

MEMBER HIGHLIGHT:
ANNA (BAUDITZ) SNOOK

UPDATES FROM OUR
ITE APPOINTEES

NEW INTERSECTIONS
TRAINING WORKSHOP



transportation TALK

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

The Decade of Action for Road Safety

Raheem Dilgir explores how we did, what we've learned, and what's next for road safety

Speed Limit Reductions in Canada

Nathalie Baudais and contributors from across the country share progress on speed limit reduction initiatives

EV Policies, Costs & GHG Mitigation

Anastasia Soukhov compares policies and strategies for the electrification of passenger transport in Ontario



**VANCOUVER
2022** 
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Julia Salvini, P.Eng.

Canadian District President

president@cite7.org

Writing this, the last of my President's messages, is bittersweet. It has been a pleasure serving as President of CITE, an organization I'm passionate about and that has meant so much to me in my years as a transportation professional. Despite the fact that the last two and a half years have not unfolded in a way any of us could have expected, I'm continually inspired by the work that our members are doing across the country—in particular, the young people who are just coming into the profession. In this edition of *Transportation Talk*, you'll see a fantastic article from McMaster PhD student Anastasia Soukhov about the Cost and GHG Mitigation Potential of Passenger Transportation Electrification in Ontario that seeks to answer a number of questions that are continually raised about electric vehicles and encourages us to dig deeper.

This edition of *Transportation Talk* also brings two articles related to road safety. The first is from Raheem Dilgir providing an update on the Decade of Action for Road Safety. This follow up article to Raheem's initial article back in 2012 brings cause for optimism—we are making progress in Canada—and a renewed call for diligence and action when it comes to reducing the number of severe injury and fatal collisions here in Canada. As a community, there is much work for us to do, but there is also creativity, guidance, and inspiration from your fellow practitioners across the country and around the world. We are making a difference.

The second article is from Nathalie Baudais exploring and reviewing Speed Limit Reductions in Canadian Municipalities. Wherever you live and practice in this country, I'm guessing your local municipality has either already implemented some sort of speed reduction program on residential streets or they are talking about it. Here is a perfect example of why our CITE community is so valuable and how we can build upon the good work of others across the country.

We have had good uptake on our *Intersections for Everyone* training program run by Toole Design with three sold out sessions. We've added a fourth session due to popular demand which will run November 8th and 9th this year.

You'll find updates in this edition from our appointees to the various ITE Councils and Committees from their meetings this summer and fall. There is a lot of important work being done through ITE and many options to get involved. If you see a project that is of particular interest to you, please reach out and we will see if there is a role for you to provide a Canadian perspective to that project.

We are re-launching the inaugural Jenn and Jan Voss Travel Bursary for Women in Transportation Engineering for our Vancouver conference in 2022. I'm delighted to open up applications for this important program developed as a tribute to Jan's late wife Jenn who was an engineer as well and faced many challenges in her career to attending conferences and other options for career development. If you are a woman practicing in Canada and are looking for travel support to our conference to participate as a speaker, a moderator, a CITE Section elected official, or are participating in the conference in some other way, please send me a letter (no longer than 2 pages) at jsalvini@cite7.org about your need and how the bursary will help you participate in the conference by February 1st, 2022. If you have had an abstract accepted for the conference, or you are participating in the conference in some other way, please indicate that in your letter. There will be five (5) bursaries valued at \$1,000 each available to eligible candidates.

The end of this year brings a change in our CITE Executive Committee. We welcome incoming Secretary-Treasurer Irimi Akhnoukh who brings her own unique perspective and energy to this organization. And we say goodbye to Jen Malzer who has served this organization so well over the last 10 years. Jen has served with passion, humility, and a deep sense of purpose and we are grateful to have had her leadership.

As a wrap up to this final message, I want to take the opportunity to say thank you. Thank you to all of you who have reached out to me in the last two years to comment on what you see happening in CITE and in *Transportation Talk*; I have welcomed your input and support. Thank you to the many volunteers I've had the pleasure of working with. Thank you to Steven Garner and Evonne Winchiu Donaher who allow us to do what we do. And finally, thank you to my partners in this adventure—Jen Malzer, Edward Soldo, Ryan Vanderputten, and Pedram Izadpanah. You are all a joy to work with and I value our friendships and your dedication to CITE.

I will gladly hand over the Presidency of this organization at the end of this year to Ryan Vanderputten, our very capable incoming President. I know we are in good hands in the years to come.

Be well and I look forward to seeing you soon.



Julia Salvini, P.Eng.
Canadian District President





Jen Malzer, M.Sc., P.Eng.

Canadian District Director

director@cite7.org

Dear members,

It is my privilege to write my last message as your District Director. I feel like I've reached the end of a long road, having served my first ITE executive committee back in 2002 at the University of Manitoba before serving the Southern Alberta Section and then the Canadian District Executive for the last ten years. Please indulge me to be a bit sentimental and remember some of the experiences, lessons, and gratitude I've felt along the way.

First, I'm proud of the organization we've become. I first joined the CITE Executive Committee in 2011, being sworn in in Halifax at a wonderful Annual Conference chaired by Dwayne Cross and a stuffed Lobster named Murray. In this first year, I would learn about the financial challenges we were in. We had primitive technology, and our practices didn't match our growth. It was a serious situation that I would witness as a committed call to action. Dedicated members stepped up to develop a financial management practices plan and mentor me on what it meant. (Thank you, Andy Vandertol; I couldn't have done it without you!) Our member organizations stepped up to make good on our accounts receivables. I saw first-hand the deep commitment members have to our organization. The willingness to step up, to train, and to fix without judgment. This culture is so powerful and will propel us as a profession to adopt best practices, to evolve our practice, and to continue to invest and improve.

Other proud moments I've felt towards CITE is the flexibility of our organization. While rapid change is often at odds with large organizations, there are so many times where I've seen us onboard ideas quickly and run with them successfully. I've also seen us try ideas and let them run their course. All of the ideas, big and small, come from a dedicated member with a thoughtful solution. What makes me proud isn't that our members have ideas, but that these ideas are normally about making meaningful spaces to better include a certain segment of our membership. Ideas like our conference mentorship program, the Jenn and Jan Voss Travel Bursary to reduce barriers for women in transportation engineering to attend conferences, the *excite* committee for emerging members and, most recently, Kate's Career Connect. I'm proud that our Executive meets often and has a culture of carefully considering any and all ideas that we can help move forward.

CITE's Annual Conferences. I quietly, among friends, have referred to our conference as "transportation camp." Nowhere else would I rather be than discussing transportation topics with new and old friends, day and night, in a great Canadian city. Having supported several Local Arrangement Committees over the years (Winnipeg, Calgary, Kelowna, and Edmonton), I have experienced the degree to which our members will go above and beyond; often more than once! Friends like Jeannette Montufar, James Donnelly, and Jan Voss return to lead conferences again, knowing the time commitment they are making for others.

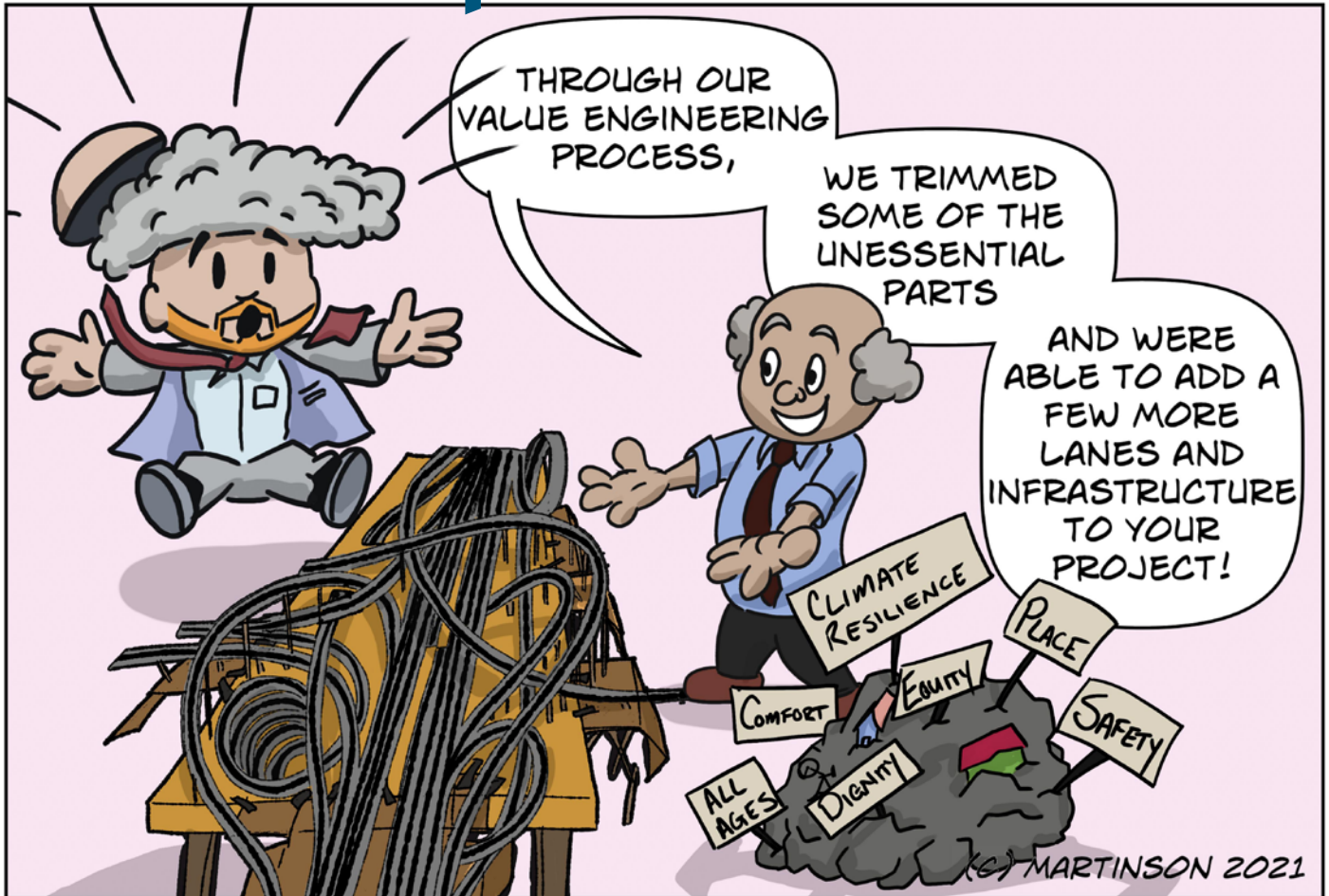
CITE's relationship with ITE has been strong now for many years, and Bruce Belmore and Gene Chartier have a lot to do with that. We continue to be an example for other Districts and a not insignificant amount of the credit belongs with our decision starting many years ago to bring in specialized talent, Steven Garner and Evonne Winchiu Donaher. Steven and Evonne give us stability and more time than volunteers could muster to support our Sections and member programs. I'm grateful to have been part of bringing them onboard and to have found candidates who are inspiring in their own ways and as committed as anyone to our organization.

