Request for Proposals

Low-Carbon Road Infrastructure: Opportunities for Canada

Issued: May 26, 2026

Deadline for proposals: June 23, 2026, 13:00 ET

A. INTRODUCTION

Canada's federal, provincial, territorial and municipal governments are committed to reducing national carbon emissions, with many establishing related targets, for achieving net-zero by 2050 or sooner. As a major contributor to national greenhouse gas emissions, the transportation sector is ripe for disruption and will require proactive efforts to contribute to those targets.

The design, planning and operation of road and highway infrastructure involves many practices and processes that contribute carbon emissions through their lifecycle. While not intended to support a specific policy target, this project will seek to identify those practices, evaluate their impacts and make recommendations for opportunities to explore lower carbon alternatives.

B. SCOPE AND APPROACH

Scope

Consistent with the mandate of the Transportation Association of Canada (TAC), the project will focus on the development and dissemination of knowledge related to materials, practices and processes that are integral to the planning, design, construction, operation and management of roadway infrastructure.

It is intended to provide technical guidance and information to TAC member road authorities without prescribing policy directions or mandating specific emissions targets. Instead, the work will identify practices that have the potential to reduce carbon emissions and provide information that can support informed decision-making by road authorities in a range of jurisdictions and operational contexts. The report will also seek to frame the scope of this study in relation projected emissions from the transportation sector.

To maintain a manageable scope and maximize stakeholder engagement, the project will focus on a clearly defined and widely understood conception of road infrastructure—specifically, areas in which TAC member road authorities have direct control or substantial influence through internal operations or contracted activities. The work will therefore be organized around the following core topic areas:

- Asset management
- Construction
- Maintenance and operations

- Pavement design and management
- Soils and materials
- Structures

Within each of these topic areas, the project will examine decisions and practices related to commonly used road infrastructure materials (e.g. concrete, asphalt, aggregates, steel, coatings) and associated processes (e.g. specification development, procurement, monitoring and reporting).

The project will not address broader transportation system initiatives or operational strategies that may also influence greenhouse gas emissions but fall outside the defined scope of road infrastructure. Examples of excluded topics include:

- Planning (e.g. alignment, sizing, provision of facilities for transit and active transportation)
- Traffic control and management (e.g. speed limits, signal coordination, incident response)
- Greening or stormwater management in the right-of-way
- Electric vehicle charging facilities and services
- Energy use for street lighting and traffic control
- Energy use for road authority buildings and employee travel
- Demand management measures (e.g. road pricing, parking pricing, ridesharing, traveller information)

These topics may support broader objectives related to low-carbon transportation systems, but would be more appropriately addressed through other initiatives.

Approach

The project will undertake a structured review of current practices across the defined topic areas to identify opportunities for reducing carbon emissions associated with road infrastructure materials and processes. For each topic area, the project will identify and document beneficial practices that have significant potential to reduce future carbon emissions. The analysis will consider the applicability and implications of these practices in a range of institutional and geographic contexts relevant to TAC member road authorities.

Specifically, the project will:

- Identify practices related to road infrastructure materials and processes that offer meaningful potential to reduce carbon emissions
- Assess the potential scope and scale of impact associated with each practice
- Identify major risks, costs and uncertainties associated with implementation
- Provide high-level guidance to help road authorities identify promising practices, determine where and when they may be appropriate, and evaluate their potential impacts
- Assess the potential for integrating practices into existing frameworks for environmental/sustainability declarations (e.g. Environmental Product Declarations), where appropriate
- Recommend approaches for individual jurisdictions and the broader road authority community to monitor and report progress
- Identify opportunities for additional work to develop supplemental technical information, including potential follow-up activities by relevant TAC committees

The successful consultant will accomplish the above through key project tasks, which may include:

Stage 1: Identification of issues and opportunities

- An international literature review
- Surveys of Canadian road authorities, not-for-profit organizations, businesses and academics to identify current practices, opportunities and challenges related to the project topics
- Online workshops with six stakeholder TAC committees (Asset Management Committee, Construction Committee, Maintenance & Operations Committee, Pavements Committee, Soils & Materials Committee, Structures Committee) to identify known interests and issues

