Request for Proposals:
Cross Section Elements: Research and Synthesis of Practice

Issued: January 25, 2024

Deadline for proposal submission: 13:00 ET, February 22, 2024

A. INTRODUCTION

The design of the cross section of a roadway requires careful planning. It must focus on all road user needs (property line to property line) including those of pedestrians and cyclists. Chapter 4, *Cross Section Elements* of TAC's *Geometric Design Guide for Canadian Roads* (GDG) addresses design procedures and domains related to road cross sections (e.g. lane widths, special purpose lanes, shoulders, medians, outer separations and boulevards, curb and gutter and drainage), and presents typical cross sections as well as discussing considerations related to bridges, utility placement, snow storage and future widenings.

The 2017 update of TAC's GDG did not incorporate major revisions to Chapter 4, which was previously updated in 2001. TAC's Geometric Design Committee conducted a comprehensive review of the chapter and identified the need for updated guidance in a number of sections. This project represents the first phase of work needed to develop a new GDG Chapter 4, Cross Section Elements. A subsequent phase of work would be required to draft and finalize text, figures and tables for the new Chapter 4.

B. SCOPE AND APPROACH

The major objective of this project will be to research and synthesize practices (established and emerging) related to urban and rural road cross section design in Canada. Using the existing GDG's Chapter 4 as starting point, it will consist of a full review of the document's currency and gaps.

Some keys issues to be addressed include:

- bridges
- climate change considerations
- snow placement
- utility placement
- landscaping and streetscaping
- future widenings
- transit facilities
- loading and delivery zones
- curbside management (e.g. street furnishing, parking for shared bicycles/scooters, streetlighting)
- speed management measures
- safety devices
- buffer treatments (between different modes and uses)
- lateral clearance distance for railway signal assemblies
- low impact development
- constricted areas
- complete streets (notably related to retrofits and bridges)

- accessibility and universal design
- intelligent transportation systems (ITS)

This phase of work will include:

- a review of current practices and design standards within Canada and internationally
- a literature review of case studies and best practices for urban and rural cross sections
- a survey of key established and emerging practices for cross section elements
- consultation with road authority employees, consultants and academics (e.g. workshops)
- documentation of findings

C. DELIVERABLES

The main project deliverable will be a comprehensive but focused final report that synthesizes the current state of practice for designing road cross sections and related considerations for bridges, utility placement, snow storage and future widenings. The report will follow the layout of the existing Chapter 4 by topic and section, and will incorporate revised and additional content accordingly.

Other project deliverables will include:

- A literature review memorandum that concisely summarizes key findings of the research review.
- A survey memorandum that identifies key topics of focus for cross section elements as identified by road authority employees, consultants, and academics.
- A workshop memorandum that summarizes the preliminary findings and recommendation from stakeholder consultations with road authority employees, consultants and academics.
- A table that summarizes comments arising from the Project Steering Committee (PSC) review of interim deliverables, specifying who submitted each comment and how it was addressed; this table will be updated after each commenting period.
- Progress reports on task/schedule status and any perceived challenges, to be circulated to Project Steering Committee members and presented at project meetings.
- A summary table in the final report that identifies suggestions for the revisions to be made to each section of Chapter 4.
- A summary PowerPoint deck describing the work undertaken and report contents, to be presented by the consultant team leader to TAC's Geometric Design Committee and Safety Design & Operations Council during TAC's online Spring Technical Meetings in 2025 (the deck is to be circulated in advance to the Project Steering Committee, inclusive of presenter's notes).
- A short primer to be published by TAC as a free introductory publication.
- A PowerPoint deck suitable for a 30-minute presentation in a TAC webinar, and delivery of the webinar by the consultant after the project is completed.

The consultant will provide:

- Microsoft Word/PowerPoint/Excel and PDF versions of the deliverables
- Separate source files for figures that contain text, making the text accessible and editable by TAC; exceptions include where original French-language graphics are provided in parallel, or where TAC agrees that the technical content should remain in English.
- Credits for images drawn from other sources, with evidence of written permission from the rights holder to reproduce them.

The deliverables identified above are a suggested minimum; however, the successful consultant may include additional items as they deem suitable. Deliverables must be submitted in English, and TAC will provide an electronic Word template with preset report headings and styles to which consultants must adhere, with any variations subject to TAC approval. Moreover, 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, and varies from the following milestones only where a supporting rationale is provided:

- Contract award ..... March 2024
- PSC Meeting (online) – project kickoff, confirmation of work plan and schedule and workshop on key issues ..... March 2024
- Submission of draft survey questions and literature review memorandum ..... April 2024
- PSC comments due on draft survey questions and literature review memorandum ..... May 2024
- Submission of draft memorandum on jurisdictional review (survey and follow-up interviews) ..... August 2024
- PSC comments due on draft jurisdictional review memorandum ..... September 2024
- PSC Workshop (online) on preliminary findings and recommendations ..... November 2024
- Submission of 90% draft report ..... February 2025
- PSC comments due on 90% draft report ..... February 2025
- Submission of 100% draft report and draft summary slide deck ..... March 2025
- PSC Meeting (online) – discuss 100% draft report and draft summary slide deck ..... March 2025
- Presentation to Geometric Design Committee and Safety Design & Operations Council (online) ..... April 2025
- Submission of final report and primer ..... May 2025
- TAC webinar delivery ..... TBD

The Project Steering Committee will comprise about 10 representatives of project funding partners. Its members will review and comment on all deliverables, with the consultant maintaining a detailed log of comments and resulting actions for each deliverable. Generally, a minimum of 15 working days is required for Project Steering Committee members to review deliverables before meetings. The consultant's team leader must attend the meetings noted above and may be asked to attend other online meetings.

E. BUDGET

This project's maximum budget is **$100,000** for all fees and expenses, not including applicable taxes. Proposals are expected to be fixed-price, and price is not a factor in their evaluation; however, proposals exceeding the maximum budget will be disqualified. A detailed cost breakdown is requested as part of the proposal, and TAC will not accept invoices for cost overruns (fees or expenses) associated with the original scope of work.

Invoices must link billing amounts to the percentage of completion of major tasks. TAC will retain a 10% holdback from each payment until the final deliverables have been accepted by TAC and approved by TAC's Chief Engineers Panel. All work conducted in the 12 months leading up to March 31 of each year must be invoiced by that date.

[1] https://www.tac-atc.ca/sites/tac-atc.ca/files/site/doc/projects/docs/tac_publications_guidelines_2015-01-01_en.pdf
[2] https://www.tac-atc.ca/sites/tac-atc.ca/files/site/doc/projects/docs/pfp-guidelines.pdf

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 propose measures to resolve them. In addition to this, consultants are being asked to identify three key issues (from the list of cross-section element topics) that they think have the most relevance to the updated chapter, and how they will address 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.
- *Methodology.* Describe major tasks, resources to be applied, major information sources, planned analyses and possible limitations. 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; bilingual team members should be identified as such.
- *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 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 10 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 in excess of 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 February 22, 2024.**

Email any questions regarding this Request for Proposals to TAC's Project Manager (see Section I, below) **by February 8, 2024.** Addenda with responses will be posted to the RFP page on TAC's website as soon as possible, but **not later than February 15, 2024.** Note that proponents are responsible to check for addenda.

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 project scope, objectives and desired deliverables	30
Demonstrated qualifications, experience and competence of the project leader and team members	30
General approach and methodology	20
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

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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