

Becca C. Lane, P.Eng., B.A.Sc., B.Sc. (Hons)

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PROFESSIONAL REGISTRATION/EDUCATION

- 1993 Licenced to practice as a Professional Engineer in the Province of Ontario
- 1991 Bachelor of Applied Science - **Geological (Geotechnical) Engineering** ,
Queen's University, Kingston, Ontario.
- 1988 Bachelor of Science (Honours) - **Geological Sciences**,
Queen's University, Kingston, Ontario.

EMPLOYMENT HISTORY

April 2020 **Director, Central Operations**
To Present Operations Division, Ministry of Transportation Ontario (MTO)

Applied highway engineering opinions based upon engineering principles in regard to the planning, development, implementation and delivery of the Ministry's regional highway operational programs (i.e., Corridor Management, Maintenance, Construction Services) as well as consulting with or responding to the comments of industry stakeholders (municipalities, developers, contractors, or consultants) relating to Ministry highway activities. Participated with the application of highway engineering principles and opinions in the development of policies, procedures, standards, specifications and guidelines to support the Ministry's maintenance and construction activities relating to the Ministry's Central Regional operational programs and industrial stakeholder relations.

April 2013 **Manager, Materials Engineering and Research Office**
To April 2020 Highway Standards Branch, Provincial Highways Management, MTO

Provided highway engineering opinions based upon engineering principles to 90+ Ministry staff on the application of highway engineered materials (i.e. concrete, asphalt, chemicals, soils, aggregates, metals) during design and construction, as well as providing expertise in pavement design, evaluation and management, and the development of geotechnical and quality assurance testing to ensure quality and acceptable life-cycle for the highway, all of which included working with technical engineering experts and laboratory staff. Participated in the drafting of highway construction standards and specifications for engineered materials with an understanding of the testing and monitoring standards applied to highway engineered materials. Further, provided advice on the use of highway engineered materials to Ministry Senior Leadership, Managers of Operations, Heads of Geotechnical and Heads of Quality Assurance. Participated and represented the Ministry on internal and external advisory groups and technical committees to provided highway engineering principles and opinions related to engineered materials.

Dec 2011 **Manager, Systems Analysis and Forecasting Office**
to March 2013 Transportation Planning Branch, Policy and Planning Division, MTO

Provided highway engineering opinions based upon engineering principles to Ministry staff in regard to the activities of the collection, analysis, modelling and forecasting of passenger and freight data, including development of data visualization tools; in support of long term planning projects and optimization of highway networks to support such usage/traffic, liaising with consultants about the traffic forecasting impacts on highways, presenting prediction models and working with industrial stakeholders at Metrolinx, Ministry of Infrastructure, Growth Plan Secretariat, Transport Canada, Municipalities, Universities and other offices/branches/divisions.

July 2008 **Head, Pavements and Foundations Section**
to Nov 2011 Materials Engineering and Research Office, HSB, PHM, MTO

Provided highway engineering opinions based upon engineering principles to Ministry staff in their activities of project management, standards and specification development and implementation, provision of technical expertise, development and implementation of guidelines and procedures for pavement design, evaluation and management.

Jan 2008 **Executive Assistant to the Assistant Deputy Minister (ADM)**
to June 2008 Provincial Highways Management Division, MTO

On assignment to the ADMs office in Queen's Park, wherein provided highway engineering opinions and program opinions to the ADM, the Deputy Minister's Office and the Minister's Office on general and specific matters related to highway projects as well as other administrative advice on highway projects involving general matters related to the Ministry highway program in response to media and other public issues related to the management, coordination of highway construction initiatives, liaison with internal and external partners related to the construction and maintenance of highways.

2003 - 2007 **Senior Pavement Design Engineer, Pavements and Foundations**
Materials Engineering and Research Office, HSB, PHM, MTO

Provided highway engineering opinions related to engineered materials to evaluate and implement innovative pavement engineering technologies, new construction engineered materials, equipment and procedures, along with the application of standards and construction specifications for the use of these highway engineered materials on Ministry highway projects. Drafted Highway Construction Specifications for the materials developed for highway usage and implemented these material specifications for construction projects along with testing and monitoring requirements to ensure quality. Provided technical expertise and highway engineering opinions on pavement design, construction, testing, monitoring, rehabilitation and maintenance to Ministry staff. Liaised with external road agencies, contractors, material suppliers and consultants in reviewing their matters and providing and receiving highway engineering opinions related to the use of engineered materials on the Ministry's highways. Coordinated with Ministry staff involved with developing the DSM lists for aggregate materials with regards to the engineering properties to be used in pavement surfaces. Developed and implemented guidelines and procedures. Wrote and presented engineering/technical papers and reports about the Ministry's use of engineered materials on its highways.

2000 - 2003 **Pavement Design Engineer, Pavements and Foundations Section**
Materials Engineering and Research Office, Policy & Planning Division

Provided technical engineering expertise and highway engineering opinions on pavement design, construction, rehabilitation and maintenance and the use of engineered materials on Ministry highways. Presented at Geotechnical Workshops and Training Courses involving the engineering/technical application of highway engineering opinions related to the use of engineered materials. Evaluated innovative pavement highway systems, new technology trials, design techniques, construction materials, equipment and testing procedures.