Stage 2: Assessment of opportunities and identification of beneficial practices

- Categorization of opportunities of interest identified within each major topic (i.e. practices related to materials and/or processes) or bridging multiple topics (e.g. carbon accounting, procurement)
- Evaluation of potential impacts on life-cycle carbon emissions as well as risks, costs and uncertainties for each opportunity of interest, including regional considerations where appropriate.
- Identification of synergies and tensions between opportunities of interest, particularly those that involve different major topics or life-cycle stages
- Online workshops with six TAC stakeholder committees to solicit feedback on preliminary evaluation results
- Identification and high-level prioritization of beneficial practices (i.e. the most promising opportunities)

Stage 3: Implementation guidance

- Guidance for road authorities on the selection, application and evaluation of beneficial practices
- Guidance for jurisdictional stakeholders to collectively monitor and report on progress
- Recommended further work by TAC committees
- Recommended next steps by other stakeholders

Through this approach, the project will provide TAC members with practical, evidence-informed considerations that support the adoption and implementation of practices that can contribute to reducing carbon emissions from road infrastructure over time.

NB: The review of relevant literature should include the following:

- TAC publications
  - Canadian Guide for Greener Roads (2015)
  - Sustainability Considerations for Bridges Guide (2015)
  - Synthesis of Environmental Management Practices (2014)
  - Best Practices Guide for the Use of Recycled Materials in Transportation Infrastructure (2013)
- Other references
  - Canada: Roadmap to Net-Zero Carbon Concrete by 2050UK: Net Zero Highways: Our 2030/2040/2050 Plan and Net Zero Highways: Our Zero Carbon Roadmap for Concrete, Steel and Asphalt
  - US: GHG Emissions Inventory from Construction of Washington State DOT Roadways: Final Report

- TAC and the project's steering committee has also compiled a list of other relevant literature that will be made available to the successful proponent

C. DELIVERABLES

Intended for transportation practitioners across the road infrastructure lifecycle, this project will consist of:

- Three interim deliverables (Stage 1, 2 and 3 reports) that would be technical in nature and would serve as reference documents. The interim deliverables should be organized as follows:

    1. **Technical Report, Stage 1** – Issues and Opportunities – Describing the findings of the literature review, surveys and TAC committee workshops
    2. **Technical Report, Stage 2** – Beneficial Practices – Describing the categorization and evaluation of practices of interest, and identifying the most promising opportunities
    3. **Technical Report, Stage 3** – Implementation – Providing implementation guidance for road authorities on beneficial practices and progress measurement, and recommending further work and next steps.

- A final report titled ***Low-Carbon Road Infrastructure: Opportunities for Canada.*** The report will outline a framework of beneficial practices for low-carbon road infrastructure in Canada, incorporating the three technical reports and feedback received from TAC committees, member organizations and stakeholders; it will be intended for transportation practitioners across a diverse set of road infrastructure components.
- The report will also include the following sections: Executive Summary, Table of Contents, List of Figures, List of Tables, Introduction, Conclusion, Glossary and References. Where appropriate, include diagrams, flowcharts, or matrices to support practitioner decision-making. All information compiled during the project will be incorporated into the report. Appendices will contain any supplementary material that is not appropriate for inclusion in the main body, and the interim reports could potentially be incorporated into the final report format for their delivery (e.g. stage results summarized into applicable chapters or sections of a master report document, with reference material in appendices, to maximize efficiency of compilation of the final report).
- The development of a script for a self-directed online on-demand course to support capacity building and implementation of the low carbon infrastructure practices unearthed from the final report. The training can be broken down into modules that align with the core topic areas, with about two-hours of learning per module.

Other deliverables will include:

- A table summarizing comments received during Project Steering Committee (PSC) review of deliverables, tracking who submitted each comment and specifying how the comment was addressed, to be updated after each commenting period (see Section D for anticipated PSC meetings).
- Bimonthly progress reports on task/schedule status and any perceived challenges, to be circulated to PSC members and presented at project meetings.
- A PowerPoint deck describing the work undertaken, report contents and PSC comments requiring further clarification and discussion to be presented by the consultant team leader to each online meeting with the PSC.
- A PowerPoint deck describing the work undertaken and report contents to be presented by the consultant team leader to online meetings of the PSC, and the Infrastructure and Asset Management Council (with the deck circulated in advance to the PSC, inclusive of the presenter's notes).