If you're thinking of getting involved with ITE, I encourage you to go for it. Volunteering has pushed me to take on so many new challenges: chairing our Board, strategizing with TAC, and conquering my worst fear of all: writing in *Transportation Talk*! Of course, it's a team effort. I have made so many friendships, fueled by a shared geekiness and lots of chocolate. I am so grateful to my fellow executive members who've tolerated me along the way—thank you Julia, Ryan, Pedram, and especially Edward (who's had to put up with me the longest). We have a great pattern of trying something new in my term followed by him making that something fully great in his. Best of luck as you take on the role of District Director. My other team has been my family, Rob, Scott and Chubby, who give me a bit of time to do transportation outside of working hours knowing it helps me advance an area I'm passionate about.

As for the future of CITE? Even as we grow and evolve, I imagine it will remain the same at its core: a place where volunteers are always there to help, where it will always be a priority to move the dial around member inclusion and better design practices, and where friendships will last a long time.



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



DE-VALUE ENGINEERING

Value Engineering processes are common in our work, but there can be drawbacks. In one day, significant changes can be done to a project if the Value Engineer and your project team don't communicate properly. Here are some tips for making it through this process:

- Recognize biases or the limitations in experience of the Value Engineer. Do they understand the complexities of urban transportation projects, the importance of the built environment on transportation decisions, and the current and leading practices for creating safe and comfortable environments for all people travelling?
- If you engaged the public on the project, make sure to communicate the desires of the community in the Value Engineering process. There's nothing worse than hearing that your hopes and dreams for a safe, healthy, and enjoyable community don't really matter and are now on the chopping room floor.
- Write a clear scope for your project and articulate your problem statement, goals, and vision for the project and the community. The Value Engineering team needs to be responsive to the community context and the rationale for the work being completed.

New travel support for women in transportation

The Jenn and Jan Voss Travel Bursary for Women in Transportation Engineering

What is it?

CITE is pleased to announce a new annual travel bursary starting in 2022 for five (5) candidates valued at \$1,000 each to provide additional funding support for women in transportation engineering. This bursary is intended to encourage women who are in the early stages of their career and no longer in school to actively participate at CITE conferences.

Why?

The annual \$5000 travel bursary is being funded by the estate of Jenn and Jan Voss in memory of Jenn Voss, P.Eng., who lost her battle with cancer at the age of 52. Jenn worked in Ontario and BC for both the public and private sectors and, over her 28 year career, encountered various barriers and inequities which, in her view, made career advancement for female engineers more challenging than for men. The goal of this new annual travel bursary is to help bridge the gender gap at future CITE conferences.

Who's it for?

Eligible candidates for this annual travel bursary will include but not be limited to CITE conference speakers whose abstracts have been accepted, those who have never had the opportunity to attend a CITE conference before, transportation engineers who may be on maternity leave or unemployed, and elected officials at the Section level in Canada.

How do I apply?

Send a maximum 2-page letter via email to Julia Salvini, CITE President at jsalvini@cite7.org outlining your need for the bursary no later than February 1st, 2022. If you are a presenter with confirmation of acceptance of your abstract at the CITE/QUAD Joint 2022 Annual Conference or you are participating in the conference in some other way, please indicate that in your letter. Questions may be sent to Julia Salvini directly.



Jenn & Jan Voss at the Consulting Engineers of BC banquet in April 2015

Celebrating 75 years of Engineering Excellence



Associated Engineering provides customized, strategic transportation planning and traffic engineering services. Complementing our technical expertise, our specialist team brings strong project management, consultation, and facilitation skills. Our approach is to work with the community and stakeholders to develop sustainable and resilient transportation solutions. Our services include:

- Transportation Master Plans
- Modelling & Model Interpretation
- Business Case Development
- Policy Studies & Development
- Functional Corridor Planning
- Intelligent Transportation Systems
- Safety Reviews & Audits
- Intersection & Network Analysis
- Traffic Operations Analysis
- Traffic Impact Assessments
- Traffic Accommodation Plans
- Traffic Signal Design



VANCOUVER 2022 ite

May 29 - Jun 1

conference.cite7.org
#CITE2022QUAD



CITE/QUAD Joint 2022 Annual Conference

CITE and the Greater Vancouver Section welcome you to attend the CITE/QUAD Joint 2022 Annual Conference in beautiful Vancouver, British Columbia. The QUAD Conference is an annual transportation conference held in the Pacific Northwest for transportation professionals from British Columbia, Washington, Oregon and beyond. Bringing together CITE and QUAD offers our members a chance to connect with the broader Pacific Northwest transportation community.

Our venue and official conference hotel is the **Sheraton Wall Centre**, located in the heart of downtown Vancouver. This will serve as the perfect hub to explore the evolving transportation networks of one of Canada's urban hubs and offers great sights for social events and technical tours. Delegates who book a room at the conference hotel will receive a discount on their conference registration.

The conference banquet will be a quintessential Vancouver experience: a three-hour sunset dinner cruise around the inner harbour, English Bay, and False Creek. This and all the social events our delegates rave about are set to return, giving the CITE community many opportunities for those meaningful in-person connections.

Keep up to date with all the CITE/QUAD 2022 news at our conference website—conference.cite7.org—and via the CITE email list. Join the conversation on social media using hashtag #CITE2022QUAD.

CALL FOR ABSTRACTS **DUE OCTOBER 31**

CITE invites all interested transportation professionals and students to help shape CITE/QUAD 2022! The conference theme—*Resilient Cities: Planning for an Uncertain Future*—will showcase the unique solutions being developed to respond to the challenges of urban growth, climate change, technological development, COVID-19, and access to mobility by all groups. In facing these challenges, the collective knowledge and experience of the ITE community will enable us to build on successes, learn from experiences, and tailor the analysis, design, and implementation of transportation systems to the specific communities and users impacted. A variety of topics and presentation formats are encouraged. See the complete [Call for Abstracts here](#) for more topic ideas and submission requirements.

Submit your ideas at conference.cite7.org

INVITING SPONSORS & EXHIBITORS

CITE conference sponsorship and exhibition offers you a unique platform to connect with leading decision-makers and practicing transportation professionals from across Canada. With options ranging from high visibility Platinum to Bronze sponsorships, you're sure to find an opportunity that will showcase your company's unique strengths to CITE/QUAD 2022 attendees.

Become a sponsor or exhibitor

The Decade of Action for Road Safety

How Did We Do?
What Have We Learned?
What's Next?

By Raheem Dilgir, TranSafe Consulting

This is a follow-up to the [article in October 2012](#) by the same author, entitled, “Decade of Action for Road Safety: How Are We Doing, What Have We Learned and Where Are We Headed?”

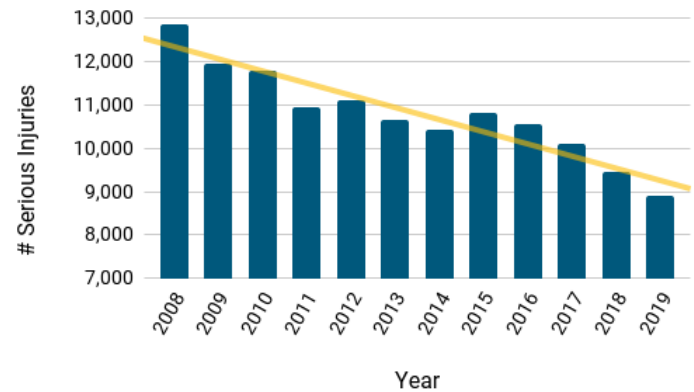
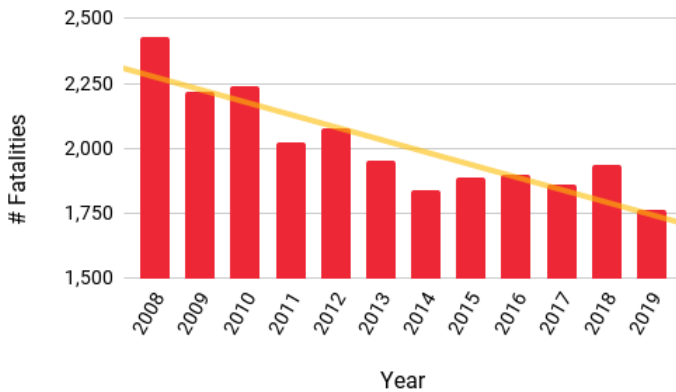
It's hard to believe that it has been nine years since I wrote the original article on this subject! In that piece, I presented some road safety trends within Canada and around the world. The Decade of Action was well underway and programs were being developed or implemented in many countries to meet the Decade's ambitious goal of reducing road traffic fatalities by 50 percent.

In the 2012 article, I also shared reasons to be optimistic, particularly in Canada, and lessons to keep in mind to help us collectively make greater progress. To save you the trouble of reading the original article, here are some of the lessons shared:

- **Lesson #1:** More Efficient Does Not Always Mean Safer
- **Lesson #2:** System-Level Engineering Measures Really Do Work!
- **Lesson #3:** The Importance of Measurement
- **Lesson #4:** Changing Road Safety Culture



Figure 1. Trends in Fatalities and Serious Injuries in Canada



In this article, we'll revisit some of those themes, and I'll share some new ones that have emerged during the past decade. Since 2012, the world has changed significantly. There has been continued growth (especially within cities), new advances in automation, and an unprecedented health crisis—which we are not out of just yet! There have also been some encouraging trends in the safety performance of our transportation systems and several new tools for understanding them better.

How Did We Do?

