

Hamilton Complete Streets Design Manual

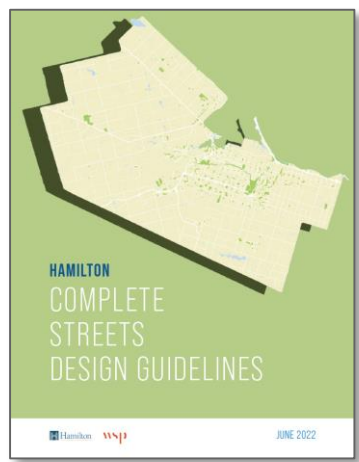
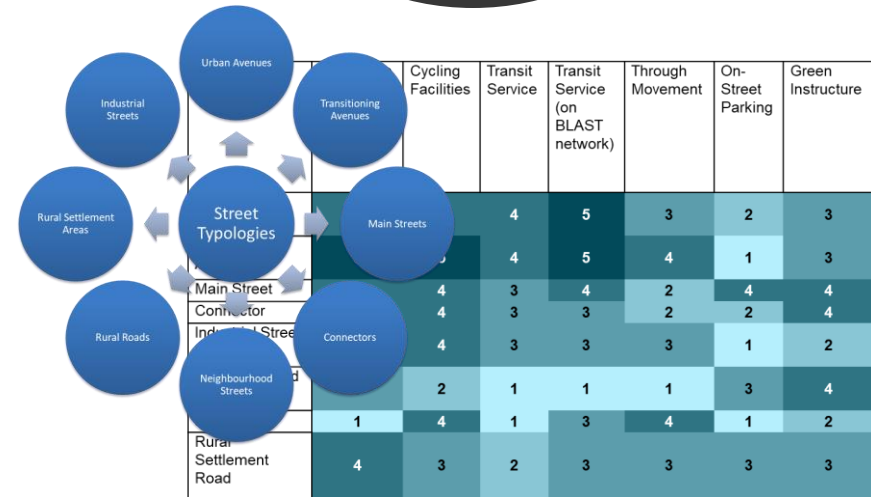
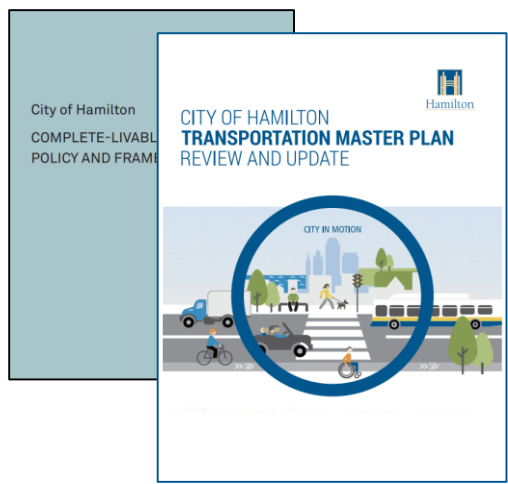
Public Works Committee

PED21020(a)/PW21002(a)

July 6, 2022



Complete Streets Evolution



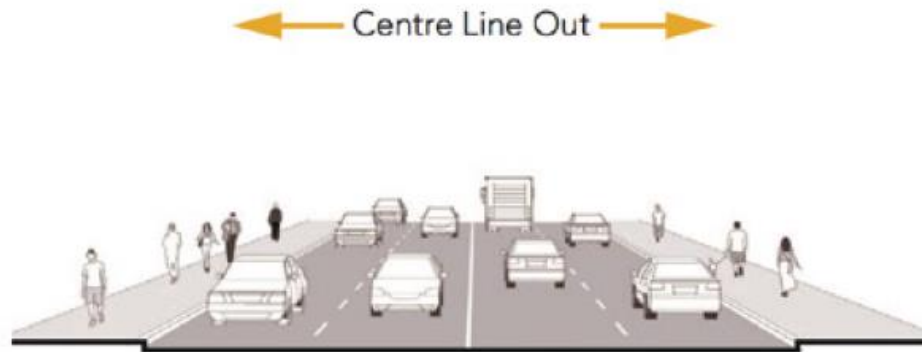
Hamilton's Complete Street Design Manual

Complete Streets are streets that are planned and designed to **balance the needs of all road users**, to allow people to **get around safely no matter their age, ability or how they choose to move**.

