Complete Streets Design & Construction Standards

Overview of Major Changes

Edmonton

INTRODUCTION

The Complete Streets Design and Construction Standards (CSDCS) provides a single point of reference that supports the planning, design, and construction of Complete Streets in Edmonton. The intent of the standards is to encourage a holistic approach to street design that will develop a network of streets that are safe, attractive, comfortable, and welcoming to all users in all seasons, while considering operational and maintenance challenges.

Aligning with the new 2017 TAC Guideline, the standards combine the former roadway design standards with the Complete Streets Guidelines, making the complete streets approach the default for all roads in Edmonton. This document provides an overview of the major changes from the previous roadway design standards. Page numbers are provided throughout as reference to the new Complete Streets Design and Construction Standards.

OVERVIEW OF MAJOR CHANGES

Section 1.0 Concepts and Philosophy for Complete Streets Design

- The **design domain** concept (as developed by TAC) is emphasized and used throughout the standards. Design domain is an acceptable range of values for design elements such as sidewalk widths, lane widths, and design speeds. The City of Edmonton has adopted the recommended range as its standard, which should be used wherever possible. Sometimes a target value is provided within the range. *(p. 13)*

- The standards introduce the concept of **design lenses**, which should be applied throughout the design process. These include a safe systems approach *(p. 11-12)*, Universal Design *(p. 15)*, designing for a Winter City *(p. 16)*, and designing for retrofit situations *(p. 17)*.

Section 2.0 Design Process, Trade-Offs and Evaluation

- The **design process** has been updated to further reflect the importance of public engagement in street design, ensuring local knowledge and preferences for the area are considered and incorporated. *(p. 29-30)*

- In cases where the recommended range cannot be met, the standards have formalized the **design exception process** to ensure there is documentation and clear rationale for the exception *(p. 31-32)*. The design exception template is available in Appendix B. The previous Complete Streets application process is also now formally retired.

Section 3.0 Design Requirements for Complete Streets Design

- The standards introduce **more guidance on cycling** as an interim measure until the Alberta Bikeway Design Guide and Edmonton Bike Plan are finalized. The main focus is on designing facilities for all ages and abilities and designing facilities that connect on a network level. *(p. 53-68)*

- The flexible and alternative uses of the **ancillary zone** are formally identified in the standards, including patios, parklets, parking, and curb extensions. *(p. 81-88)*

- The standards have a much higher focus on **designing for pedestrians** *(p. 94-97).* Major changes include:
    - **Wider minimum sidewalk widths**, where feasible, to better serve people walking and wheeling.
    - Building **shared use paths** on both sides of new arterial roadways to better serve less experienced people cycling within existing road right-of-way. Shared use paths should make sense at a network level.
    - Changes to the the design of **curb ramps** to improve the safety of people walking and wheeling. Perpendicular curb ramps that meet the crosswalk at its centreline are preferred wherever possible. *(p. 122-124)*

- The standards take a new approach to how we design streets based on their **motor vehicle speeds**. In the new standards, local and collector roadways posted at 50 km/h or less will be designed at design speed = posted speed. Arterials with posted speeds of 60+ km/h will continue to be designed at posted speed + 10 km/h, while arterials with posted speeds of 50 km/h will follow a hybrid approach with some elements being designed at design speed = posted speed, and others at posted speed + 10 km/h. *(p. 45-47)*

- **Lane widths** are now differentiated by motor vehicle speeds and design vehicle. The 4.45m curb lane has also been eliminated in greenfield arterials. *(p. 49-53)*

- The standards provide updated guidance on **intersection design**. In general, intersections should be designed to be accessible for all users and should follow the Universal Design principles. The standards also introduce high level guidance on **roundabouts**. *(p. 106-156)*

- The standards provide direction for selecting **traffic calming** measures. Traffic calming measures have be grouped into 3 general categories: vertical deflection, horizontal deflection, and obstruction. *(p. 161-166)*

- The standards introduce design guidance for **shared streets**, which are low volume streets that limit drivers to speeds that are no faster than a person walking. *(p. 167-169)*

- The standards also introduce guidance on **reverse housing**, which fronts onto park space with access to motor vehicles provided from an enhanced alley *(p. 169)*. A standard drawing is available for reverse housing.

- The standards introduce additional options for **industrial areas**. New rural and hybrid rural/urban cross sections provide designers with more flexibility and cost efficient options. Sidewalks and shared use paths are also now required on at least one side of industrial streets to improve accessibility in industrial areas where feasible. *(p. 175-178)*

Complete Streets Standards Drawings

- The **standard drawings** have been updated:
    - 18 new standards drawings have been developed, covering truncated dome Tactile Walking Surface Indicators (TWSI), roundabouts, rural and hybrid industrial cross sections, and reverse housing lanes.
    - Revisions have been made throughout the cross sections to align lane widths, sidewalk widths, and offsets with the new standards.
    - The former Series 8000 Complete Streets cross sections have been renumbered and incorporated into the Series 2000 cross sections.
    - Duplicate cross sections and details have been removed.
    - The former example greenfield cross sections are now retired.
    - Alberta Transportation concrete median barrier design has been adopted.

For more information on *Complete Streets*, please visit edmonton.ca/completestreets.
For more information on the *Design Standards*, please visit edmonton.ca/designconstructionstandards.
For comments or questions, please contact completestreets@edmonton.ca.