition of the competition for ITEUA and it was a great success. Seven students, both graduate and undergraduate, presented on a transportation topic of their choice. Thanks to NACITE's generous \$400 contribution to the event, a total of \$700 in prize money was distributed amongst the winners. Congratulations to the best presenters: Stephen Raitz (first place), Amr Mohamed (second place), and Mostafa Tawfeek Mohammed (third place). Connor Bayne won the people's choice vote. ITEUA would like to thank our industry judges for evaluating the competitors: Dean Cooper from Watt Consulting Group, Zheng Luo from IBI Group, and Howaida Hassan from the City of Edmonton.

Finally, we would like to thank our annual sponsor, Tetra-Tech, for their continued support for ITEUA activities and NACITE for their provision of student seats at their monthly luncheons, which are always a great success.



Inspiring Sustainable Journeys

ISL's transportation planning and design team finds effective solutions to the mobility challenges associated with growth and environmental stewardship.

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Presentation Competition winners and judges; from left to right: Mostafa Tawfeek Mohammed (third place), Connor Bayne (people's choice), Amr Mohamed (second place); Stephen Raitz (first place), and judges Dean Cooper, Zheng Luo and Howaida Hassan.]

student chapter news

UNIVERSITY OF CALGARY

With a new Executive Committee, the University of Calgary Student Chapter organized four events this fall.

On November 7, U of C alumnus Matiur Rahman of the Government of Alberta offered a presentation covering the vitality of having a Demand Prediction Model, methodology of developing such a model, software used for that, interpretation of some analysis and examples of using the model. The presentation was done remotely through video call and followed by a Q&A session and lunch.

To create awareness among the civil engineering students around the emerging topic of Demand Responsive Transit Systems, the University of Calgary student chapter organized a research seminar on November 16 with Prof. Babak Mehran of the University of Manitoba, a pioneering researcher in the field. His presentation was focused on the evolution of Demand Responsive Transit Systems and a methodology was proposed to develop analytical models describing operational costs of regular bus and demand responsive transit services as a function of demand or annual ridership. Applications of the proposed models and analysis method were demonstrated through a case study in Regina. It was evident that a lot of people were interested to hear about the topic from the significant participation of students.

In late November, the chapter's executive committee ran a transportation themed STEM activity evening for the Girl Guides of Cochrane, AB. Using activity templates from ITE, the group invited the girls (aged 8 to 11) to think about the transportation systems they use day-to-day, how they get to school, what causes them to be stuck in traffic, why we need traffic lights to avoid conflict, and what makes a good road sign etc. The activities were developed to create enthusiasm among the participants to pursue more technical higher education. The Girl Guides were really interested in the games and had a great time at the event.

Finally, a two-day workshop on EMME software was organized by the chapter and presented by Ali Farhan, Mahsa Ghaffari and Sumaya Nasir from

Government of Alberta. EMME is a transportation planning software which facilitates complex and large-scale modeling of transport networks. Twelve students participated in the workshop and a certificate of participation was provided to attendees.



UNIVERSITY OF MANITOBA

Since our last update, the University of Manitoba Student Chapter has hosted nine events! We held two speaker luncheons with Dr. Jeannette Montufar and Keenan Patmore presenting on professionalism and road safety respectively. We have also been busy planning our annual technical trip to New York City to expand our transportation knowledge with technical tours. Community events held this term include a pancake breakfast fundraiser to raise funds for the Christmas Cheer Board as well as the purchase, assembly, and delivery of hampers to families in need using those donations. In lieu of our annual holiday potluck to engage students and professionals, we held a new networking event at a local pub for professionals and students to interact. We plan to host another in early February. We also held two samosa sales and a Rumor's Comedy Club Event to assist in funding our trips, luncheons, and networking events. We're exciting for the semester ahead and attending the CITE Conference this June!



student chapter news

MCMaster UNIVERSITY

During the 2018 Fall Semester, McMaster's student chapter held various events to share information about the club and promote transportation knowledge across the campus. Both educational and entertaining events were held to attract students with different interests.