The Complete Streets concept is **tied to the Safe Systems and Vision Zero** approaches to road safety, which aim to design the transportation system to accommodate human error and with the **goal of eliminating death or serious injury**.

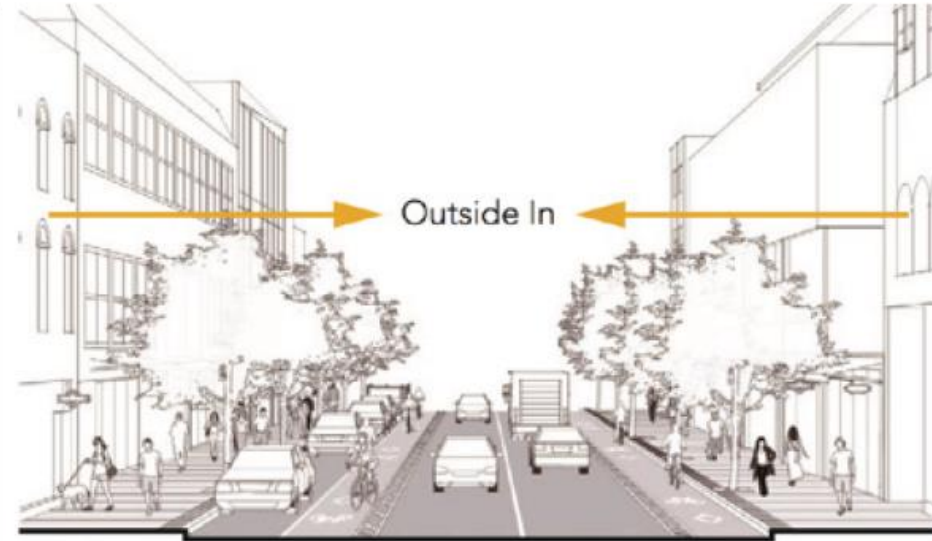
The approach recognizes that **there is no one-size-fits-all solution to street design**, as different streets have different priorities, depending on the street's location, context, and role within the transportation system.

Our Design Goals Have Evolved



THEN

Auto-Mobility
Automobile Safety



NOW

Multi-modal Mobility + Access
Public Health/Safety
Economic Development
Environmental Quality
Livability/Quality of Life
Equity

Design Manual Overview

The role of the manual is to **improve and normalize the role of complete streets** across all projects.