- A PowerPoint deck suitable for a 60-minute TAC webinar (i.e. 30-minute presentation followed by 30 minutes of questions) to be delivered by the consultant after the project is completed, providing a high-level overview of the project and its deliverables to a multidisciplinary audience.

The consultant will also provide:

- Microsoft Word/PowerPoint and PDF versions of the deliverables.
- All figures that contain text as separate files, with text accessible and editable by TAC for translation purposes; exceptions include where original-source French-language graphics are also provided, or where TAC agrees that the technical content should remain in English.
- Credits for images drawn from other sources, with evidence that written permission to reproduce them has been received.
- Any relevant spreadsheets in Microsoft Excel format.

Deliverables must be submitted in English. TAC will provide an electronic Word template with pre-set report headings and styles to which consultants must adhere, with any variations subject to TAC approval. In addition, the selected proponent must adhere to TAC's *Publication Guidelines* [1] and *Guidelines for Pooled-Fund Projects*[2].

D. SCHEDULE

The consultant should propose a project schedule that enables high-quality deliverables, ideally adhering to the following milestones (with divergence permitted if a supporting rationale is provided):

- Contract award .....Aug 2026
- PSC Meeting (virtual) – project kickoff, discussion of proposed work plan and schedule .....Sept 2026

- Submission of survey and workshop plans and list of known literature ..... Oct 2026
- PSC review of survey and workshop plans and list of known literature..... Oct 2026

- Submission of Technical Report Stage 1 – 50% draft content ..... Jan 2027
- PSC review of Technical Report Stage 1 – 50% draft content ..... Jan 2027
- PSC Meeting (virtual) – Technical Report Stage 1 – 50% Draft discussion..... Feb 2027

- Submission of Technical Report Stage 1 - 100% and Technical Report Stage 2 – 50% reports .....May 2027
- PSC review Technical Report Stage 1 - 100% and Technical Report Stage 2 – 50% reports.....May 2027
- PSC Meeting (virtual) – Technical Report Stage 1 – 100% and Technical Report Stage 2 – 50% reports discussion.....June 2027

- Submission of Technical Report Stage 2 – 100% and Technical Report Stage 3 – 50% report .....Sept 2027
- PSC review of Technical Report Stage 2 – 100% and Technical Report Stage 3 - 50% report.....Sept 2027
- PSC Meeting (virtual) Technical Report Stage 2 – 100% and Technical Report Stage 3 - 50% reports discussion ..... Oct 2027

[1] TAC-Publication-Guidelines_2025-e.pdf
[2] pfp-guidelines.pdf

- Submission of Technical Report Stage 3 - 100% and Final Summary Report – 50% ..... Dec 2027
- PSC review of Technical Report Stage 3 – 100% and Final Summary Report - 50%..... Dec 2027
- PSC meeting (virtual) Technical Report 3 – 100% and Final Summary Report – 50% discussion..... Jan 2028

- Submission of Final Summary Report – 100%.....Feb 2028
- PSC review of Final Summary Report – 100% ..... Feb 2028
- PSC meeting (Virtual) Final Summary Report – 100% discussion..... March 2028

- Presentations to Infrastructure and Asset Management Council (STM 2028)..... April 2028
- Submission of Final Stages 1, 2, 3 and Summary Technical reports and Summary deck .....May 2028
- TAC webinar delivery ..... TBD

The Project Steering Committee (PSC) will include about 15 representatives of project funding partners who will review and comment on all deliverables. The consultant will maintain a detailed log of comments and resulting actions for each deliverable. Generally, a minimum of 15 working days is required for PSC members to review deliverables before meetings. The consultant's team leader must attend the PSC meetings noted above and may be asked to attend other online meetings.