In the 2012 piece, I noted that over 2,000 people die every year as a result of motor vehicle crashes in Canada. So how has that changed? Figure 1 above, using [Transport Canada's National Collision Database](#), indicates that the number of fatalities declined by approximately 30 percent between 2008 and 2019 to approximately 1,750 per year, and the number of serious injuries over the same period declined by a similar percentage. These reductions are attributed in part to improvements in safety regarding alcohol-impaired driving, young drivers, and commercial vehicles. The reductions are in spite of declines in safety regarding drugs and driving, distracted driving, speeding, and motorcycle safety; these represent opportunities for further improvement.

Other high-income countries and some middle-income countries were also able to reduce traffic deaths during the Decade; however, *not one low-income country was able to reduce traffic deaths*. The reasons are varied and complex: infrastructure is in very poor shape in many of these countries; data on traffic deaths are inaccurate; government priorities do not include road safety; and rules are widely disrespected and not enforced properly. Progress will be slow but, with time, can be achieved. In the latter part of the Decade, there have been some signs of hope. In 2018, Marrakech, Morocco hosted the 1st Africa Road Safety Forum. I was fortunate to attend this event, and what I found most interesting was the leadership shown by many non-government organizations, taking matters into their own hands and achieving results. For example, [AMEND](#), an NGO with offices in Ghana, Mozambique, and Tanzania has been using science, evidence-based programs, and advocacy to help ensure safe, healthy and equitable journeys in developing countries. At that conference, the African Road Safety Observatory was launched to provide some basic road safety performance data and a management system that countries could use to start identifying trends and hotspots.

Continued on page 11...

What Have We Learned?

We have to learn from both failure and success. Here are a few examples of both from the past decade.

Lesson #1: Zero Is Possible!

In 1997, the Swedish government adopted legislation stating that road fatalities were unacceptable and called it “Vision Zero.” The growth and popularization of Vision Zero has changed the way that many in the transportation world think about road safety. Zero fatalities and serious injuries may sound impossible to some, and I have to admit I was quite skeptical at first. But seeing the success that some have achieved has inspired others and created a ground swell of optimism and activity. These success stories typically include a systemic approach to implement more widely the treatments that we have learned really do work—some of which I identified in the 2012 article—including roundabouts, safe system speed limits, leading pedestrian intervals, a shift to transit, and protected bicycle lanes.

Let’s consider the City of Oslo, Norway. In 2019, the Norwegian capital had *zero fatalities among pedestrians, cyclists, and children*. The City achieved this by reimagining the use of public spaces. For example, they closed off streets in the city centre to cars and removed parking lots, replacing them with cycling lanes, benches, and miniature parks.

While both the above examples are from northern Europe, they can provide inspiration for other northern countries such as Canada—that *zero is indeed possible!* Smaller scale successes of zero fatalities in cities across North America are starting to be achieved with greater regularity. With renewed optimism, some jurisdictions are now setting specific timelines for achieving zero fatalities and serious injuries (e.g., City of Edmonton: 2032; City of Lethbridge: 2040).

Zero Deaths on our roads.

We can do this.

Sponsored by Desjardins

Find out how: Parachute.ca/VisionZero

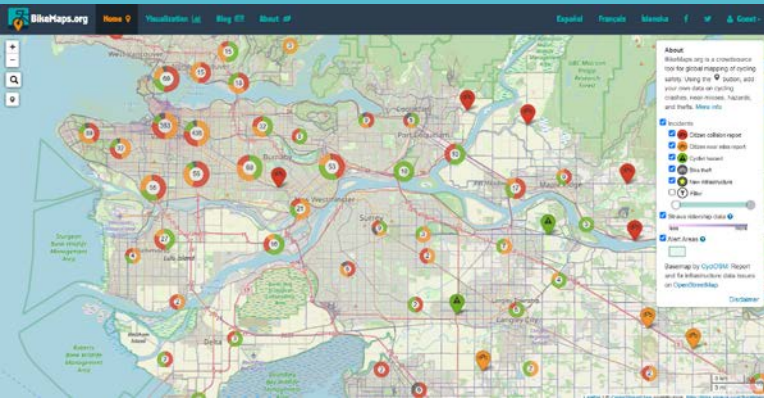
Parachute
PREVENTING INJURIES. SAVING LIVES.

Vision Zero billboard by Parachute Canada, a national charity dedicated to injury prevention

Lesson #2: The Role of Speed

The relationship between vehicle speeds and the frequency and severity of crashes is well established. Several new examples of this emerged during the past decade. For example, speed limit increases on BC highways in 2015 led to an increase in serious injuries. Speed limit reductions within many cities have led to reductions in injury crashes. For example, a reduction of the speed limit to 40 km/h on 27 urban residential collector roads in the City of Edmonton led to a 50% reduction in severe (injury and fatal) crashes along those roads (Dr. Karim E-Basyouny et. al., University of Alberta). A default speed limit of 40 km/h for residential roads has since been implemented in Edmonton and Calgary, Alberta and other municipalities across Canada are implementing speed limit reductions. Learn more about these programs in the following article on page 14.

Further reductions in speed-related crashes can be expected with the broader deployment of Automated Speed Enforcement (ASE) across Canada. The recent change in legislation to allow municipalities in Ontario in November 2019 to enforce speed limits in school and community safety zones using ASE is an important step to protecting all road users, and—in the process—helping to fund additional road safety interventions. Other effective methods of measuring and enforcing speeds (such as average or “point-to-point” speed cameras) will likely contribute to further serious injury and fatality crash reductions as the technology evolves and the public starts to accept these methods in light of their safety benefits.



More diverse data types and sources, such as citizen-reported crashes and near misses at bikemaps.org, are informing road safety programs

Lesson #3: Diversification of Road Safety Data

Crash data has traditionally been used as the primary measure for road safety performance, despite inherent issues with accuracy and reliability. This limitation, along with the shift towards looking at serious injury and fatality crashes, has prompted road agencies to make greater use of available data from hospitals, ambulances, coroners, and even crowd-sourced information such as bikemaps.org. Technological advancements have made it possible for a wider spectrum of incidents, i.e., “traffic conflicts” or “close-calls,” to be analyzed in conjunction with crash as an indicator of injury risk. Several companies now offer specialized services in this area.

Among the next steps in data development is the use of real-time information to provide feedback to road authorities to support decision-making and ultimately to road users themselves to facilitate the safer use of the transportation system. However, such systems are accompanied by privacy and security concerns which may stall efforts and the positive outcomes for awhile. Specific apps drivers can use to provide feedback on their own performance, however, are already available and should be utilized by drivers to keep enhancing their skills.

Lesson #4: Available Knowledge Resources

With the increasing focus of organizations on Vision Zero and the growing body of research among government, academic institutions, non-government organizations, and consultants, a plethora of new knowledge resources

and practical tools have recently become available. One of these is the [Action2Zero module](#), developed by the Traffic Injury Research Foundation (TIRF) to support communities with the latest research to help plan, build and implement road safety strategies. Another is the FHWA’s [Safe System Strategic Plan](#) (PDF, 5.3 MB). A list of other resources can be found on [ITE’s Safe System Technical Resources](#).

In recognition of the importance and need for expertise in road safety, the Transportation Professional Certification Board (TPCBB) established a Road Safety Professional Certification program in 2018. To date there are 100 registered Level 1 Road Safety Professionals (RSP) in Canada and 20 Level 2 RSPs. In addition, the Transportation Association of Canada, with substantial support from CITE, will be rolling out an online Road Safety Training course in 2022. Continued building of capacity and expertise in road safety, particularly among decision makers, will lead to better results.

Lesson #5: Collaboration between Knowledge Developers

In Canada, numerous non-government organizations play a role in road safety. A recent environmental scan led by Mavis Johnson of the Transportation Association of Canada (TAC)’s Vision Zero and Safe System Subcommittee identified over 30 national NGOs, with numerous others acting locally. I currently Chair the TAC Vision Zero and Safe System Subcommittee, where we have been synthesizing initiatives across Canada and holding meaningful conversations regarding best practices. At the recent TAC 2021 Annual Conference, representatives from CITE, TAC, TIRF, CARSP, and Parachute came together to start a conversation about sharing knowledge resources and exploring opportunities for collaboration. These types of discussions must continue, to leverage each others’ efforts and to influence Vision Zero-inspired policies at the federal level.

Continued on page 13...

What's Next?

In uncertain times such as this, it is important to not lose sight of our aspirational goals. To make a more substantial change going forward, in October 2020 the United Nations passed [resolution A/RES/74/299](#) (PDF, 256 KB) “Improving global road safety”, proclaiming the Decade of Action for Road Safety 2021-2030, with the ambitious target of preventing at least 50% of road traffic deaths and injuries by 2030. A plan will be released in late October 2021 by the World Health Organization in conjunction with other UN regional commissions and other partners in the [UN Road Safety Collaboration](#).

In Canada, other than continuing the national downward trends and building on lessons that I presented above, some of the keys that will help us come closer to meeting road safety targets include:

- Taking every opportunity to formalize the road re-purposing changes that were started during COVID

- Providing large incentives for a return to (at least) previous levels of transit use pre-pandemic
- National and provincial legislation for the widespread deployment of automated enforcement of speed and other unsafe behaviours
- Diversification and automation of road safety data (using traffic conflicts and health data more extensively and meaningfully)
- Slowly but surely changing the transportation safety culture (i.e. the way that health and safety is viewed in our value systems and what we each do about it individually and in our respective organizations)
- Finally, while autonomous vehicles are not a panacea and the vehicle fleet will take decades to change over, proven automated vehicle safety features should be made standard in all new vehicles and valued by consumers.

I wish you well in all your endeavours during the next Decade of Action and look forward to reporting back in a few years!



worlddayofremembrance.org

This year marks the start of the new Decade of Action for Road Safety 2021-2030, during which the World Day of Remembrance for Road Traffic Victims will play a very important part—through highlighting the very reasons for all the necessary actions during this coming Decade. WDoR 2021 puts the spotlight on the reduction of traffic speeds, which has the potential to prevent many deaths and serious injuries, in particular those of pedestrians and all other vulnerable road users— the children, elderly, and disabled.

Let's commemorate this day by keeping road safety at the forefront of all of our work and individually commit to changing one habit in support of Vision Zero. For me, it will be putting the phone in the glove box before driving, taking transit more often, and showing greater empathy regardless of what travel mode I choose.



