



Josée Dumont,  
M.A.Sc., RSP2IB, P.Eng.



## Expert Summary

Josée is a transportation safety engineer with TNS and has over 16 years of experience specializing in the fields of transportation safety, engineering, and planning. Josée has completed numerous safety assessments, road safety audits, and in-service road safety reviews for various types of transportation facilities, including corridors, intersections, active transportation facilities, and residential and commercial accesses. She also has experience with transportation policy review and development, traffic operational reviews, active transportation, transportation master plans, environmental assessments, speed limit reviews, neighbourhood traffic calming, and review of road maintenance activities. Josée has provided several transportation safety-related trainings. She has also been involved in several one-of-a-kind projects, for which she has investigated innovative methodologies and provided recommendations to implement new practices.

## Specialized Professional Competencies

- Road User and Pedestrian Safety
- Human Factors and Positive Guidance
- Winter Maintenance
- Transportation Engineering and Peer Reviews

## Professional Experience

- True North Safety Group: 2020-present
- EXP: 2019-2020
- Paradigm Transportation Solutions: 2015-2019
- CIMA+: 2009-2015
- McCormick Rankin Corporation: 2009
- MMM Group: 2007-2008

## Academic Background

- Master of Applied Science, Civil Engineering (Transportation), University of Toronto, 2009
- Bachelor of Engineering, Civil Engineering, École Polytechnique de Montréal 2006

## Additional Courses

- Road Safety Audit Training, Ontario Good Roads Association, 2023
- Road Safety Professional – Level 2, Behavioural Certification, 2022
- Snow School, Ontario Good Roads Association, 2022
- Road Safety Professional – Level 2, Infrastructure Certification, 2020
- Road Safety Professional – Level 1, Certification, 2018

## Project Experience

### Road Safety Audits

#### **Hunt Club Road and Bank Street Protected Intersection, City of Ottawa, Ongoing**

Retained to conduct an RSA of the functional design for the widening and modification to a protected intersection. The study area includes the intersection itself, as well as the approaches of Hunt Club Road and Bank Street, including commercial accesses.

#### **Proposed roundabout at the intersection of Jeanne d'Arc Boulevard and Fortune Drive, City of Ottawa, Ongoing**

Retained to conduct an RSA of the functional design for one-lane and multi-lane roundabout options at the intersection, along with lane modifications on Jeanne-d'Arc Boulevard, between Fortune Drive and the Highway 174 Westbound ramps. The network improvements aim to support the new Jeanne d'Arc O-Train station at OR 174 and Jeanne d'Arc Boulevard.

#### **Bank Street Cycling Improvements between Riverside Drive Westbound and Cameron Avenue, City of Ottawa, 2023**

Retained to conduct an RSA of the preliminary design for the redesign of Bank Street between Riverside Drive Westbound and Cameron Avenue, including a lane reduction, from a four-lane cross-section to a three-lane cross-section, the addition of designated cycling facilities, the addition of protected intersection elements at several intersections, and a connection to the existing multi-use path at Riverside Drive Westbound.

#### **Laurier Avenue Cycling Modifications, City of Ottawa, 2022**

Retained to conduct an RSA of the preliminary design for the redesign of Laurier Avenue between Elgin Street and Queen

Elizabeth Driveway, including the implementation of a protected intersection at Laurier Avenue and Elgin Street, the addition of a separate cycle track on the north side of Laurier Avenue, and updates to the pedestrian and cyclist crossing configurations at the Queen Elizabeth Driveway ramps.

#### **Woodfield Road Extension, City of Toronto, 2022**

Retained to conduct an RSA of the functional design for the extension of Woodfield Road, a new intersection with Lake Shore Boulevard East, and new separated cycling facilities between Eastern Avenue and Lake Shore Boulevard East.

#### **Mackenzie Avenue Cycling Link, City of Ottawa, 2022**

Retained to conduct an RSA of the tender progress print design for new separated cycling facilities along Mackenzie Street, between Rideau Street and the Rideau Canal Eastern Pathway, in the area of the intersection of Mackenzie Avenue/Colonel By Drive and Daly Avenue. The study area also included the intersections of Mackenzie Avenue and Daly Avenue, Rideau Street and Mackenzie Avenue, and Rideau Street and Colonel By Drive.