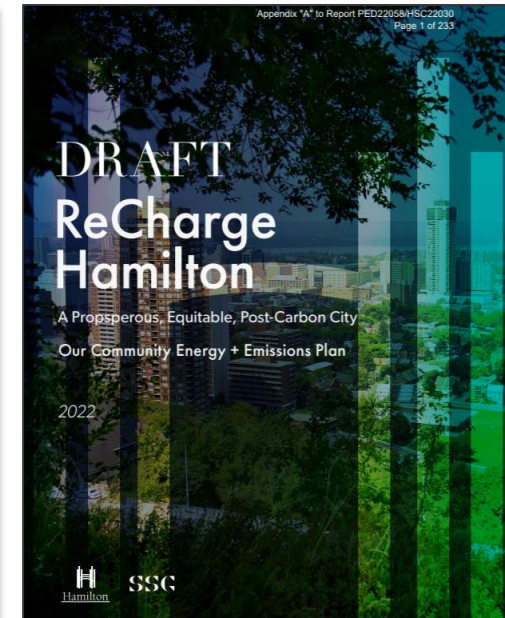
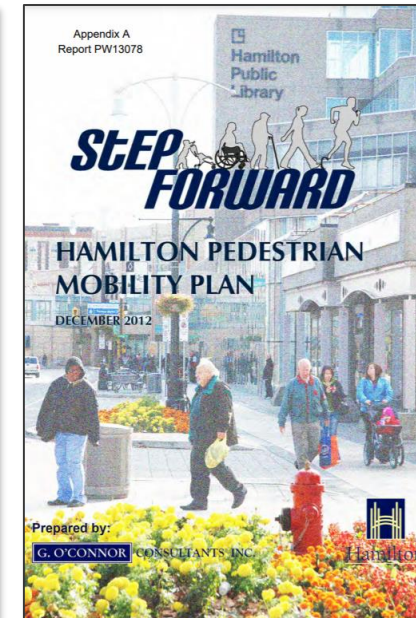
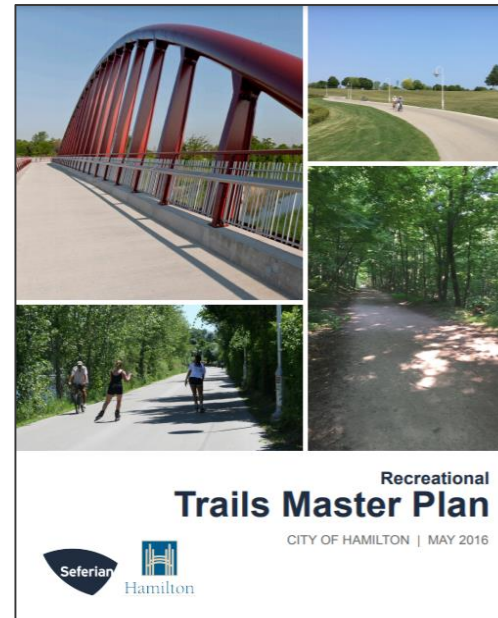
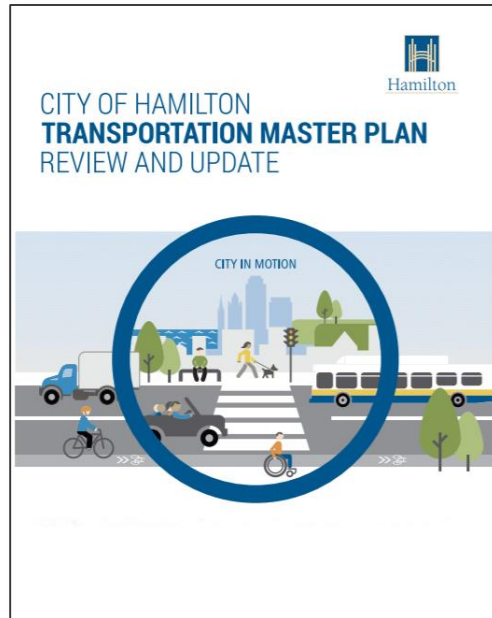
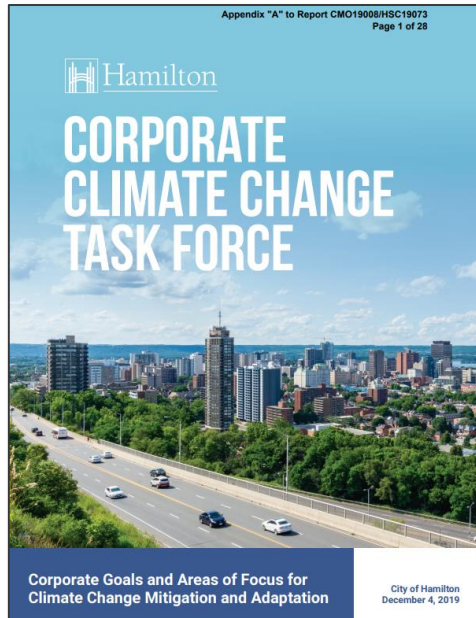
The design manual is structured in five sections:

1. Introduction;
2. Undertaking Complete Streets Design;
3. Elements of Complete Streets;
4. Complete Street Typologies; and,
5. Designing for Intersections.



Chapter 1: Introduction

Provides an overview of the guidelines and their applicability, and **relationship to other guidelines, strategies and policies.**



Chapter 2: Undertaking Complete Streets Design

1. Plan

Identify projects and begin preliminary scoping.

2. Conceptualize

Establish design priorities and a vision, and engage key internal & external stakeholders.