Raheem Dilgir, P.Eng., MBA, RSP2I is a Level 2 Certified Road Safety Professional (Infrastructure), and has been a Safe Mobility Advisor in British Columbia and Alberta for 26 years. He is the Founder and President of TranSafe Consulting Ltd. which provides strategic and project-level road safety management advice to government agencies and corporations across Canada and internationally. He can be reached at 604-653-7633 or raheem@transafe.ca.

Speed Limit Reductions in Canadian Municipalities

By **Nathalie Baudais**, City of Saskatoon

As more and more municipalities across the country adopt Vision Zero policies and embrace a Safe System approach to traffic safety, there is an increasing number of municipalities exploring speed limit reductions as one of the tools to reduce the risk of severe injury and fatal collisions on their streets.

The [Safe System Approach](#) aims to minimize severe consequences of motor vehicle collisions so that road users involved in a collision do not suffer a severe injury or fatality. Speed limits are set according to the collision types that are likely to occur, the impact forces that would result from these collision types, and the human body's tolerance to withstand these forces. Refer to the resource list on the next page to learn more about Vision Zero and the Safe Systems approach.

Continued on page 15...





FURTHER READING

ITE Safe System Technical Resources

ite.org/technical-resources/topics/safe-systems

Developed in partnership with the Road to Zero Coalition

ITE Vision Zero Technical Resources

ite.org/technical-resources/topics/transportation-safety/vision-zero-standing-committee

ITE Standing Committee with links to discussions and other resources

FHWA Safe System Approach Brochure

[PDF download \(3.81 MB\)](#)

Graphic overview of the principles, elements, and comparison to traditional road safety practices

NACTO City Limits: Setting Safe Speed Limits on Urban Streets

nacto.org/publication/city-limits

Technical and policy guidance on setting safe speed limits on city streets

NACTO Urban Street Design Guide

nacto.org/publication/urban-street-design-guide

Discussion and recommendations on design speed and urban street design

Parachute Vision Zero

parachute.ca/en/program/vision-zero

Public awareness campaign for Vision Zero from Parachute, a national injury prevention charity

Canada's Road Safety Strategy 2025

roadsafetystrategy.ca

Led by the Canadian Council of Motor Transport Administrators (CCMTA)

Vision Zero Network

visionzeronetwork.org

A collaborative campaign bringing together leaders in health, traffic engineering, policy and advocacy to develop and share strategies, policies and practices that make Vision Zero a reality

A municipality's ability to set speed limits on their streets is dependent on the provincial acts. Some provinces, like Saskatchewan, allow each municipality to define speed limits in their municipal bylaws. Other provinces set speed limits provincially for all urban streets and municipalities wanting to revise the speed limit must get approval from the province.

In Saskatchewan, several municipalities in the province (e.g. Prince Albert, Warman, Martensville) have a default speed limit of 40 km/h. The largest urban centres in the province (i.e. Saskatoon and Regina) have a default speed limit of 50 km/h. In Saskatoon, there is one neighbourhood (Montgomery Place) that has a community-wide speed limit of 40 km/h due to the rural cross-section of the streets and the lack of sidewalks.

Many urban municipalities are exploring speed limit reductions on residential streets because of the possible risks to the people walking, biking, and playing in the street—vulnerable road users. In addition to the intersections, parked vehicles and driveways can create additional conflict points.

Saskatoon City Council directed the Administration to explore how speed limits are set on streets in our residential areas, including school zones, playground zones, and areas with a high concentration of seniors. It has taken time to assemble the background information, literature review, jurisdictional scan, best practices, and local context. Several reports about the issue have been presented so far this year. Find more information on Saskatoon's [Speed Limit Review](#) engage page.

Speed limit reductions in urban centres can be highly controversial and politically charged! When we conducted a survey to gauge community support for speed limit reductions, we received nearly 14,000 responses within a few weeks, with the majority of responders wanting to maintain the current speed limits.

speed limit reductions

In September 2021, our Standing Policy Committee on Transportation defeated the motion recommending that City Council approve speed limit reductions for local and collector streets in residential areas. The report on school, playground, and areas with a high concentration of seniors will be presented later this fall.

Although Saskatoon may not be seeing a city-wide speed limit reduction in the near future, there will continue to be more adoption of this type of speed limit setting practice across the country.

Several municipal councils have recently approved speed limit reductions in residential areas. Many of these municipalities have endorsed Vision Zero Action Plans or Road Safety Strategies and have been implementing various measures towards those goals for several years. As a result, their communities seemed well primed to receive this type of action. Other municipalities are conducting pilot projects, consulting community, and requesting changes at the provincial level; see updates from across Canada on the following pages.

Implementation of the speed limit reductions will vary across the country. Some municipalities have the ability to revise the default speed limit in their traffic bylaw and will sign streets that aren't set to the default speed limit. Other municipalities may have to sign every block that isn't set to the provincial speed limit for urban areas, while others may create a speed limit for a specific "zone" or "area" so that they don't have to sign every block, as shown on the right.

Despite the differing approaches, it is wonderful that so many transportation professionals are working towards improving safety for everyone using our streets. Keep up the good work!



Nathalie Baudais, P. Eng. is a senior transportation engineer with the City of Saskatoon. She is responsible for neighbourhood traffic including the neighbourhood traffic review program, pedestrian safety, traffic calming, active transportation, signage and pavement marking. Nathalie serves on the national CITE Board of Directors and is the Past President of the Saskatchewan Section of CITE.

Credit: City of Calgary



The City of Calgary posted signage at their city limits to alert drivers entering Calgary of the new city-wide speed limit change

Credit: City of Surrey



The City of Surrey Surrey Slow Streets pilot features signs designed by children from the community displayed upon entry into pilot neighbourhoods

Credit: City of Ottawa



City of Ottawa signs placed at the entrance and exit points of select areas to designate speed limits lower than the default 50 km/h for all streets within that area

Speed Limit Reduction Across Canada

VANCOUVER, BC

In July 2020, Vancouver City Council approved the creation of the slow zone pilot for local streets in the Grandview-Woodland neighbourhood. The area was identified by staff as the top ranked neighbourhood based on speeds, collisions vulnerable populations, and community amenities.

Gateway signs, speed limit signs, and paint markings were posted to alert drivers the speed limit is 30 km/h on local streets in March 2021. The pilot is ongoing but initial speed and volume data collected before and after installation reveal a slight decrease in speeds (5% fewer vehicles driving over 30 km/h and 5% more vehicles driving under 30 km/h).

More on Vancouver's Slow zone pilot [here](#)

SURREY, BC

The City of Surrey will be conducting a one-year pilot to reduce speed limits in six neighbourhoods to 30 km/h or 40 km/h. Vehicle speeds, crashes and perception of safety among residents will be monitored. If the research shows an improvement, consideration will be given to expand the Slow Streets Program to other residential neighbourhoods in Surrey. Neighbourhoods for the pilot were selected based on demographics, speeding issues, safety issues, community amenities and equity, ensuring the needs of Surrey's diverse communities were incorporated into the pilot project design.

Find more information on Surrey's pilot [here](#)

EDMONTON, AB

- The default speed limit in Edmonton was changed from 50 km/h to 40 km/h on August 6, 2021. The speed limit reduction included most residential local and collector roads; several high pedestrian arterials were also reduced to 40 km/h as well as most roadways within the Downtown area.
- A [refreshed signage approach](#) was developed to reduce signage clutter and responsibly manage the project budget.
- An extensive public awareness campaign, including the creation of a [publicly available speed limit map](#), was conducted so Edmontonians are aware of the change.
- An [Estimated Time of Arrival tool](#) was developed that shows travel time increase is very little as the lower speed limit does not impact most major roads around the city.
- A new [Safe Speeds Toolkit](#) was made available to the public to support the implementation of the new 40 km/h default speed limit.
- A grace period (warning tickets only) for automated enforcement in locations with new speed limits was applied from August 6-31.
- Based on enforcement in the first 2 weeks of September, 77% of drivers were driving at or below the new speed limit at the enforced sites.

For more information on Edmonton's speed limit reduction, check out [this website](#).

CALGARY, AB

On February 1, Calgary council approved a default speed limit of 40 km/h unless otherwise posted to come into effect May 31, 2021, leaving four months to implement a city wide speed limit change. This involved the design and installation of about 5,000 signs to maintain previously unposted speed limits at 50 km/h and cordon signage to alert drivers entering the city of the change. Many Collector Roadways were kept at 50 km/h due to compliance concerns if speed limit was dropped without changing the road environment. Council was seeking a low cost, high compliance first step toward safer speeds. Extensive education and awareness campaigns were carried out and the change was well covered by media. Data collection for evaluation purposes is underway including speed studies and citizen surveys. The Calm Collector Framework, which will outline how to continue to make credible speed limit reductions on collector roads, will be presented to Council in Q2 2022.

Full details including Collector road selection criteria, a speed limit map, and technical report are available at [Calgary.ca/saferspeed](#).

ST. ALBERT, AB

In 2019, the City of St. Albert initiated a comprehensive speed review of their road network using the *TAC Guidelines for Establishing Posted Speed Limits* and the Safe System approach as a follow up to the Transportation Safety Strategy and part of their commitment to Vision Zero.

The technical report recommended a 40 km/h posted speed for all neighbourhood roadways (local and collectors) given the higher risk level associated with parked vehicles, accesses, horizontal curves, and others. The report also recommended increasing certain arterial speeds from 50 to 60 km/h given lower risk levels associated with managed access spacing, centre median, improved pedestrian crossings, wider right-of-way, and others. Following the technical report, through a public survey, reduced speed limits for neighbourhood roads received a slight, albeit narrow majority of non-support, while increased speeds received an overwhelming majority of support. Council approved both changes in February 2021.

Find more information on St. Albert's changes [here](#).

WINNIPEG, MB

City of Winnipeg Council directed the Public Service to review lowering the default speed limit on residential streets. The review will include hiring a consultant to conduct trials of 40 km/h and 30 km/h speed limits in various communities, public engagement, developing educational materials, and working with the Province of Manitoba on signage requirements.

Additionally, the City of Winnipeg is currently trialling four 30 km/h neighbourhood greenways. Traffic calming measures and speed limit signage were installed on the greenways in the summer of 2021. The trial will span one year and will include before/after data collection and public engagement.

Details on Winnipeg's Neighbourhood Greenway Reduced Speed Pilot can be found [here](#)

TORONTO, ON

The City of Toronto is currently rolling out speed limit reductions on all local roads to 30 km/h across the city. This will ensure consistency and provide clear messaging that residential neighbourhoods are intended to be for slow driving.