E. BUDGET

This project's maximum budget is **$275,000** for all fees and expenses, not including applicable taxes. Proposals exceeding this maximum budget will be disqualified. Proposals are expected to be fixed-price, and price will not be a factor in their evaluation. Proposals must include a detailed cost breakdown. TAC will not accept invoices for cost overruns (fees or expenses) associated with the original scope of work. Note that the lead consultant must be a TAC member organization, and that no more than 20% of the budget may be assigned to subconsultants that are not TAC member organizations.

Invoices must link billing amounts to the percentage of completion of major tasks. TAC will retain a 10% holdback at the end of the project until the final deliverables have been approved by TAC and approved by TAC's Infrastructure and Asset Management Council. All work conducted in the 12 months leading up to March 31 of each year must be invoiced by that date.

F. PROPOSAL REQUIREMENTS

Proposals should provide the following information:

- *Project understanding.* Demonstrate a clear understanding of the project's scope and objectives, describe challenges that might be encountered in its execution and proposed measures to overcome them.
- *Consulting team.* Identify a project leader and team members including subconsultants, describe their roles, and identify their experience on similar or otherwise relevant projects as well as any experience with TAC projects and processes. Although the working language for this project is English, the consultant will be expected to review literature and communicate with stakeholders in French as required; French-speaking consulting team members should be identified. NB: After project award, project leader and team members cannot be substituted for another without prior approval of TAC and the project steering committee. As evaluated by TAC, any project leader or team members substituted must have similar or greater experience than the replaced.

- *Methodology.* Describe major tasks, resources to be applied, key information sources, planned analyses, and possible limitations.
- *Schedule and resources.* Show the proposed person-hours for each team member by task, total fees broken down by task and team member, any expenses, and a schedule with key milestones and project deliverables.
- *References.* Identify three organizations for which senior members of the consulting team have conducted similar or otherwise relevant projects, including the organization's address and the name and telephone number of an individual familiar with the proponent's work. TAC reserves the right to request additional references.
- *Conflicts of interest.* Disclose possible financial or organizational conflicts of interest in conducting the project; for example, the proponent's ownership, relationships or proprietary rights and interests could be perceived as jeopardizing its objectivity. Identify mitigating strategies for any such circumstances.

Proposals should include:

- A covering letter (not more than two pages long)
- Table of contents
- Main body (not more than 15 pages long, with 12-point single-spaced text and one-inch margins)
- Additional pages for:
    - Project cost breakdown (one page)
    - Project schedule (one page)
    - Project team organization chart (one page)
    - References
    - Conflict of interest declaration
- Team member résumés (each not more than four pages long)

Note that any material exceeding these scope and length parameters will be deleted from proposals before evaluation.

G. PROPOSAL SUBMISSION

TAC's Project Manager (see Section I, below) must receive a PDF version of the proposal by email **no later than 13:00 ET on June 23, 2026.**

Email any questions regarding this Request for Proposals to TAC's Project Manager (see Section I, below) **by June 2, 2026.** Addenda with responses will be posted to the RFP page on TAC's website as soon as possible, but **not later than June 8, 2026.** Note that proponents are responsible to check for addenda on the TAC website Request for Proposals section.

H. PROPOSAL EVALUATION

Proposals will be evaluated using the criteria in the following table. TAC reserves the right to conduct telephone or online interviews of proponents.

Evaluation Criteria	Weight
Understanding of the project including its scope, objectives, expected priority topics, and desired deliverables	30
Demonstrated qualifications, experience and competence of the project leader and team members	25
General approach and methodology, including a preliminary list of Canadian organizations to be interviewed	25
Adequacy of work plan, schedule and resources to ensure quality and timeliness of deliverables	15
Team member experience with TAC projects and processes	5
TOTAL >	***100***

I. PROJECT ADMINISTRATION

TAC is not liable for any costs and/or expenses incurred by proponents in the preparation of proposals.

A contract for consulting services will be established before work can begin. TAC's Project Manager will be the liaison between the consultant and Project Steering Committee for this project and will work with the Project Steering Committee to review project deliverables and ensure objectives are met.

The working language for this project is English. TAC will be responsible for recording and distributing meeting minutes and maintains a secure online collaborative platform for sharing documents.

For more information, contact:

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