Soccer Tournament

The first event of the year was a soccer tournament held in collaboration with the instructor of the Introduction to Transportation Engineering course. The objective of the tournament was to promote the McMaster student chapter among students and to give an overview about the exciting opportunities offered by the transportation field in an open and relaxed environment. The aim was for the students to meet their professor in an informal setting to ease approachability in the future. The event had a large turnout with over 20 students attending, all showing significant interest in the chapter.

Delta Award Presentation

On November 2nd, the ITE McMaster Student Chapter hosted the Delta Award Presentation and guest speaker night to celebrate winning the most improved chapter in all of Canada. Two guest lecturers were present. Mr. Edward Soldo, the President of CITE, talked about the Institute of Transportation Engineers and the benefits of being a student member. Dr. Mohamed Hussein, a new transportation engineering professor at McMaster University, talked about his research field and about the importance of disruptive technologies in improving the safe movement of people and goods. Overall, it was a very successful event. The students who attended were engaged and increased their transportation knowledge by asking plenty of insightful questions.

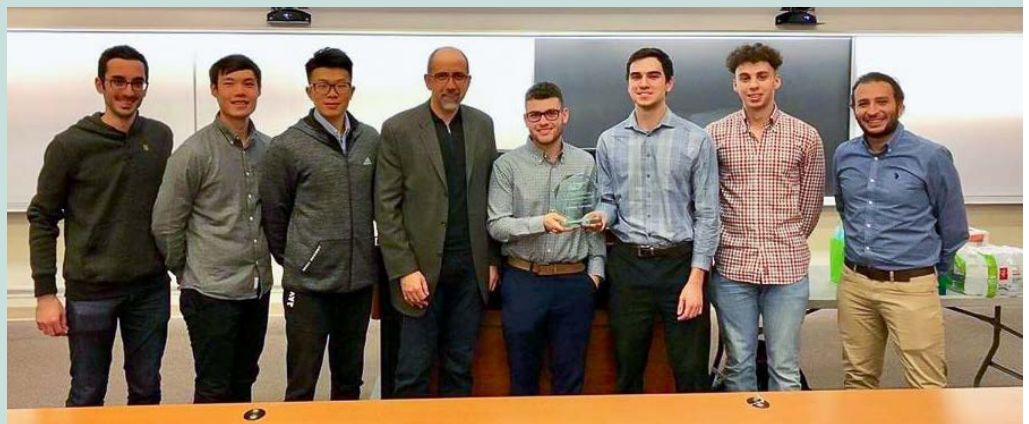
Autonomous Vehicle Coffee House

On November 23rd, the chapter organized a coffee house to highlight the impact of transportation on our society. The topic of autonomous vehicles and how it could improve the quality of life was discussed, with an emphasis of the mobility options for elderly.

There were several great performances throughout the night, with the final performance being a rendition of the Eagles' Hotel California, performed by all in attendance.

The McMaster Student Chapter looks forward to hosting more events in the 2019 Winter Semester, including syncro nights, guest speaker nights, and a practice traffic bowl event.

Top to bottom: Soccer tournament participants; Autonomous Vehicle Coffee House; Student Chapter members with CITE President Edward Soldo



UNIVERSITY OF TORONTO

UofT ITE 2018-2019 Seminar Series

The weekly “Friday Seminar Series” that was established by the UofT ITE Student Chapter resumed in early September. The weekly seminar series is primarily attended by the students and faculty of the transportation group at the University of Toronto, in addition to industry representatives and students from other institutions. The seminar series provides attendees with the opportunity to learn about the work currently being done by professionals in the transportation industry, as well as the opportunity to hear from visiting professors discussing their research and graduate students discussing their thesis work.

This semester, seminars have been delivered by industry professionals and professors visiting from other universities. The seminar delivered by Mr. Tyrone Gan, which centred on the planning of rapid transit in the GTHA over the past 40 years, featured a wide variety of attendees, including graduate students, professors, postdoctoral fellows, alumni, and other visitors.