Find more information on Toronto's Speed Limit Reduction program [here](#)

CONTRIBUTORS

Thank you to all the transportation professionals who contributed to this feature and the many more working across the country to make our communities safer.

- Liliana Quintero, City of Vancouver
- Shabnem Afzal & Jacki Tokaryk, City of Surrey
- Dan Zeggelaar, ISL Engineering
- Dean Schick, City of St. Albert
- Md Tazul Islam & Shewkar Ibrahim, City of Edmonton
- A.E. (Tony) Churchill, City of Calgary
- Rebecca Peterniak, City of Winnipeg
- Mateen Mahboubi, City of Toronto
- Roddy MacIntyre, Samantha Trask & Mike Connors, Halifax Regional Municipality

HALIFAX, NS

The Province of Nova Scotia legislates speed limits on public roadways via the Nova Scotia Motor Vehicle Act (MVA). Currently the MVA prescribes a default speed limit of 50 km/h. However, the Province will consider speed limit reduction submissions from a Local Traffic Authority on a neighbourhood-by-neighbourhood basis.

Halifax Regional Municipality (HRM) staff have submitted requests to the Province to reduce the default speed limit from 50 km/h to 40 km/h, or that Local Traffic Authorities be given the ability to post speed limits below 50 km/h without Provincial approval. Until changes are made to the existing MVA, HRM staff will continue to submit applications for reduced posted speed limits to the Province. Since HRM's original application in 2019, 40 km/h speed limits have been implemented in eight neighbourhoods.

More info on speed limit reduction in Halifax can be found [here](#)

The Cost and GHG Mitigation Potential of Passenger Transportation Electrification in Ontario

By **Anastasia Soukhov**, McMaster University
Co-Authors: Dr. Moataz Mohamed & Dr. Zoe Li, McMaster University

*Winning paper of the 2021 CITE WATT Consulting Group
“Transportation in a Sustainable World” Student Award*

Background

In April 2016, alongside 175 other countries, Canada committed to reducing its greenhouse gas (GHG) emissions as part of the Paris Agreement, which acknowledged the urgent need to address climate change. The *Pan-Canadian Framework on Clean Growth and Climate Change* (PCF) outlines Canada’s national plan to meet a target of reducing GHG emissions 30% below 2005 levels by 2030. The PCF includes policy actions for GHG emissions reductions across all sectors; namely carbon pollution pricing strategy, complementary actions to reduce emissions, adaptive and resilience measures, and support for clean technology. The most current publicly released [GHG reduction projections](#) indicate that the 30% GHG reduction by 2030 target will be met assuming the sectoral targets are kept in place, such as Canada’s recently announced [target](#) for 100% of new light-duty cars and passenger truck sales to be zero-emission by 2035.

The transportation sector is the [second-largest contributing sector to GHG emissions](#); it is responsible for a quarter of all GHG emissions where almost half are a result of [passenger transportation](#) (predominately on-road passenger cars and light-trucks, transit buses, etc). The rapid electrification of passenger transportation vehicles is a feasible short-term solution (pending sufficient solutions related to after-life recycling and infrastructure capacity expansion) as Canada has one of the least carbon-intense energy systems in the world due to a high proportion of renewable electricity production (Kennedy, 2015). As such, significant short-term reductions can be realized by switching to more energy-efficient technology without significantly changing behaviour.

However, what does this mean for policy-makers interested in significantly reducing on-road vehicle GHG

Table 1. Provincial policies, costs, and GHG reduction outcomes

Policy	Cost	Assumed Outcome	Source
BEV incentive	\$3,000 point-of-purchase incentive per BEV sold	An increase in one BEV and a reduction in one conventional gasoline LDV	British Columbia, 2019
PHEV incentive	\$1,500 point-of-purchase incentive per PHEV sold	An increase in one PHEV and a reduction in one conventional gasoline LDV	British Columbia, 2019
Government BEV Replacement	Between \$9,000 to \$3,000 saved per BEV (compared to conventional gasoline LDV) depending on TCO ¹	Retire conventional gasoline LDV and replace with BEV	Lutsey & Nicholas, 2019 (PDF, 376 KB); Plug'n Drive 2020
Government BEB Replacement	Between \$0 to \$76,000 per BEB (compared to conventional diesel bus) depending on TCO ²	Retire conventional bus and replace with BEB	Quarles et al., 2020

BEV = battery electric vehicle, PHEV = plugin hybrid vehicle, BEB = battery electric bus, LDV=Light-duty vehicle (passenger car), TCO = Total cost of ownership (purchase price and ten-year life-time maintenance and operation)

¹ includes the price of one charging station
² includes the price of overnight charging stations (1:2 buses) and on-route charging stations (3:10 buses)
 * all prices in 2020 CAD

emissions by year 2030? Key questions for policy-makers to consider are:

- How many vehicles should be electrified to realize a sufficient reduction in GHG emissions?
- What are the associated costs of policies which will support this transition?

Considered Policies and Costs

With the support of Dr. Moataz Mohamed and Dr. Zoe Li, I attempted to address these questions through an [interval linear optimization model](#) which was presented at this year’s Canadian Research Transportation Forum. I considered four hypothetical Ontario policies and their respective ten-year costs (from year 2020 to 2030) as listed in Table 1:

- **Battery Electric Vehicle (BEV)** incentives,
- **Plug-in Hybrid Electric Vehicle (PHEV)** incentives,
- **government Battery Electric Vehicle (BEV)** replacement, and
- **government Battery Electric Bus (BEB)** replacement.

Additionally, four federal policies identified in [Canada’s 4th Biennial Report to the United Nations Framework Convention on Climate Change](#) (PDF, 3.5 MB) that are currently implemented or planned are considered through background emissions reductions.

- **Carbon price:** An increase in the proportion of EV sold and reduction in conventional vehicles use as a result of increased fossil fuel price
- **EV purchase incentives:** Additional point-of-purchase incentives will further increase the proportion of EV sold and reduction in gasoline LDV
- **Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations:** Incremental reduction in operational emission intensity of gasoline LDV (Model year 2011 to 2025)
- **Clean Fuel Standard:** Incremental reduction in emission intensity of fossil fuel combustion

It is assumed that these background on-going federal policies come at no cost to the province, and thus only their emissions reduction impact is considered in the model.

Continued on page 21...

Any number of policies with a policy unit cost (i.e., cost per vehicle included in the policy) and forecasted emission reduction potential could have been selected. So why these four provincial policies? In Ontario, electrification of the provincial fleet and EV incentives have been or are currently in place. For instance, Ontario had EV incentives in place from 2010 to 2018 and many municipalities have pledged to electrify their municipal light-duty (LDV) fleets and bus fleets, including [City of Kingston](#), [City of Ottawa](#), [City of Toronto](#) (PDF, 2 MB), and [Greater Sudbury](#) (PDF, 518 KB). This list of policies is by no means exhaustive and additional policies should be considered if a transport specific GHG emission target is to be met.

Life-cycle GHG Emission and Vehicle Sales Data

It is assumed that each new purchase of an electric vehicle will result in a relative reduction in GHG emissions (as a result of a conventional gasoline/diesel vehicle no longer being purchased). To calculate this reduction in relative GHG emissions, the life-cycle emissions associated with the average vehicle in 2020 and 2030 are extracted from Canada’s freely available excel-based vehicle Life-Cycle (LC) Analysis emissions tool [GHGenius](#) (S&T Squared Consultants Inc., 2018). Three vehicle powertrains that reflect dominant and emerging powertrain technologies and energy sources are considered in this model:

1. a conventional option: gasoline for LDV (G.LDV) and diesel for bus (D.Bus),
2. a reduced emission option: plug-in hybrid electric vehicle (PHEV) for LDV, and
3. an emerging power sources option: battery electric vehicle (BEV) for LDV and bus (BEB).

A forecasted LDV (F.LDV) and bus (F.BUS) emission factor is calculated for the vehicle fleet in 2020 and

2030 based on the assumed proportion of vehicle types (i.e., percentage of conventional gasoline/diesel vehicles vs. EV). A few general assumptions were made to calculate these values. Please see the [pre-print](#) (PDF, 631 KB) of the submission of this research to the 2021 Canadian Research Transportation Forum Conference for additional details.

Next an interval linear programming model is implemented to calculate the minimal cost allocation of all four provincial policy units, under the following three constraints:

1. For every personal BEV and PHEV sold, a purchase incentive is given, and it is assumed that a gasoline vehicle is not purchased (resulting in GHG emission savings). It is assumed that provincial incentive offerings (in addition to federal offerings) will result in total EV sales representing between 20% to 30% of all vehicle sales in 2030. Therefore, it is assumed that the private passenger car fleet will be between 11% to 16% EV in 2030.
2. Two times the amount of BEVs is sold in comparison to PHEV in 2030
3. 80% of the existing government passenger cars and buses are replaced by BEV and BEB by 2030

Table 2. LC GHG emissions factors, number of vehicles in the fleet, and vehicle kilometres travelled in 2020 and 2030

Vehicle Type	Total LC emissions (CO ₂ eq g/km)		Forecasted number of vehicles in 2030	Forecasted number of vehicles sales, 2020–2030	Vehicle kilometres travelled each year
	2020	2030			
G.LDV	-	177.5	10,300,000 LDV of which 19,000 are government owned	8,760,000	14,500
EV	-	45.7			
PHEV	-	82.4			
F.LDV	223.7	168.33			
D.Bus	-	1768.8	9,000 Buses	-	43,647
BEB	-	185.9			
F.BUS	1794.0	1610.51			

Results and Discussion

The model estimated that GHG emissions would be reduced by between **24% to 26% (below 2005 levels) by 2030** as a result of the four provincial policies considered and the four federal background policies. To achieve this reduction range, the Ontario government must spend between **\$2.86 to \$3.11 billion** on these four policies over ten years (depending on the total cost of vehicle ownership and the number of EV incentives distributed based on EV sale). For reference, in 2017, the only year in which Ontario participated in the cap and trade program, **\$1.9 billion in revenue** was generated.

Table 3 breaks down the optimal allocation (based on the general assumptions outlined in the previous section) of this estimated **\$2.86 to \$3.11 billion** ten year period (2020 to 2030) provincial spending on a per policy unit basis. In the first four columns, the table illustrates the number of policy units (i.e., vehicles) to be purchased, the cost, the GHG emission reductions, and the ratio of the cost to the GHG emission reduction which is referred to as **GHG Abatement**. The last two columns illustrate the proportion of cost and GHG reduction for each policy.