3. Design

Develop preliminary and detailed design. Balance trade-offs, priorities and stakeholder feedback.

4. Implement

Construct the final complete street design.

5. Monitor

Evaluate the complete street's performance against the vision and priorities.

Chapter 2: Opportunities



Methods to implement Complete Streets elements:

- **Retrofit** – primarily focused on reallocating existing space (e.g. bike lanes, crosswalks). e.g. Hatt Street.
- **Rehabilitation** – typically the civil works are minimal, such as a resurfacing of the street. e.g. Cannon Street.
- **Reconstruction** – more intensive construction, such as subsurface utility replacement, where curbs and gutters can be moved. e.g. Locke Street.
- **Major Projects/New Development** – new streets tied to development. e.g. Leavitt Drive.

Chapter 3: Street Elements



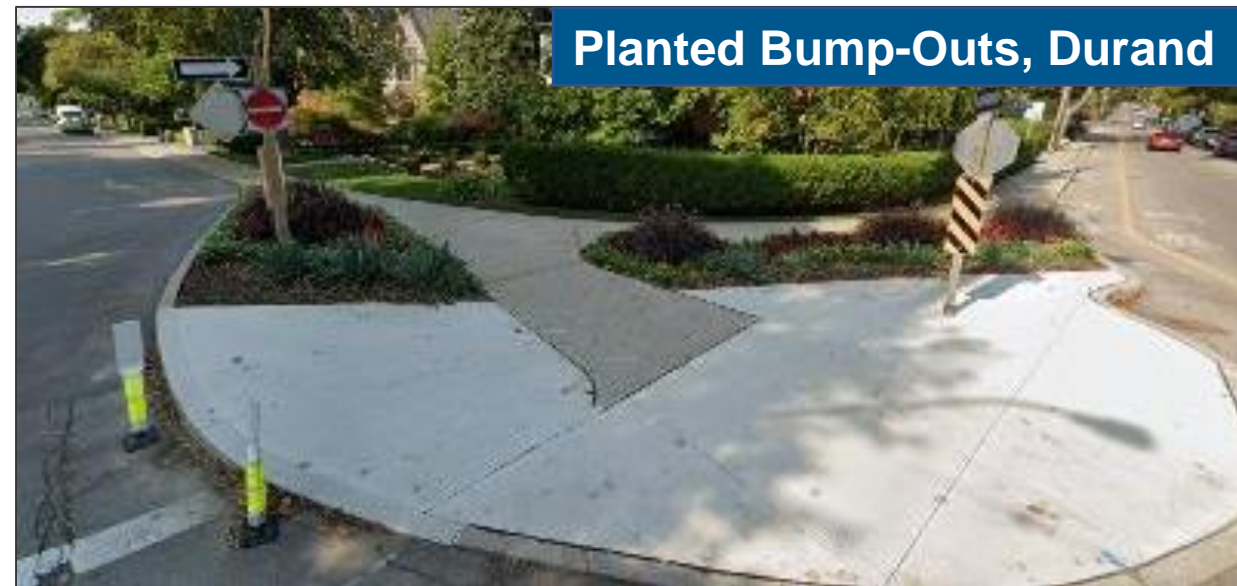
Image: City of Hamilton Complete-Livable-Better Streets Background Report

The manual provides **direction on the design of different complete street elements**, including:

- Pedestrian Realm & Placemaking;
- Cycling Facility Design;
- Transit Facility Design;
- Roadways;
- Curbside Management;
- Green Infrastructure; and
- Utilities and Municipal Services.

Chapter 3: Street Elements

- Narrower lane widths and **right-sized** corner radii.
- Emphasis on **making the transportation system accessible to people of all ages and abilities.**
- **Wider sidewalks** and **accessible treatments** at intersections.
- **Greater separation in cycling facility design** to support a wide range of ages and abilities.
- Opportunities for **street trees**, and green infrastructure



Chapter 4: Complete Street Typologies

- Conceptual cross-section for each of the eight street typologies, previously approved by Council.
- Demonstrate how the different complete street elements **can fit together** in different contexts.
- **Represent the starting point for the design process**, but all streets will need to take a context sensitive approach to the local conditions.
- **Align with right-of-way widths** in the Urban and Rural Official Plans.