Dr. Gregory Erhardt, visiting from the University of Kentucky also delivered a seminar this semester. Dr. Erhardt’s seminar focused on the impacts that transportation network companies (such as Uber and Lyft) can have on public transit ridership and traffic congestion. This seminar was also attended

by a variety of graduate students, professors, and postdoctoral fellows.

We would like to invite ITE members in the GTHA to consider presenting their work this winter. Presentations typically take place over the course of 40 minutes, followed by a Q&A session. Seminars take place Fridays from 12:00 PM to 1:00 PM in the Sanford Fleming building (10 King’s College Rd., Toronto) on the St. George campus of the University of Toronto. For more information or to request a presentation date, please contact us at ite@utoronto.ca.

UofT ITE End-of-Year Potluck

The UofT ITE Student Chapter organized an end-of-year gathering of graduate students, professors, and postdoctoral fellows. The event offered the chance to celebrate a year of hard work and the beginning of the winter break.



Tyrone Gan of HDR (left) and Greg Erhardt of the University of Kentucky (right)

YORK UNIVERSITY

The ITE York University Student Chapter has been very busy over the past few months. Our membership has grown to 29 and we have our first sponsor, **Esri Canada**.

Monthly Seminars and Presentations

Our November Seminar was titled “The Future of Transportation” and featured two speakers. Peter Paz, manager of regional partnerships at Metrolinx, spoke about the 2041 Regional Transportation Plan. We also brought back Siavosh Dâna to talk about the company he co-founded, AXLEAPP.IO, and how it has the potential to change the trucking industry in North America.

Our January Seminar theme was autonomous vehicles and featured three speakers. Ryan Lanyon, chair of the Automated Vehicles Working Group at the City of Toronto, spoke about preparing our city for autonomous vehicles. Dr. James Elder, professor and York Research Chair in Human and Computer Vision at York University, discussed intelligent systems for sustainable urban mobility. Laura Barlow, an engineer in the General Motors Active Safety & Autonomous Team, talked about autonomous vehicle technology and the current state of the industry.

Continued on page 45...

student chapter news

We also hosted two special presentations to accommodate longer-format lectures. Mehemed Delibasic, former ITE Toronto Section president and current division manager of transportation planning & traffic engineering at McIntosh Perry Consulting Engineers Ltd., spoke to us about careers in transportation, traffic engineering, and planning. Ir Prof. William H.K. Lam, chair professor and head of the Department of Civil and Environmental Engineering at The Hong Kong Polytechnic University, gave a presentation titled "Intelligent Transportation Systems (ITS) for Smart Mobility: Opportunities and Challenges in Hong Kong".

We have continued the tradition of having student chapter members present at our general meetings. MD. Tanvir Uddin Chowdhury, our events director, discussed his previous work with the design of the Dhaka-Chittagong Expressway in Bangladesh. Seun Daniel Oluwajana, our operations director, presented his doctoral thesis work on DDACTS (Driven Approach to Crime and Traffic Safety). Our student chapter congratulates Seun Daniel on passing his thesis defence.

Workshops and Field Trips

We hosted two software workshops for our student chapter members. Sean Nix of Seneca College, lead our students in a Synchro workshop at the Seneca Newnham Campus. We also held an ArcGIS Pro workshop where our president, Erik Nevland, facilitated a Lynda.com course which was also attended by several Seneca students. Jonathan Van Dusen, a higher education developer and analyst at Esri Canada, opened this workshop.

In addition, we arranged for a tour of the Mississauga Traffic Control Centre Tour where we had the opportunity to learn more about their Advanced Transportation Management System (ATMS) and massive video wall. We were guided by Javed Khan, manager of traffic signals and street lighting, and Michael Flanagan, project manager of traffic management.