Key Take-Aways

- The **most cost-effective** GHG reduction policies are the electrification of the **provincial light-duty fleet** and **bus fleet**
 - › The overall cost of purchasing, owning, and operating a BEV is lower than a comparative gasoline passenger car
 - › The cost of owning and operating a BEB is lower than a conventional diesel bus however the upfront cost of a BEB and charging infrastructure has not yet reached priced parity
- **BEV and PHEV incentives** are the most expensive policy but represent the **highest overall proportion of potential GHG emission mitigation**
 - › The private passenger car fleet produces **119 times** more GHG emissions than the provincial car and bus fleet
- This model is based on general EV sales assumptions and a **single-point** average life-cycle GHG emission for the private and provincial vehicle fleet in 2030; in reality, there is a **high degree of uncertainty** associated with these estimations.

Continued on page 23...

Table 3. Estimated ten-year (2020 to 2030) Ontario GHG abatement costs and proportion of cost and GHG emission reduction per passenger vehicle electrification policy units

Policy	Policy Units to be Purchased by 2030	Cost for Policy Units (\$ Bil)	GHG Emission Reductions (MT CO ₂ eq)	GHG Abatement (\$ per T CO ₂ eq reduced)	Proportion of Cost in Year 2030	Proportion of GHG Emission Reductions in Year 2030
BEV incentive	629,510 to 863,890	1.89 to 2.59	1.20 to 1.65	1,570	66% to 85%	56% to 59%
PHEV incentive	314,755 to 439,535	0.47 to 0.66	0.43 to 0.61	1,088	16% to 21%	20% to 22%
Government BEV Replacement	15,200	-0.05 to -0.14	0.03	-4,709 to -1,570	-1% to -6%	1%
BEB Replacement	7,200	0.0 to 0.55	0.50	0 to 1,100	19% to 0%	23% to 18%

Negative costs reflect a total cost of ownership savings (over the vehicle's life-time considering operation and fuel savings) compared to gasoline vehicles; thus this policy is revenue generating

An Opinion on The Long-Term Outlook

The findings of this model emphasize three significant points about Ontario's passenger transportation emissions:

- the majority of emissions are sourced from passenger cars,
- purchase incentives for passenger cars make up the largest proportion of the estimated 'hypothetical' provincial policy spending associated with GHG emission mitigation, and
- replacing provincial vehicles (both passenger car and buses) is more cost effective (in terms of GHG Abatement) than EV Incentives.

So, should we prioritize the electrification of the private passenger car fleet? Yes, as they make up the largest proportion of passenger transport emissions. However, a one-for-one replacement of a gasoline to electric should not be promoted as the long-term solution to realize significant GHG emission reductions; there are critical social and environmental concerns about the impact on vulnerable groups associated with EV manufacturing supply chains and a need to massively scale up end-of-life solutions for EVs.

Furthermore, low-occupancy passenger vehicles, whether electric or conventional, still pose the same issues associated with road-space allocation, safety for vulnerable road users, and traffic congestion. The purchase of *fewer* passenger vehicles overall and the reduction of total vehicle kilometres are essential. The continued development of equitable public transit systems and walkable communities is the only viable option to realize deep and sustainable reductions in GHG emissions; fortunately, [this investment has begun](#).

Additionally, there are more cost-effective methods to increase EV uptake than EV purchase incentives. For instance, an *EV sales mandate* is in effect in Quebec in

addition to small purchase incentive and the current federal purchase incentive. An EV sales mandate legislates auto dealerships to sell a certain percentage of EV annually, which has been shown to secure consistent supply and can free up funds to further support EV adoption. These initiatives can include: the further development of EV charging infrastructure location and levels, EV awareness campaigns, and improvements to the EV retail experience.

As the federal government recently announced an even [more ambitious GHG reduction target](#) of 40-45% GHG reduction (relative to 2005 levels) by year 2030 and reaffirmed their commitment to net-zero emissions by 2050, it is critical that governments at all levels consider and support both short- and long- term GHG emission reduction policies.



Anastasia Soukhov is pursuing a PhD in Transport Geography at McMaster University. She is passionate about sustainable and equitable transportation and recently graduated with a M.A.Sc. and B.Eng in Civil Engineering. She helped co-found the ITE McMaster Student Chapter in 2016 and has since been involved in various roles, including President.



Credit: Marc Heckner/Unsplash

TRAINING OPPORTUNITY

INTERSECTIONS FOR EVERYONE

Learn how to plan, design and balance the needs of all transportation modes at intersections



WORKSHOP FORMAT

Online course

This course will be delivered over two half-day (three hour) workshops using online instructional tools including video conferencing and whiteboard collaboration platforms.



FACILITATORS

Toole Design

This workshop is offered by the CITE Training Committee and will be facilitated by Tyler Golly, P.Eng., RSP, and Ryan Martinson, P.Eng., RSP.



DATES & TIMES

1-4 p.m. Eastern Time

- Thursday + Friday, **October 21 + 22 SOLD OUT!**
- Monday + Tuesday, **November 8 + 9 NEW!**



REGISTRATION FEES

- \$175 per individual student registration
- \$200 per individual CITE member
- \$250 per individual non-member

WORKSHOP SUMMARY

Intersections are the location where the highest number of conflicts occur, making them uncomfortable places for people walking, biking, and driving. Communities across Canada and North America have been transforming streets to achieve broader objectives and increase multimodal safety. Many designers have found challenges with how to design the intersections. This training workshop will cover intersection design approaches for different contexts: urban, suburban, cities, towns.

LEARNING OUTCOMES

- ✓ Better understanding of the goals for intersection design to achieve safety and mode share objectives
- ✓ Knowledge of the evidence-based research that underpins these goals and selecting design elements
- ✓ Hands-on experience designing intersections with innovative design elements

REGISTER HERE

- **PURCHASE REGISTRATION ON THE CITE WEBSITE**
cite7.org/about-cite/training/training-opportunities
- **QUESTIONS ABOUT THE TRAINING PROGRAM?**
Please contact the [CITE Training Committee](#)
- **QUESTIONS ABOUT REGISTRATION?**
Please contact the [CITE Administrator](#)

ANNA (BAUDITZ) SNOOK P.Eng., PTOE



Current Employment

Transportation System Engineer, City of St. John's

City of Residence: St. John's, Newfoundland

Education: BSc in Civil Engineering, *University of Alberta*

First job in transportation: Summer student at Genivar

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

CITE Training Committee

Member (2017/18), Vice-Chair (2019/20), Chair (present)

Family: Married to Brandon, mother of our new son Miles

Things I like to do: Being outside including hiking, camping, and downhill skiing

CITE INVOLVEMENT

What was the first ITE event you attended?

My first ITE event that started it all was a student mixer at the University of Alberta in the basement of a local campus pub. It was there that I realized I was not only interested in transportation but that I had also found a community of amazing professionals I wanted to become a part of. That event helped me network to get my first interview and full time job after university.

What is your ITE involvement (past and present)?

I am currently the chair of CITE's Training Committee. In 2017, I joined the committee in its early days. Over the past four years, we have facilitated in-person and virtual training workshops on current topics of interest.

What do you value most about ITE membership?

The people I have met through this organization are without question the most valuable part of membership. I have met colleagues and friends across the country and I have a network of peers I can reach out to with ideas and questions.

GETTING TO KNOW YOU

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

Ski racing as a kid. I wasn't amazing so I'm pretty lucky I didn't end up with a bad injury.

What is the last book that you read?

The last book I read was *The Very Cranky Bear* by Nick Bland. I also recently finished *All the Devils are Here* by Louise Penny.



Anna and Miles on the East Coast Trail

What's your favourite mode of transportation?

Walking. I'm also a fan of trains but, living where I do, they're not something I get to use often.

PROFESSIONAL ACHIEVEMENTS & PERSPECTIVES

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

Our City is home to some very unique intersections, and by extension some safety challenges. In recent years we piloted temporary/semi-permanent countermeasures at a few of the trickiest locations to test their potential effectiveness before making a permanent investment.

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

I like that in my position I have the opportunity to work with so many different people. From internal staff, consultants, and developers to residents and politicians.

During your career to date, have you pursued any professional designations through ITE

Last year I earned my PTOE designation. Having a civil engineering degree that's not necessarily specific to transportation I see it as a good way of recognizing, particularly for the public, that my experience and knowledge is specialized in the transportation field.

What will you hope to have accomplished at the end of your career?

I would like to look back on my career's work and see projects that improved safety and sustainability.

What is the greatest opportunity you see for the field?

Our streets are so much more than a route from place to place. They are invaluable public assets that most people don't give much thought to, unless it's the one they live on. Making more streets safe for all modes and a comfortable place in their own right will be a transformation of how we move and live.

In 2020, we appointed CITE representatives to many ITE Technical Committees and Councils to bring our unique Canadian perspective to the work of ITE. In this ITE Insights feature, our appointees share updates about their committees to help our members connect to ITE's initiatives and the transportation industry more broadly. If you are interested in participating or contributing, please contact CITE's [Technical Liaison Committee](#) and we can help you navigate the Councils.

Council Leadership Team



Mariya (Mars) Otten-Andrew P.Eng., PTOE
Principal Consultant, WSP



Niki Burkinshaw, P.Eng.
Transportation Design Engineer, City of Red Deer

Welcome to news from the ITE Council Leadership Team (CLT)! Who's that? We are the rebranded ITE Coordinating Council. ITE's Councils and Committees are the Technical Engine of ITE. ITE's CLT facilitates breaking down barriers to broader engagement. The Goals of the CLT are:

- Serve as a conduit between the International Board of Direction (iBOD) and the Councils.
- Identify opportunities for coordination and collaboration among councils and committees.
- Provide council and committee chairs with resources to deliver products and services.
- Invest in leadership growth of council and committee chairs and assist with succession planning.
- Maximize volunteer opportunities.