1995 - 2000 **Geological Engineer, Soils and Aggregates Section**
Materials Engineering and Research Office, Policy & Planning Division

Provided engineering materials advice on the design, construction, testing and maintenance of the materials used in the construction of highways. Directed aggregate and soil laboratory and field testing of the engineered materials used in the construction of the highway, developing and improving test methods. Organized province wide proficiency sample testing and laboratory correlation programs. Conducted construction site visits and materials audits. Supported development of the DSM list for aggregate materials. Provided technical/engineering expertise on aggregate resource management and rock slope hazards. Assisted in the drafting of construction standards and specifications to use engineered materials in highway construction projects.

1993 - 1994 **Geotechnical Engineer, Geotechnical Section**
Eastern Region, MTO

Carried out field investigations, directed laboratory testing, evaluated test results on the engineering materials placed on Ministry highways during construction. Addressed design, construction and maintenance issues from Ministry staff related to the contractor's means and methods of placing the engineering materials on Ministry highway construction projects. Produced pavement design reports and pavement evaluation reports assessing and providing highway engineering opinions on the quality of the materials placed. Managed geotechnical consultant assignments with the receipt and giving of highway engineering opinions on the quality of the engineered materials used on the construction project. Carried out pavement evaluations, highway rockcut assessments, low complexity foundation design, analysed blasting proposals. Coordinated with Ministry staff involved in preparing lists of suitable aggregate materials for highway construction projects.

May 1991 **Engineer in Training**
to May 1993 Materials Engineering Development Program, MTO

Participated in a training rotation with senior Ministry highway material engineers through the different sections/materials engineering offices within the Ministry (Material Engineering Research Office), including Bituminous Section, Soils and Aggregates, and Eastern Region Construction.

EXTERNAL PROFESSIONAL COMMITTEE ACTIVITIES

American Association of State Highway Transportation Officials (AASHTO) – Committee on Pavements and Materials (COMP) (2013-2020)

American Society for Testing and Materials (ASTM) Committee E17 on Vehicle-Pavement Interaction (2003-2007)

Transportation Association of Canada (TAC) – Pavements Committee, and Soils and Materials Committee (2003-2021)

Transportation Research Board (TRB) – (2010-2021)
Standing Committee on Design and Rehabilitation of Concrete Pavements (AKP20);
Surface Requirements of Asphalt Mixes (AFK40);
Pavement Sustainability (AFD001)

PUBLICATIONS

Rogers, Chris, Bob Gorman, Becca Lane, 2001, Skid-resistant aggregates in Ontario, Canadian Technical Asphalt Association, Proceedings of the 46th Annual Conference, pp. 51-76, also in Proceedings of the International Center for Aggregate Research Annual Symposium, Baltimore, April 2002.

C.A. Rogers, B.C. Lane and S.A. Senior (2003), The Micro-Deval Abrasion Test For Coarse And Fine Aggregate In Asphalt Pavement, International Center for Aggregates Research, Annual Symposium, Austin, Texas.

Becca Lane, Tom Kazmierowski, "Implementation of Cold In-Place Recycling with Expanded Asphalt Technology in Canada," Transportation Research Record: Journal of the Transportation Research Board, No. 1905, Transportation Research Board of the National Academies, Washington, D.C., 2005, pp. 17–24.

Andrew Alkins, Becca Lane, Tom Kazmierowski, "Sustainable Pavements: Environmental, Economic, and Social Benefits of In Situ Pavement Recycling," Transportation Research Record, vol. 2084, 1: pp. 100-103. First Published January 1, 2008.

Susanne Chan, Becca Lane, Tom Kazmierowski, "Pavement Preservation," Transportation Research Record, vol. 2235, 1: pp. 36-42. First Published January 1, 2011.

Becca Lane, Tom Kazmierowski, "Ten-Year Performance of Full-Depth Reclamation with Expanded Asphalt Stabilization on Trans-Canada Highway, Ontario, Canada," Transportation Research Record, vol. 2306, 1: pp. 45-51. First Published January 1, 2012.

Susanne Chan, Becca Lane, Tom Kazmierowski, "Sustainability metrics of flexible pavement preservation and rehabilitation in Canada," Proceedings of the International Conference on Asphalt pavements, North Carolina, USA, pp. 1601-1610, June 2014.

Becca Lane and Warren Lee, 2014, Comparing 10 Year Performance of Cold In-Place Recycling (CIR) with Emulsion versus CIR with Expanded Asphalt on Highway 7, Perth, Ontario, Conference of the Transportation Association of Canada

Susanne Chan and Becca Lane, 2016, Performance of a Perpetual Pavement on Highway 406 in Ontario, Conference of the Transportation Association of Canada

PROFESSIONAL ACTIVITES

2006-2020 Guest Lecturer at Ryerson University engineering graduate and undergraduate programs speaking on highway engineered materials.