Other Events

Our student chapter co-hosted the annual GIS day at York University with the help of the Geomatics Club, the Department of Earth and Space Science and Engineering, and the Esri Canada Centre of Excellence. Erik Nevland was one of the graduate student presenters at this event. We also co-hosted a Geomatics & Civil Engineering Career

Fair with the York University CSCE Student Chapter and Geomatics Club, where students interacted with various industry representatives.

In order to review and celebrate our first academic term as a student chapter, we held our first Annual General Meeting (AGM) and Holiday Supper. We also attended several ITE Toronto Section events, including the '2018 AGM and Christmas Luncheon' and the 'Data Analytics and Evening Social' which was a joint event with the Young Professionals in Transportation Toronto Chapter. Lastly, Erik Nevland and student chapter advisor Dr. Kevin Gingerich attended ITE Washington Student Meetup at Transportation Research Board Annual Meeting where they socialized with the ITE International Executive and members from around the world.

For information on upcoming events or to learn more about our student chapter, please visit our website at www.ite.club.yorku.ca. You can also email us at ite@yorku.ca or visit one of our social media pages.

Clockwise from top right: Nevland with ITE International President Bruce Belmore and Dr. Gingerich; Nevland and our January Seminar speakers; Group photo from the AGM and Holiday Supper; and Vice President Anson Thomas and our November Seminar speakers.



CARLETON UNIVERSITY

Carleton University student chapter visited the Traffic Control Centre in Ottawa on November 13th, 2018. The tour was led by Mr. Jama A. Mohamed who engaged us in an informative discussion on the operations conducted in the traffic control room. The staff also provided a live video observation of varying traffic conditions at some intersections around Ottawa. We later visited the warehouse where we were exposed to the various traffic signal types, and the procedure used to create roadway signs.

We want to thank Mr. Mohamed and the staff of the Traffic Control Centre in Ottawa for taking the time to accommodate us.

Members of the student chapter were also granted the opportunity to attend the CITE Complete Streets training

in Ottawa hosted by ITE and Alta Planning + Design on October 23rd, 2018. This workshop provided us with an overview of the concept of complete streets and the opportunity to engage in discussions with professionals. The workshop started at 8:00 am, and discussions and activities were persistent throughout until 4:00 pm.

We want to thank the CITE Training Committee for providing the opportunity for us to be able to attend the workshop.

Experiences gained at the Traffic Control Centre provided us with an understanding of the procedures used to monitor / adjust traffic operations in Ottawa, and the Complete Streets workshop enabled us to become familiar with relevant concepts in engineering.



student chapter news

MONTREAL-QUEBEC

The chapter kicked off 2018 by focusing on different workshops to empower the members for their future transportation-related careers.

CITE Traffic Bowl

Three members of Québec ITE student chapter participated in CITE annual conference and Collegiate Traffic Bowl competition in Edmonton to get to know the other chapters members. The Traffic Bowl is a competition amongst ITE student chapters, similar to the TV game shows with concentration on transport planning and traffic engineering topics. The members of the chapter have been encouraged to be more active and enhance their knowledge of transportation engineering to strengthen the programs of the ITE student chapters.

PTV VISION annual meeting

Two of the members engaged in PTV VISION 2018 in Toronto as the speakers. In this conference, the international companies presented their latest products

of transportation models and the results of their research. Members of ITE Quebec student chapter presented some cutting edge research topics on microscopic traffic modelling and participated in an advanced workshop on PTV VISSIM software.

Microsimulation workshop

Members of Québec ITE student chapter held a workshop on microsimulation modelling in transportation at Concordia University, Montreal. The theoretical material on microscopic modelling were presented and the participants were able to learn to build variety of traffic models in VISSIM software. It was not only a reunion of members but also a great work on potential academic research projects and usage of modelling within the job market.