#### **Cycling Safety Improvements on St. Patrick Street, City of Ottawa, 2022**

Retained to conduct an RSA of the 66% design for new separated cycling facilities along a 280 m segment of St. Patrick Street, including the intersection with King Edward Avenue.

## **Transportation Safety Assessments**

### **Safety Review of Proposed Multi-Use Path Crossing of Eglinton Avenue west of Jonesville Crescent, City of Toronto, Ongoing**

Retained to complete an assessment and preliminary design of the Multi-Use Path (MUP) crossing of Eglinton Avenue in the vicinity of Jonesville Crescent. In this location, the MUP will cross a two-way divided section of Eglinton Avenue, which also includes an at-grade portion of the Eglinton Crosstown Light Rail Transit Corridor in the median.

### **Safety Review for Macdonald Bridge Bikeway Redevelopment, Halifax, Nova Scotia, 2023**

Safety review for the 30% conceptual design for the redevelopment of the Macdonald Bridge Bikeway Connectors Project in Halifax, Nova Scotia. Used explicit transportation safety principles to identify safety issues and potential remedial measures to improve safety for all users.

### **Transportation Safety Assessment of Franklin Boulevard Redesign: Impacts on St. Benedict Catholic Secondary School, Waterloo Catholic District School Board, 2023**

Retained to complete a transportation safety assessment of the design alternatives proposed by the Region of Waterloo for the reconstruction of Franklin Boulevard, in the vicinity of St. Benedict Catholic Secondary School. The assessment included a review of the impacts of the signalized intersection and roundabout alternatives on student pedestrian safety.

### **Assessment of LPIs through Conflict Analysis, Transport Canada, 2022-2023**

Retained to conduct video conflict analyses at 14 intersections in the municipalities of

Durham, Guelph, and Oakville to measure the effect of implementing Leading Pedestrian Intervals (LPI).

### **Safety Review of Kariya Drive/Kariya Gate Corridor, City of Mississauga, 2022**

Retained to conduct a safety review as part of a roadway improvement project for the Kariya Drive/Kariya Gate corridor to provide recommendations to improve safety while implementing new cycling facilities.

### **Safety Review of Separated Cycling Facilities and Conversion of Pilot Cycling Facilities Network, Region of Waterloo, 2022**

Retained to conduct a safety review of existing conditions on four cycling corridors to identify collision patterns and risks and recommendation of countermeasures. The project also includes a safety evaluation of the proposed alternatives and a detailed safety assessment of the preferred alternative for each corridor.

### **Collision Analysis, Downsview Area, BA Group, 2022**

Retained to conduct a high-level collision analysis, using Vision Zero publicly available collisions data, along four corridors and at the top 10 intersections with the most collisions, within the context area for the Downsview Transportation Master Plan. The analysis included the identification of safety themes to consider during the planning and design stages.

### **In-Service Road Safety Review of the 8<sup>th</sup> Line Road and Parkway Road Intersection, City of Ottawa, Ongoing**

Retained to conduct an ISRSR at the intersection, following collision history and residents' complaints. The review includes collision analysis, desktop review, field investigation, public consultation, and recommendation of countermeasures.

**Safety Workshops for the Eglinton Crosstown LRT Infrastructure, 2021-2022**

Retained to prepare a series of safety workshop for the Eglinton Crosstown LRT infrastructure team. The workshops included the identification of potential safety issues, frequency analysis, and the identification of countermeasures, including recommendations for the maximum LRV speeds through intersections.

**Safety Review of McLaughlin Road Corridor, City of Mississauga, Ongoing**

Retained to conduct a safety review as part of a Class EA of McLaughlin Road corridor between Bristol Road West and Britannia Road to provide recommendations to improve safety while implementing new cycling facilities.

**Road Safety Review for a New Development, 2021**

Retained to conduct a road safety review for roadways and intersections in the vicinity of a proposed new development in the City of Barrie, including a review of sight lines, intersections and roadways, collision analysis and recommendation of countermeasures to improve safety for all modes.

**Guide Rail Assessment and Prioritization Study, Town of Caledon, 2021**

Retained to conduct a roadside safety assessment of existing conditions based on industry standards and to develop a priority list for the recommended remedial measures at over 300 locations.

**Safety Review of Bridge Street and Canal Road Intersection, Town of Bradford West Gwillimbury, 2021**

Retained to conduct a safety review of the intersection and provide recommendations to improve operations and safety at the intersection.