A recent meeting of the CLT offered many updates from across ITE's program areas and various councils and committees. Here are some highlights:

- **Safety Council** releases the "Essential Components of Incorporating Safety in Transportation Impact Analysis "60/60 report (60 days to prepare, 60 minutes to read), along with a Webinar.
- **Traffic Engineering Council** is on the home stretch of the "Prohibitions of Turns on Red Informational Report"
- **Awards Program** "Volunteer of the Year" and "Project of the Year" awards will move to the Spring Technical Conference. This move addresses part of the ITE 2021-2023 Strategic Plan – to elevate visibility and engagement with our Awards program.
- **Enhancing Connection between Councils, Sections, and Districts:** A series of recordings will be prepared providing a library of video content that can be used across any part of ITE on demand. Content can be used to supplement local meetings, use in classrooms by lecturers, etc.
 - › **ITE Book Tours** –20-25 min recording when Council or Committee publications are released
 - › **Meet a Pro** – a 30 min presentation about each Council and Committee

Continued on page 28...



- **Engagement:** ITE remains passionate about engaging members from around the globe. The Canadian District has a long and strong history of engagement and the CLT wants this to continue. We are looking at ways to improve this process, improve the value proposition for engagement to enhance the value to our membership overall. Would you like to contribute? Please reach out.
- **Leadership**ITE proudly graduated the 8th LITE class at the Annual Meeting. LITE now has 192 alumni who are remaining highly engaged in ITE. The 2022 program will be hybrid of in-person and virtual. Keith Hall is the new Chair, with Adam Allen moving to the Liaison role.
- **2022 Council Action Planning** is underway, stay tuned!
- **Developing Trends Report** is scheduled for publication December 2021. Get ready for excellent industry insights.
- **2022 Spring Technical Conference** will be virtual. The content is defined and developed by Councils and Committees, keep your eye out for our Call for Abstracts.
- **2022 Rural ITS Conference** will not be timed with the ITE Annual Meeting; instead it will occur with the Florida District Meeting in late October.




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Complete Streets Council

Ryan Martinson, M.Eng., P.Eng., RSP₁

Senior Engineer, Toole Design



Since we last chatted, the [Complete Streets Council](#) had their Summer meeting with a few aspects our Canadian membership may find interesting. There are a number of projects that are underway, so please reach out if you are interested in participating in any of the following: Pedestrian Crossing Policy Guide (currently being reviewed for Canadian context by Ryan Martinson), Bike Signal Resource Hub, Curbside Management Quick Bites, Repurposing Streets for People in a Post-COVID World, Centering Transit and Pedestrian Safety in Quick Build, and Accessible Streetscape Design Principles. Some projects have been released, and those are: ITE Micromobility Design Practitioners Guide (released [here](#)) and Allocating Right of Way (case studies available [here](#)).

Public Agency Council

Ryan Vanderputten, P.Eng., FITE

Director, Transportation Planning, The City of Calgary



The Public Agency Council held a successful Town Hall meeting on June 3rd to speak to current issues facing public agencies. In collaboration with the Industry Council, a project is underway looking at the lasting effects of COVID-19 related to the workplace.

As part of the ITE (Virtual) Annual Meeting, The City of Calgary was awarded the 2021 Public Agency Council Achievement Award for Mobility Trends During COVID-19. This award recognizes public agencies that achieve excellence in management and implementation of innovative ideas.

Consultants Council

Alfred A. Guebert, P.Eng., PTOE

President, AAGuebert & Associates



The ITE Consultants Council serves as a sounding board for the ITE Board of Direction on the strategic direction of ITE, provides a forum for collaboration among senior representatives from the member firms, and, working with ITE staff, identifies and develops products and services of benefit to its member firms.

This year alone, the following programs and services were developed by the Consultants Council exclusively or in collaboration with other employer councils.

- [Best Practices in Selecting Transportation Consultants Informational Report](#)
- [Vision Zero Sandbox Design Competition](#)
- [Diversity Scholars Scholarship](#)
- Closing Plenary Speaker Sponsorship for the ITE Annual Meeting

Upcoming in 2021-2022:

- Consultants Council Town Hall
- Consultants Council Toolbox for Being an Effective Transportation Consultant

Transportation Education Council

Sean Nix, M.Eng., RPP, FITE

Associate Dean - Mathematics & Statistics, and Building & Construction Sciences, Mohawk College



The [Transportation Education Council \(TEC\)](#) serves to support the needs of transportation students, researchers and educators across its various Districts. At its most recent meeting on August 3rd, the TEC highlighted the following activities for the remainder of 2021:

- Hosting two more webinars to assist faculty and student chapters, including one on November 11th (faculty) and November 23rd (student chapters); and
- Continuing Student Chapter Leadership/Faculty Advisor Session at district meetings - many of which have seen increases in attendance due to the on-going virtual environment.

In addition, the TEC contributed to the 2021 Developing Trends report that will be forthcoming shortly from ITE. TEC's submission included a discussion paper on Short- and Long-Term Impacts of COVID-19 on Transportation Education, with contributions from the experiences of various members of TEC.

Joint Rail Crossing Committee

Garreth Rempel, Ph.D., P.Eng.

CEO, TRAINFO



The Committee met on August 4, 2021 and involved 22 participants. Key items discussed included:

- The *Recommended Practice of Preemption of Traffic Signals Near Railroad Crossings, 2nd Edition* was approved by IBOD and released in the Spring of 2021. The next step is to schedule a webinar.
- Committee is interested in presentations for the 2022 ITE Annual Conference that address guidelines or warrants for grade separations at highway-rail crossings and lower-cost alternatives to grade separation.
- Committee is interested in working with the Pedestrian and Bicycle Committees regarding the truncation of pedestrian signal indications when traffic signals are preempted by approaching trains.
- The Committee is working on three Informational Reports: (1) Another Train Coming signs, focused on active devices in the vicinity of stations where passenger trains predominate, (2) bicycle crossings, being developed in collaboration with the Pedestrian and Bicycle Committees, and (3) CAVs at rail crossings.

congratulations & welcome

CITE extends a warm welcome to these new Canadian ITE members!

Atm Abir, AECOM, Whitby, ON

Jordan Ezanwa Achioso, Mohawk College, Hamilton, ON

Faisal Ahmed, Regional Municipality of York, Newmarket, ON

Pierre Barrieau, M.Urb., Ph.D, Université de Montréal, Montreal, QC

Siddharth Bqnerjee, University of British Columbia, Kelowna, BC

Ainsley Brown, IBI Group, Edmonton, AB

Katrina Melanie Carter, University of Manitoba, Petersfield, MB

Patrick Chahil, Mohawk College, Hamilton, ON

Manas Choudhary, Centennial College, Peterborough, ON

Farah Tasnim Choudhury, EIT, Crozier Consulting Engineers, York, ON

Bhuwani Dhakal, Lakehead University, Edmonton, AB

Jocelyne Dupas, University of Manitoba, Oakbank, MB

Hassan El-Assily, Lakehead University, London, ON

Ethan Enns, University of Manitoba, Winnipeg, MB

Adonai Manace García Santana, York University, Toronto, ON

Gurdiljot Gill, University of British Columbia, Vancouver, BC

Sarah J. Grady, City of London, London, ON

Nouran Habib, E.I.T., Urban Systems, Surrey, BC

Julia Holgate, University of New Brunswick, Fredericton, NB

Joanne Jackson, McMaster University, Milton, ON

Danyal Kamal, York University, Toronto, ON

Bryan Kelly, E.I.T., Saskatchewan Ministry of Highways and Infrastructure, Saskatoon, SK

Jeth Myco Lacsamana, Lakehead University, Thunder Bay, ON

Renee Lau, University of Waterloo, Burnaby, BC

Binuji Liyanage, University of Toronto, Toronto, ON

Farid James Mullally, University of Waterloo, Ottawa, ON

Darin Ng, University of Manitoba, Winnipeg, MB

Brian Patterson, RSP1, Urban Systems, Vancouver, BC

Steven Pignataro, Ryerson University, King City, ON

Alexander Randall II, Lakehead University, Thunder Bay, ON

Brianna Rietzel, University of New Brunswick, Fredericton, NB

Saad Roustom, Carleton University, Ottawa, ON

Josh Self, City of London, London, ON

Anna Simone, HRYCAY Consulting Engineers, Inc., Oldcastle, ON

Kelly Yili Tang, University of Regina, Regina, SK

Crystal Truong, University of Manitoba, Winnipeg, MB

Chien Wan, University of Victoria, Victoria, BC

Corey Watterson, Miovision, Kitchener, ON

Charlene Wilcock, City of Calgary, Alberta, Calgary, AB

Samirah Zafreen, University of British Columbia, Kelowna, BC

Viktoriya Zaytseva, TraffMobility, Mississauga, ON

Rui Zhong, University of Manitoba, Winnipeg, MB

Transportation & Road Safety Professional Certifications

CITE congratulates the following Canadian members who successfully passed TPCB certification exams in June 2021 and received their PTOE, PTP, RSP₁ or RSP₂ professional designations:



Road Safety Professional® (Level 1)

Christopher S. Chahil
Tavia Chow
Alireza Jafari Anarkooli
Tom Leung
Soroush Salek Moghaddam
Joy Sengupta
Emmanuel Ali Takyi



Professional Traffic Operations Engineer®

Gloria Bansah
Anne M. Beauvillier
Martin Bruno Kaczmarek
Michelle Li



Professional Transportation Planner®

Michael John Palomba



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FOR THE FEBRUARY 2022
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visit tpcb.org

Northern Alberta Section

Due to the impacts of COVID-19 in the region over the summer, the ITE Northern Alberta Section held our annual summer planning session virtually again in September. The session, held annually is to discuss our overall goals, evaluate events in the past year, and discuss plans for the upcoming year, including potential presentation topics, social events, training opportunities, workshop/panel events, year-end awards, as well as the support to our local ITE University of Alberta Student Chapter (ITEUA) events. In addition, we formally welcomed two new committee members, Davesh Sharma and Bo Kapatsila, who recently joined the team.

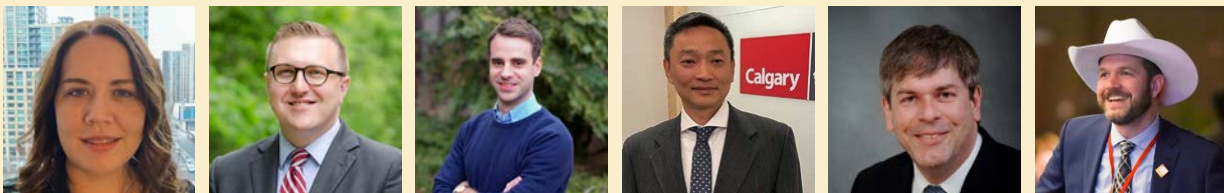
On October 6th, our fall session kicked off with a webinar on the topic of an urban gondola project in Edmonton. Georg Josi (Dialog Design) and Jeffery Hansen-Carlson (EllisDon) will present on the Prairie Sky Gondola Project, Alberta’s urban ropeway as a solution to respond to the City’s fiscal and infrastructure challenges. It can be a new transportation mode in the city for urban commuters and provide a new way to experience Edmonton’s River Valley, the largest urban park in Canada.