Street Typologies

Urban Avenue

Transitioning Avenue

Main Street

Connectors

Neighbourhood Streets

Rural Roads

Rural Settlement Areas

Industrial Street

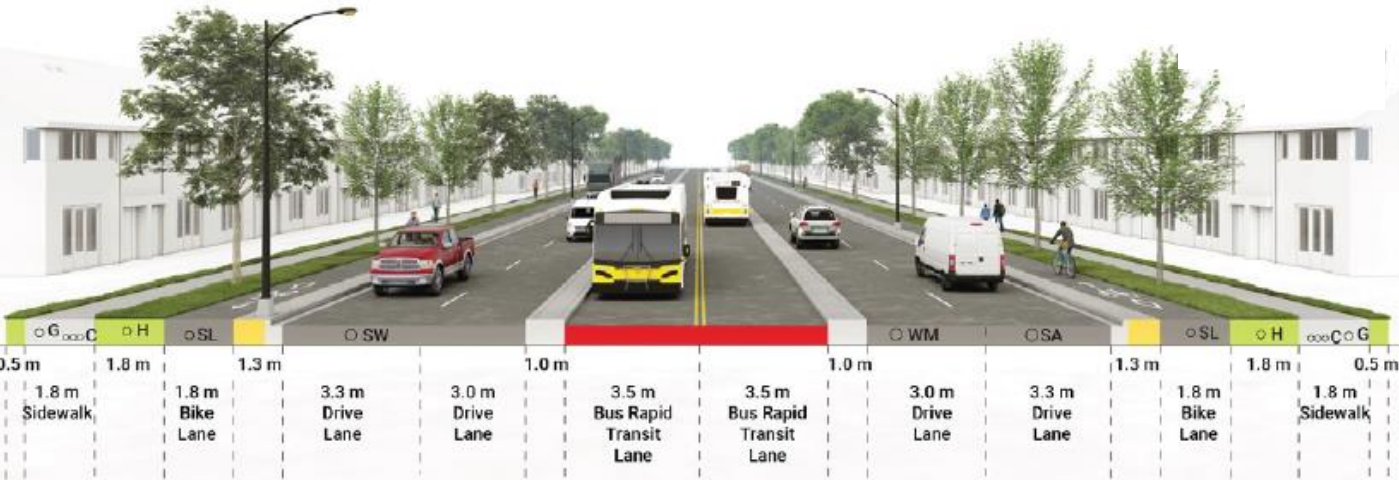
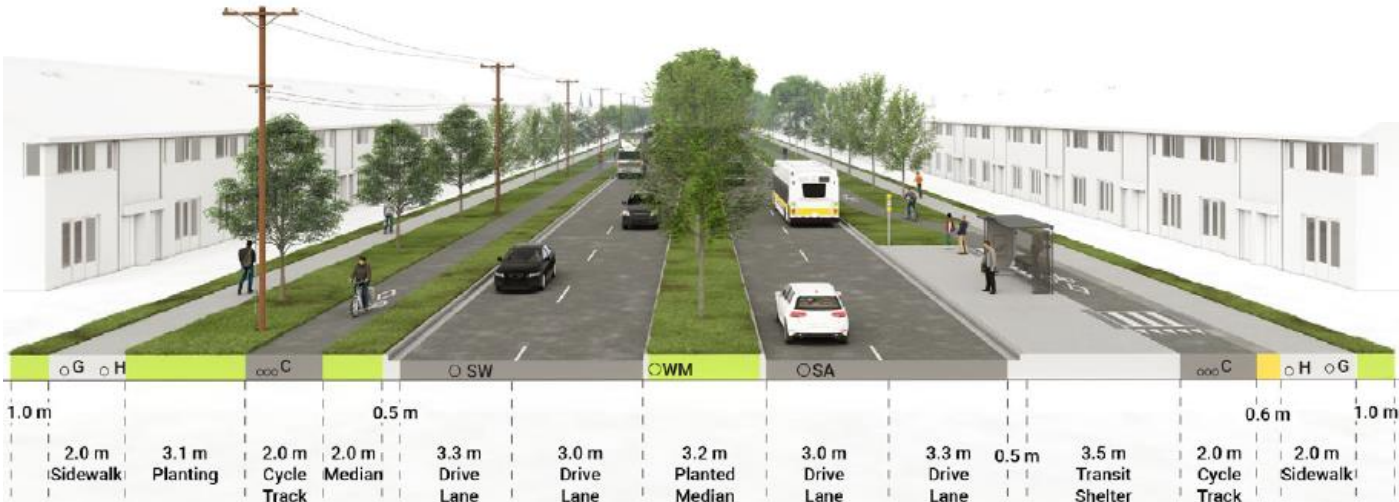
Typologies: Urban Avenue - 20 m