**Review of Intersection Countermeasures, York Region, 2020**

Retained to review countermeasures at four intersections and analyze pedestrian/cyclist safety using conflict analysis, and before and after countermeasure implementation.

**Review of Safety at Plaza Access, York Region, 2020**

Reviewed safety and operational concerns at a commercial access along Highway 7 in Vaughan. Provided recommendations to modify the movements allowed at the access to improve safety while minimizing impacts on traffic operations.

**Traffic Study of Nelles Road South and Dorchester Drive, Town of Grimsby, 2020**

Conducted a road safety review and sidewalk connectivity study along Nelles Road South and Dorchester Drive, in the Town of Grimsby. The project included the assessment of traffic calming measures, public engagement, and education.

**Yonge Street Corridor Review, York Region, 2020**

Reviewed two intersections along Yonge Street in Richmond Hill. The review included the assessment and recommendation of alternatives to improve traffic safety and operations.

**Plaza Access Safety Review, York Region, 2020**

Reviewed safety and operations at the accesses to a private plaza located near the intersection of 16th Avenue and Woodbine Avenue in Markham. Provided recommendations to modify the accesses to increase traffic safety while minimizing impacts on traffic operations.

**Melville Avenue Operational Safety Review, Vaughan, 2020**

Retained to complete a safety review of Melville Avenue, including needs and opportunities for active transportation, traffic operations, traffic safety and heavy vehicles traffic.

**Intersection Conflict Analysis, Cobourg, County of Northumberland, 2019**

Reviewed traffic conflict analysis at the Elgin Street and Ontario Street intersection and impacts on past recommendations.

**Speed Limit Review, County of Norfolk, 2019**

Conducted a review of posted speed limits in two locations, including a horizontal curve advisory speed, and development of a speed limit review policy.

**Elgin Street and Ontario Street Implementation Plan, Cobourg, County of Northumberland, 2019**

Prepared a signal timing changes plan for implementation at the intersection of Elgin Street and Ontario Street, and reviewed safety impacts.

**St. Raphael Catholic Elementary School Traffic Study, Toronto Catholic District School Board, City of Toronto, 2019**

Conducted a traffic safety and reviewed traffic operations around the school, and provided recommendations for improvements.

**University Avenue Pedestrian Safety Review, McMaster University, City of Hamilton, 2019**

Reviewed pedestrian safety and pedestrian crossover needs along University Avenue on the campus of McMaster University.

**Traffic Safety and Conflict Review, Intersection of Bruce Road 19 and Bruce Road 4, Walkerton, Bruce County, 2019**

Retained to review traffic conflict analysis and safety of the Bruce Road 4 and Bruce Road 19 intersection and provide recommendations for improvements.

**Muskoka Road 118 Detailed Engineering Analysis, Port Carling, District of Muskoka, 2019**

Completed an operational and safety review of Muskoka Road 118 including pedestrian facilities, intersection traffic control, on-street angle parking and sight distances. Provided recommendations to improve interactions between through vehicles, parking maneuvers and pedestrians.

**Needs Environmental Assessment Update for County Road 25, Bruce County, 2019**

Conducted an operational, safety and needs assessment for County Road 25, between County Road 33 and Highway 21. Provided client with identification and assessment of opportunities and recommendations.

**St. Eugene Catholic Elementary School Traffic Study, Toronto Catholic District School Board, City of Toronto, 2018**

Completed a traffic safety and traffic operations review around the elementary school. Provided recommendations for improvements.

**Pedestrian Safety Program, Town of Oakville, 2017**

Participated in the review of existing policies and practices, recommendations for use of pedestrian crossovers, identification of potential locations for implementation of pedestrian crossing treatments, development of a prioritization methodology and tool to rank potential pedestrian crossing locations.

**Environmental Assessment of Main Street and Queen Street, City of Brampton, 2017**  
Retained to complete a safety assessment as part of a Class Environmental Assessment.

**Cork Drive Traffic Operational Review, Town of Whitby, 2016**

Technical review of operational and safety issues along a residential roadway. Recommendations for traffic calming strategies were provided, and public information meetings were held.

**Operational Safety Review of the Intersection of County Road 30 and Old Wooler Road, Brighton, County of Northumberland, 2016**

Completed technical review of operational and safety issues at the rural three-leg intersection, including traffic impacts of an adjacent quarry. Recommendation of improvement strategies were provided.