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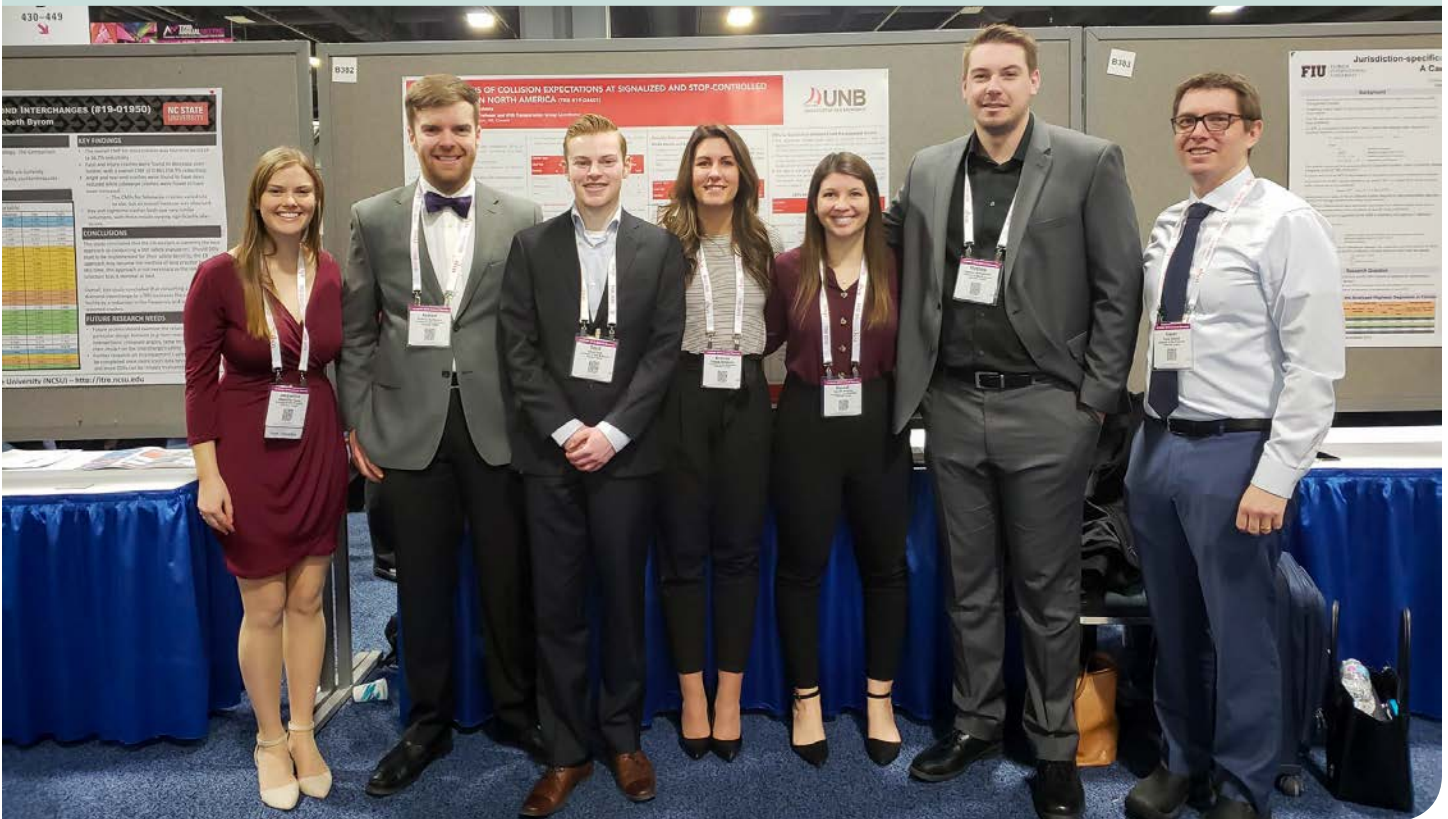
The Fall term at UNB was a busy one for the ITE Student Chapter. The group held a Lunch-and-Learn with a presentation by Kristin Elton from Watch for Wildlife, an organization dedicated to promoting awareness, discussion, and action on wildlife-vehicle conflict issues. Kristin's presentation informed our chapter about the challenges that wildlife face when attempting to cross our roadway infrastructure and some of the mitigative measures that can be implemented to make the crossing safer for both drivers and wildlife.