CONTEXT	Urban
STREET FUNCTION	Mobility and placemaking
RIGHT OF WAY	20–26 m
NUMBER OF LANES	2–4
TARGET SPEED	40–50 km/h
CYCLING FACILITIES	Cycle tracks, typically one-way on each side of the street
PEDESTRIAN CLEAR ZONE WIDTH	2.0 m, up to 3.5 m adjacent to high pedestrian generators

* Alternative 26 m ROW included in the manual

Typologies: Transitioning Avenue - 36 m



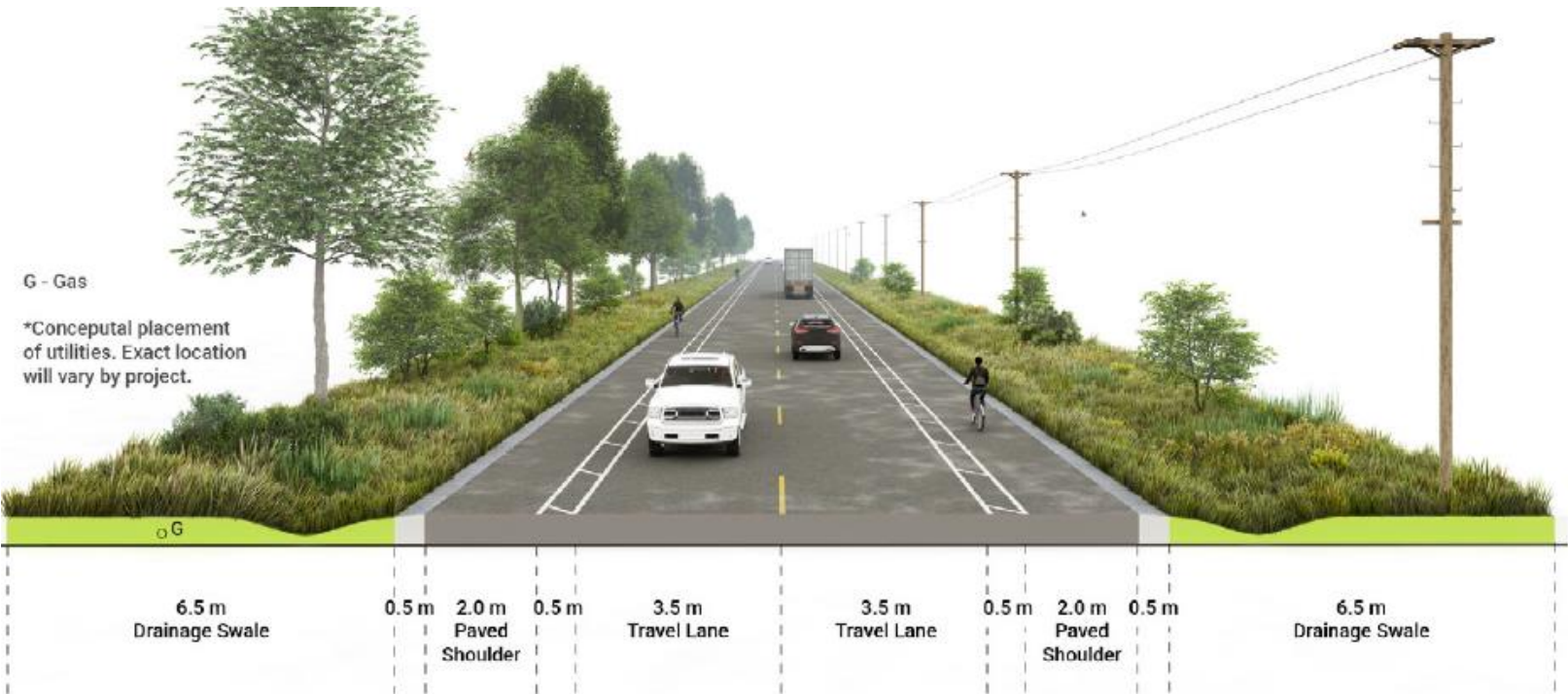
CONTEXT	Urban/Suburban/Industrial
STREET FUNCTION	Mobility
RIGHT OF WAY	36 m
NUMBER OF LANES	4 plus turning lanes
TARGET SPEED	50–60 km/h
CYCLING FACILITIES	Cycle tracks or multi-use paths (see Chapter 3 for selection criteria)
PEDESTRIAN CLEAR ZONE WIDTH	1.8 m, 2.5 m adjacent to high pedestrian activity generators