**Operational and Safety Review of the Intersection of Elgin Street and Ontario Street, Cobourg, County of Northumberland, 2016**

Retained to conduct a technical review of operational and safety issues at the four-leg signalized intersection, including improvement strategy recommendations.

**Mississauga Road Widening Class Environmental Assessment and Road Safety Analysis, Region of Peel, 2016**

Completed a safety assessment as part of the Class Environmental Assessment. Study area ranged from Financial Drive to Bovaird Drive West. Identification of safety issues and provision of safety-related recommendations were provided to the client.

**Scoping and Feasibility Assessment for a Comprehensive Safety Countermeasure Toolkit, FHWA, 2015**

Completed a literature review, including an inventory and summary of available literature including tools, guides and manuals, which could be included or useful in the development of a Safety Countermeasure Toolkit.

**Road Safety Strategic Plan, City of Toronto, 2015**

Literature review and jurisdictional scan of best practices for the development and implementation of a Road Safety Strategic Plan. Documentation of current situation and recommendations for the preparation of a Road Safety Strategic Plan by the City.

**Safety Impacts and Regulations of Electronic Static Roadside Advertising Signs, City of Toronto, 2013**

Literature review of safety impacts of static electronic advertisement signs, jurisdictional scan of electronic signs regulations, survey of best practices in other Ontario jurisdictions. Also completed a before and after collision analysis using Empirical Bayes methodology and comparison sites for signs located at intersections, along an expressway, and along a major arterial, and a critical review of FHWA's 2012 Driver Visual Behavior in the Presence of Commercial Electronic Variable Signs (CEVMS) report and its transferability to the City of Toronto

**Opportunity Study for Corridor Widening, Autoroute 15, Ministry of Transportation of Québec 2012**

Literature review of the safety implications for the option of adding a lane to a freeway without widening the pavement.

**Intersection Safety Devices Program Evaluation, Alberta Transportation, 2012**  
Completed quality control of evaluation data, including volumes and collision information. Assisted in the development of safety performance functions.

**Implementation of SafetyAnalyst, MTO, Head Office 2012**  
Completed quality control of volume and infrastructure databases.

**Cost-Benefit Analysis of Suggested Improvements for Freeway Ramps, Eastern Region, MTO, 2011**  
Analysis of benefits and benefit/cost ratios for suggested improvements to four freeway ramps, including calculation of reduction in the number of collisions expected from the suggested improvements.

**Update of Safety Performance Functions and Network Screening, Region of Peel, 2011**  
Provided guidance to other staff for application of the Empirical Bayes method to assess the safety of each location, development of a potential for safety improvement at each location, and ranking of locations to complete the network screening.

**Assessment of Speed Limit Reduction in the City of Montréal, Québec, 2011**  
Performed a before and after study to estimate changes in safety for zone whose speed limits reduced from 50 km/h to 40 km/h.

**Update of Safety Performance Functions and Network Screening, Region of Halton, 2010-2011**  
Calibrated safety performance functions using the Full-Bayes method for different types of road segments and intersections.

Applied the Empirical Bayes method to assess the safety of each location, developed a potential for safety improvement at each location, and ranked the locations to complete the network screening.

**Characterisation of Median Barriers and Applicability with 2+1 Type Roads in the Province of Québec, Transport Québec, 2010-2011**

Bilingual literature review and characterisation of different median barrier types, their safety impacts, characteristics, installation, costs, applicability to 2+1 type roadways, and other advantages and disadvantages. Identification of decision factors for the use of each median barrier type.

**Ontario Municipal Board Expert Report – Traffic Operations and Safety, 2010**

Review and preparation of expert report with respect to traffic operations and traffic safety issues in preparation for an OMB hearing for a proposed development in the Town of Milton.

**Safety Review for the Turcot Complex, Ministry of Transportation of Québec, Montréal, 2010**

Participated in the development of a methodology for the analysis of potential ramp closures impacts, and reviewed safety for future conditions, including the review of various scenarios.