Southern Alberta Section

The Southern Alberta Section (ITE SA) organized interesting webinars in summer/fall 2021. In June, Jeffrey Xu and Ken Curry introduced us to the Deerfoot Trail Study, which included approximately 35 km of provincial highway that includes 18 existing interchanges and one future interchange. In July, ITE SA had a webinar in coordination with the ITE Urban Goods Movement Committee. There were three panellists, including Daniel Haake, Dr. Alison Conway, and Dr. Giacomo Dala Chiara. The discussion focused on curbside management in urban goods movement. In September, Tony Churchill presented on the Calgary Neighbourhood Speed Limit Reduction. He discussed the approval and implementation of the 40 km/h speed limit in Calgary neighbourhoods.

After each presentation session, we enabled the platform access to facilitate networking among our members. The recordings of each webinar can be also found on the [CITE YouTube Southern Alberta Webinars Playlist](#).

Keeping the membership’s interest in mind, ITE SA is currently planning for many new and exciting presentations and events. ITE SA will be hosting a joint speed mentoring event with CSCE Calgary in October as well as the annual gala event in December. Stay tuned for more details to come.



Recent ITE SA webinar presenters (L-R): Dr. Allison Conway, Daniel Haake, Dr. Giacomo Dala Chiara, Jeffrey Xu, Ken Curry, and Tony Churchill

Saskatchewan Section

The Saskatchewan Section is pleased to announce the new ITE-Saskatchewan Section Board members for 2022. The term of the new board will begin on January 1, 2022.

- President: Destiny Piper
- Vice President: Sheliza Kelts
- Programs Director: Ellen McLaughlin
- Secretary/Treasurer: Iyonia Rabayaa
- Communications/Membership Coordinator: Rebekah Vasyljeva
- Past President: Nathalie Baudais

The Saskatchewan Section hosted a webinar on October 6th entitled “Provincial Strategies for Sustainable Mobility and Active Transportation”. The virtual session featured presenters from across Canada, including Quebec, British Columbia, and Ontario. Following the presentations, the presenters and attendees participated in a discussion panel regarding sustainable mobility. The event had 36 participants join from across the province. The Saskatchewan Section wants to thank the following presenters for participating in our event:

- Jean-Marc Lefebvre, Transports Quebec
- Kate Berniaz, BC Ministry of Transportation and Infrastructure

- Katia Gauvin, BC Ministry of Transportation and Infrastructure
- Kyle Perdue, Ministry of Transportation Ontario
- Melanie Trottier, Ministry of Transportation Ontario
- Sean Wraight, Ministry of Transportation Ontario
- Mike Canzi, Ministry of Transportation Ontario

One of the Section’s goals for this year is to develop a 4-Year Strategic Plan that complements the CITE and ITE International strategic plans. The Strategic Plan has recently been distributed to the Section members to provide their thoughts and comments on the plan. The Saskatchewan Section will be asking members for their support to finalize the strategic plan through a vote scheduled for early November.

Preparations are ongoing for the 2021 Fall Session and Annual General Meeting which is to be held virtually on the morning of Thursday, November 25, 2021. If you are interested in presenting, please email a brief summary of your recent project, research, or innovation topic to Rebekah Vasyljeva, Communications & Membership Coordinator: communications@saskatchewan.cite7.org.

Watch your emails for more information about upcoming events. Follow us on Facebook: [@ITEsaskatchewan](https://www.facebook.com/ITEsaskatchewan).

National Capital Section

The National Capital Section (NCS) Executive is back after taking a well-deserved 2-month summer break! Although we didn’t host any events in July and August, the Executive used this time to progress several internal initiatives such as updating our strategic plan, developing a membership survey to understand how NCS can better serve its

members in the future, and standardizing the nomination process for our annual Lifetime Achievement Award.

NCS held two events in September since returning from the summer break. In the first half of the month, NCS partnered with the Ontario chapter of the Association of

Pedestrian and Bicycle Professionals (APBP) to host a 12-km outdoor bike tour of the recently constructed east portions of the Nepean Trail. The tour was led by Robin Bennett from the City of Ottawa’s Cycling Program Unit.

The trail consists of a variety of cycling facility types, including a multi-use trail along a hydro corridor, in-boulevard multi-use paths, buffered bike lanes, sharrows on quiet streets, and wayfinding signage along the new segment. The tour helped illustrate how policy for bicycle planning in Ottawa shifted towards a corridor approach in contrast to the previous piecemeal opportunity-based approach over the last several years.

At the end of September, NCS hosted Dr. Tae J. Kwon and Mingjian Wu from the University of Alberta, who shared their innovative methodological framework for the continuous mapping of winter road surface conditions using Road Weather Information Systems (RWIS). This framework incorporates both deep learning and geostatistical methods and has been used to support the improvement of winter traffic safety and mobility of municipal, provincial, and state roads in Canada and the US.

NCS plans to hold one or two more events in 2021 before our Annual General Meeting (AGM) in December and prioritizing our transition into 2022.



Screenshot from webinar on the mapping of winter road surface condition presented by Dr. Tae J. Kwon and Mingjian Wu.

Nepean Trail bike tour hosted by Robin Bennett, City of Ottawa

York University

Message from our President

You know it's going to be an exciting year when the weather begins to affect your events.

I would like to send a warm welcome to our new members and a big hello to our returning ones. This year we're going to have many firsts at ITE YorkU, the first year to have a theme, our first hackathon, and our introduction to a new type of membership.

We're working hard to test these changes and pave a path for future years. We hope you join us for the ride!

ITE BBQ Fall Social

This time we started our school year off by hosting our first in-person event on Sunday, September 26th at Earl Bales Park in Toronto. New and returning members joined us at the ITE YorkU BBQ to network and interact with club executives and York University professors. The event which included food, drinks, and a very exciting match of bingo received a turnout of 26 club members. Overall, the great company and delicious food made for an enjoyable evening.

ITE Pumpkin Fest

The second event of the year, the ITE Pumpkin Fest, was hosted on Sunday, October 10th in the Discovery Centre at Downsview Park in Toronto. Aside from networking opportunities, the event allowed ITE members to showcase their artistic talents with a pumpkin carving competition. After picking a pumpkin from the pumpkin patch, members carved their favourite mode of transportation in their pumpkin. Additionally, attendees were given a chance to showcase their Halloween spirit by getting their faces painted and wearing creative costumes.



ITE YorkU executive team



ITE YorkU members at the Fall BBQ Social



ITE YorkU Pumpkin Fest poster

Paved Roads Seminar

On Friday, October 29th, we will be hosting our first online seminar event of the year. Guest speakers of the event will give a presentation about the roots of our profession. Keeping in line with the timeline theme of this year, members will get to learn about the early practices of road construction that paved the way to today's design standards, no pun intended.

Future Seminars

The successful events that we have run in the early stages of the school year have motivated us to continue to provide learning and networking opportunities to our community. Currently, planning for future educational seminars with guest speaker presentations from industry partners and community professionals is underway. Following the transportation timeline theme, throughout the school year, we will be hosting seminars regarding the growth of public transit throughout the world and the more novel transportation modes that include ridesharing and autonomous vehicles.

Future Social Events

To gain student engagement in our club, ITE YorkU currently has planned multiple entertaining events within the theme of transportation. In the near future, we will be hosting social gatherings that will allow students to experience transportation modes including horseback riding, monster trucks, and more.

Hackathon

Planning for this year's transportation hackathon has begun. The hackathon, which will be hosted in collaboration with industry partners, will allow students to work on a set of transportation problems. The technical problems will

challenge students to get creative and find innovative solutions within a limited amount of time.

Industry Night

This year everyone will have the chance to develop their networking skills around industry professionals and presentations of projects from different streams of civil engineering. Preparation for our annual Industry Night where students get to interact and foster a relationship with industry professionals is underway. If you and your company would like to participate in the event and network with current and graduating students do not hesitate to reach out via our contact information below.

Club Membership

This year, we have introduced a new membership system that includes two levels, the basic membership and premium membership. Students who actively engage via events and social media are upgraded to a premium membership level. Perks of this level include discounts on club merchandise and early registration for limited capacity events.

Call for Collaboration

ITE Student Chapters! Please reach out to us if you would like to collaborate on various events, especially the hackathon! We want to build strong and lasting relationships with other chapters for many years to come.

More Information

For information about our student chapter or to view our latest annual report, visit our website at ite.club.yorku.ca. Please let us know if you are interested in speaking at one of our seminars/events or sponsoring us. You can email us at iteyorku@gmail.com or visit us on one of our social media pages. We also encourage you to watch our latest informational video on [YouTube](#).

McMaster University

The ITE McMaster Chapter started the academic semester off-strong with two virtual events!

On September 22, 2021, **Jesse Coleman**, a manager at the **Transportation Data & Analytics Unit** at the **City of Toronto** spoke to all attendees about his experience with data practice and high-impact projects around Vision Zero, multi-modal travel, and emerging forms of mobility. As he has more than 13 years of academic and industry experience in transportation engineering, he provided plenty of insight on the necessary skills and advice to start off and succeed in the industry.

On October 6th, 2021, the chapter hosted an introduction to **Transportation Spatial Data Software Tutorial**. This tutorial was led by two student members with extensive spatial analysis experience, Anastasia Soukhov and Rachael Rajendram. Anastasia provided an overview of the types of spatial data and their potential uses. Rachael demonstrated

how to produce a quick map using ArcGIS Online Map Viewer and freely available spatial data. Rachael then conducted some exploratory analysis and visualized spatial data using QGIS (an open-source GIS software). This is the first of a multi-part series of software tutorials covering applications used widely in the transportation industry. Visit the [ITE McMaster website](#) to view this recorded tutorial.



Ryerson University

After a hiatus in the previous academic year, there is a new Ryerson ITE (RITE) Executive Team ready to lead the chapter for 2021-2022 year.



Nael Alsaleh
President



Mevandie Abegunawardana
Vice-President



Ruben Del Rosario
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Rahmah Tariq
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