Typologies: Main Street - 20 m



CONTEXT	Urban
STREET FUNCTION	Placemaking and access
RIGHT OF WAY	18–20 m
NUMBER OF LANES	2
TARGET SPEED	30–40 km/h
CYCLING FACILITIES	Shared lanes
PEDESTRIAN CLEAR ZONE WIDTH	2.0 m, 3.5 m adjacent to high pedestrian generators

Typologies: Rural Roads- 26 m

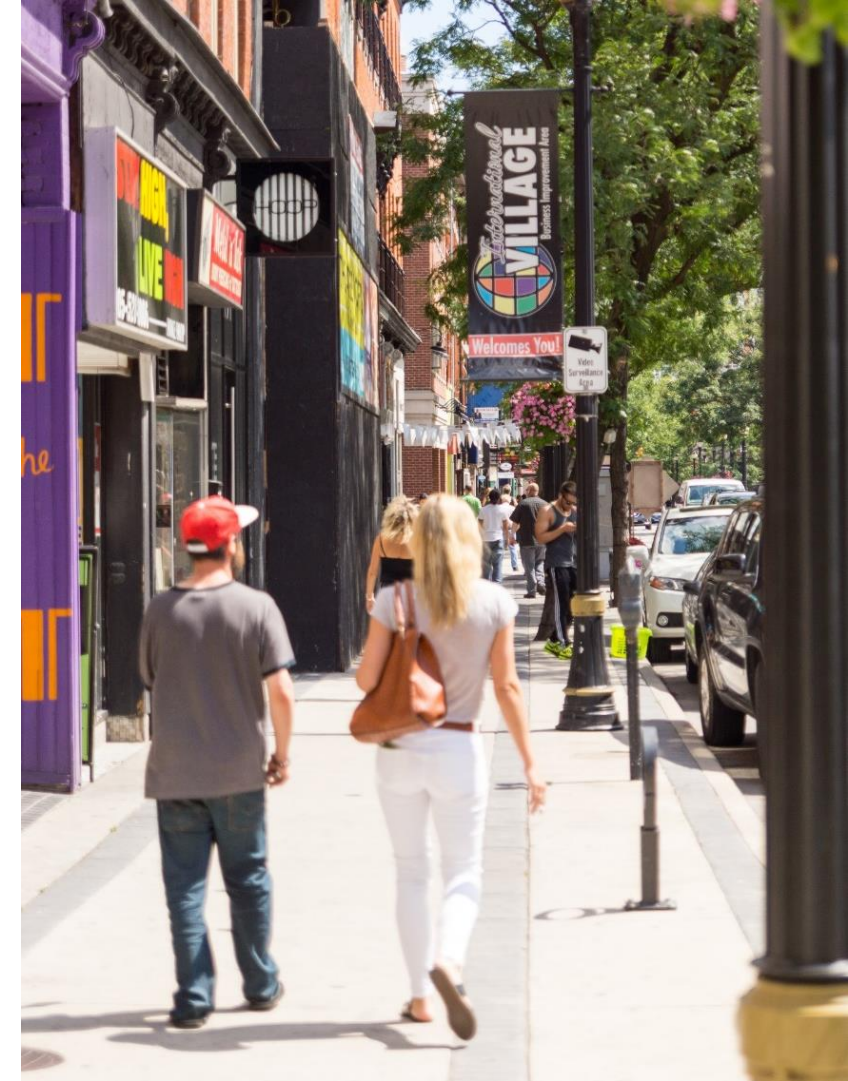


CONTEXT	Rural
STREET FUNCTION	Mobility
RIGHT OF WAY	26–36 m
NUMBER OF LANES	2
TARGET SPEED	60–80 km/h
CYCLING FACILITIES	Shared lanes, paved shoulder, or parallel multi-use path
PEDESTRIAN CLEAR ZONE WIDTH	n/a

* Alternative 26 m ROW included in the manual

Chapter 5: Intersections

- Conceptual cross-section showing **how different typologies can intersect** with one another.
- Provides updated turning radii to reduce vehicle speeds, which is **critical to improve safety at intersections**.
- Introduces **protected intersections** and related elements to improve safety.



Low Speed Intersections



Neighbourhood Street to Neighbourhood Street

1. Tighter Corner Radii
2. Opportunities for traffic calming (e.g. raised intersections, curb extensions, traffic diverters)
3. Shared cycling street

Compact Urban Intersections



Urban Avenue to Main Street

1. Raised corner to separate cyclists and motorists
2. Smaller corner radii
3. Left turn lane stop bar setback
4. Transition to shared cycling facilities
5. Bus stop integrated with cycle track
6. Crossing distances minimized

Major High Capacity Intersection



Transitioning Avenue to Transitioning Avenue

1. Corner radii can accommodate larger vehicles, like buses
2. Turning lanes provide flexibility for protected signal phasing
3. Protected intersection corners for AT facilities
4. Median refuges for pedestrians
5. Separated cyclist waiting area
6. Bus stop with full amenities

Working With Our Partners

- **Four Cross-Departmental Technical Advisory Committee Meetings**
- **One-on-One Meetings with Internal Groups**

- Planning
- Engineering Services
- Chief Road Official
- Forestry and Horticulture