**Safety Review for the Autoroute 50 Freeway and Route 148 Highway, Ministry of Transportation of Québec, Gatineau, 2010**

Undertook a safety review for current and future conditions on autoroute 50 and route 148, using the Empirical Bayes approach. Calculated the potential for safety improvements (PSI) index for autoroute 50. Completed a safety review of future



conditions on autoroute 50, including the assessment of 5 safety measures and their index of efficiency, using the Empirical Bayes approach.

**Speed Limit Review, Main Street West between Casablanca Boulevard and Mountain Street/Christie Street, Region of Niagara, 2009-2010**

Undertook an in-office review and the collection of field data. Completed a safety review using the Empirical Bayes approach, and a review of posted speed limits based on Region of Niagara Speed Policy.

**In-Service Road Safety Review, Kingston Road between Salem Road and Harwood Avenue, Durham Region, 2009**

Provided assistance for the in-office review and on site data collection. Provided technical assistance for the road safety review.

**Other Transportation Studies**

**Travel Time Study, Town of Halton Hills, 2019**

Data collection and analysis review of 7 corridors within the Town. Analysis included comparison with previous years.

**Lane Reconfiguration Feasibility Study, Town of Caledon, 2019**

Retained to conduct a feasibility study of adding active transportation facilities to two existing roadways, Kennedy Road and Queensgate Boulevard, as part of the Revitalizing Caledon Streets Program.

**Pedestrian Crossing Warrant Analysis and Preliminary Design, Town of Tillsonburg, 2018**

Retained to complete a warrant analysis for a pedestrian crossing facility at the Trans Canada Trail and Broadway crossing, including data collection, analysis and

recommendations. She was later retained to complete the preliminary design for the same PXO.

**Speed Limit Review, Waste Management Centre, Region of Waterloo, 2018**

Reviewed the posted speed limit within the waste management centre, including the review of a horizontal curve advisory speed.

**Kennedy Road Environmental Assessment, Town of Caledon, 2018**

Conducted an operational, safety and needs assessment of Kennedy Road, between Old School Road and Bonnieglenn Farm Boulevard. The study area included a new school. Identification and assessment of opportunities and recommendations were provided to the client.

**Posted Speed Limit Reviews, Township of Centre Wellington, 2017**

Reviewed posted speed limits on various roadways within the Township.

**Leaside Traffic Calming Study, Leaside Property Owners' Association, City of Toronto, 2017**

Retained to complete a neighbourhood-wide traffic study, including the identification of issues, preparation of a traffic calming plan and public consultations.

**Transportation Master Plan, Town of Caledon, 2017**

Developed a methodology and completed the analysis to prioritize town intersection reviews, based on operational and safety characteristics.

**Speed and Delay Study, Region of Halton, 2017**

Completed data collection and analysis along 12 corridors within the Region. The analysis included comparison with previous studies.



**Traffic Impact and Parking Study, Diamond Schmitt Architects, Trafalgar Park Revitalization Project, Town of Oakville, 2017**

Retained to complete a traffic impact study and parking study for the Trafalgar Park Revitalization project. The revitalization included: new fire hall, indoor arena extension, community centre, and improvements to outdoor equipment and sport fields.

**Winter Maintenance of Bicycle Lanes, Les Ponts Jacques Cartier et Champlain Incorporée, 2015**

Bilingual literature review and jurisdictional scan of best practices for winter maintenance of bicycle lanes, including levels of service, equipment and materials used.

**Flashing Beacon Justification System, Traffic Engineering Services Retainer, Eastern Region, MTO, 2013**

Literature review and development of a justification, based on collision history, for the use of flashing beacons at two-way and all-way stop controlled intersections.

**Patrol Yard Assessment Study, Region of Niagara, 2013**

Overview and technical guidance for the development of optimized patrol and maintenance routes, ensuring all the appropriate standards are met.

**Peer Review of Two Longer Commercial Vehicle Reports, Region of Halton, 2011**

Review of the geometric analysis and the traffic impact analysis completed by 2 consulting firms. Summarized issues and completed a technical report.

**Cost-Benefit Analysis of 2+1 Type Roads in the Province of Québec, 2011**

Cost-benefit analysis of 2+1 type roadways, with and without median barriers. Analysis of 2+1 type roadways with at-grade intersections and with grade-separated intersections. Comparison to regional 2-lane roadways and 4-lane divided freeways.

**Review of Winter Maintenance Routes, County of Haldimand, 2011**

Review of three winter maintenance route scenarios for appropriateness, and compliance with winter maintenance and hours of work standards and regulations.