The graduate students in the chapter also attended the Atlantic Chapter's Fall Meeting on the UNB Campus. On the first day our members attended a training session on the use of TAC's Canadian Guide to Traffic Calming, where we learned the ins-and-outs of the guide from Brian Malone of CIMA+ and applied our knowledge in a pair of case studies. During the second day of the meeting the group attended several fascinating presentations on traffic engineering projects from practitioners from across Atlantic Canada.

In January, a group of our graduate students went to Washington, D.C. to attend TRB. The conference was an

amazing learning and networking experience, with our members attending a wide variety of sessions on transportation subjects ranging from safety analysis to mobility issues to geotechnical road construction. Our Chapter President, Andrew Northmore, also presented a poster on a portion of his PhD research.

Overall, the Fall term was a busy mix of networking and educational opportunities, and the group is looking forward to even more in the coming months.



congratulations & welcome

CITE extends a warm welcome to all new Canadian District ITE members who recently joined us!

Allan Abrogena, City of Toronto, Toronto, ON
Sneha Adhikari, University of Toronto, Toronto, ON
Emmanuel Agostino, AECOM, Ottawa, ON
Muhammad Asad Akbar, York University, Mississauga, ON
Rauhan Akhtar, Mohawk College, Hamilton, ON
Dania Al-Adhami, York University, Mississauga, ON
Nima Arbabi, P.Eng., City of Toronto, Toronto, ON
Rob Aurilio, University of Waterloo, Waterloo, ON
Montaha Mona Awil, Mohawk College, Hamilton, ON
Joel Bannis, Ryerson University, Toronto, ON
Mike Becke, City of Hamilton, Hamilton, ON
Mariam Bello, Dillon Consulting Limited, Ottawa, ON
Logan Blanchard, University of New Brunswick
Fredericton, Fredericton, NB
Daniel Blischak, Bunt & Associates Engineering Ltd.,
Calgary, AB
Shubham Bohra, Ryerson University, Toronto, ON
Cole Bondarewski, McMaster University, Hamilton, ON
Kenny K.C. Chan, E.I.T., City of Toronto, Toronto, ON
Maung Chan, Ryerson University, Toronto, ON
Bhargav Ram Channa Reddy, Stantec, Toronto, ON
Shaokai Chen, City of Hamilton, Hamilton, ON
Vin Chung, City of Port Moody, BC, Port Moody, BC
Jose Hernan Cohen, University Manitoba, Winnipeg, MB
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Pardeep Dhillon, York University, North York, ON

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Vancouver, BC
Jennifer Lynn Duke, University of Manitoba, Winnipeg,
MB
Patrick D'Uva, York University, North York, ON
Joel Elgersma, Wood Environment & Infrastructure
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Patrick James Fronda, Ryerson University, Toronto, ON
Arun Garg, University of Alberta, Edmonton, AB
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Zi Jun He, Bunt & Associates Engineering, Vancouver, BC
Tyler Hensz, Titanium Transportation Group Inc., Bolton,
ON
Sovandary Hoeun, City of Hamilton, Hamilton, ON
Farzana Khan Islam, Georgian College of Applied Ar,
Barrie, ON
Haris Ismail, University of Waterloo, Waterloo, ON
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Sheldon A. Koo, P.Eng., City of Toronto, Toronto, ON
Zaid Koreishi, Ryerson University, Scarborough, ON
Ryan Krantz, City of Hamilton, Hamilton, ON
Melissa Lachance, Mohawk College, Hamilton, ON
Kim Law, City of Port Moody, BC, Port Moody, BC
Jean-Guy J. Leger, City of Moncton, Moncton, NB
Wenting Li, University of Toronto, Toronto, ON
Franz Andres Lorenzana, Lakhead Univeristy, Thunder Bay, ON
Alvin Luk, University of Waterloo, Waterloo, ON
Suel Martin, Mohawk College, Hamilton, ON
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