**Review of the Ontario Highway Traffic Act and Suggestion of Potential Amendments to Promote Active Transportation, Regional Public Works Commissioners of Ontario, 2010-2011**

Review of the Ontario Highway Traffic Act (HTA), equivalent acts for all Canadian provinces, and other literature. Comparison of the Ontario situation against other provinces and key states and countries. Consultation of transportation organisations and community and public stakeholders. Suggestion of potential amendments to the HTA.

**Speed Limit Review, City of Laval, 2010**

Designed and conducted a survey on processes for the determination and modification of speed limits and summarized the data. Surveyed 24 jurisdictions across Canada.

**Boulevard Maintenance Survey, 2010**

Designed and conducted a direct and indirect survey on boulevard maintenance in municipalities across Ontario and summarized the results.

**Determination of Speed Limits for the Chelsea Municipal Road Network, Municipality of Chelsea, 2009**

Undertook a review of literature on speed limits determination and identified factors and methods. Developed a methodology applicable for the Municipality of Chelsea. Determined and justified speed limits and speed zones for the entire road network in the Municipality of Chelsea.

**Highway 17 Four-Laning Route Planning and Preliminary Design Study, Ontario Ministry of Transportation, Ontario/Manitoba border to City of Kenora, 2009**

Provided direct support to the Consultant Project Manager for the organization of collected data, identification of stakeholders and preliminary design. Prepared documentation for the first Public Information Centre (PIC), and attended the PIC as part of the consultant team. Participated in the preparation of the Transportation Environmental Study Report (TESR).

**Environmental Impact Statement for the New Nuclear at Darlington Project, Ontario Power Generation, Clarington, 2007-2008**

Managed data collection for the traffic and transportation environment assessment of environmental effects. Assisted with the administrative documentation for the traffic and transportation environment.

**Traffic Impact Study for a Potential Building in Downtown Burlington, Burlington, McMaster University, 2007**

Collected traffic and road network data. Generated traffic volumes and parking demand and analyzed the impact of multiple scenarios for the use of a downtown Burlington building.

**Transit Assessment Study, City of Kawartha Lakes, 2007**

Collected information on the existing transit routes, including drivers' and passengers' input. Assessed the existing transit routes and services, and suggested modifications and improvements.

**Construction Signage Design, Lower Simcoe Street, Enwave Energy Corporation, Toronto, 2007**

Design of the construction signage on Lower Simcoe Street and on the Lakeshore Boulevard approaches.

## Professional Societies and Associations

- Member, Professional Engineers of Ontario (PEO)
- Member, Ordre des ingénieurs du Québec (OIQ)
- Member, Institute of Transportation Engineers (ITE)
- Member, Canadian Association of Road Safety Professionals (CARSP)
- Member, Association Québécoise des transports (AQTR)

## Publications/Presentations

- Safety Effectiveness of Leading Pedestrian Intervals – A Before and After Study Using Video Conflict Analysis, ITE Canada Conference, Winnipeg, June 2023
- A New Tool to Select Pedestrian Crossings for Crossing Guard Allocation [published in French under the title: *Un nouvel outil pour sélectionner les traverses piétonnes à sécuriser avec brigadiers*], Routes et transports, Volume 52, No 1, June 2023
- Pedestrian Facilities: Safety and Risk Management Workshop, Ontario Traffic Council, April 2023

- Big Data and Emerging Traffic Technologies – Lessons and Tools to Learn: Crowd Sourced Data, ITE Canada, November 2022, March 2023 & May 2023
- The Benefits of Proactive Road Safety Programs on Liability Risk, Hamilton ITE Section, September 2021
- The Role of Road Safety Audits in Vision Zero Strategies, Municipal World, June 2021
- Roadway Safety Management and Systemic Safety Approaches module, part of Fundamentals and Practical Applications of the AASHTO Highway Safety Manual, Greater Vancouver ITE Section, May 2021
- Safety Through Geometric Design, Road Safety at Intersections, and Positive Guidance, World Bank, November 2020
- Development of a Municipal Pedestrian Safety Program, ITE Canada Conference, 2019
- Determination of Speed Limits and Related Factors and their Impacts on Safety, 2010 Annual Meeting, Canadian Multidisciplinary Road Safety Conference XX, Niagara Falls, Ontario.