- Landscape Architecture
- Transit
- Growth Management
- Transportation Operations & Maintenance
- Environmental Services

- **Advisory Committees**

- Advisory Committee for Persons with Disabilities
- Hamilton Cycling Committee
- Development Industry Liaison Group (x2)
- Seniors Advisory Committee

- **Community Focus Group**
- **2 Surveys on Engage Hamilton**

What We Heard During Phase 2

- Proposed typologies and cross-sections **reflect the intent of the Complete, Livable, Better Streets policy** well.
 - 90%+ support on each cross-section
- **Strong support** for improving multi-modal transportation options.
- Proposed cross-sections are **pragmatic** and are likely to be achieved.
- **Need to make designs flexible to adapt to area specific characteristics** (e.g. narrower right-of-way, above ground utilities, mature trees, typography).

Home » Complete Liveable Better Streets Design Manual

Complete Liveable Better Streets Design Manual

f t in e



The City of Hamilton is developing a Complete, Livable, Better (CLB) Streets Design Manual. This manual will provide a set of consistent guidelines and tools to inform the design, implementation, maintenance and monitoring of CLB Streets across the city. The purpose of this manual is to:

- Encourage designs that better balance considerations for the different transportation modes that share streets;
- Focus on enhancing road safety; and;
- Design streets to address the transportation requirements and placemaking functions of surrounding areas.

The manual is being developed in two phases in 2020 and 2021, and stakeholders are invited to provide their input to help inform the project.

What are Complete Livable Better (CLB) Streets?

Complete Streets are streets that are safe for everyone: people who walk, bicycle, take transit, or drive, and people of all ages and abilities. Complete, Livable, Better (CLB) Streets are Hamilton's version of Complete Streets.

The CLB Streets approach is a shift away from traditional design that prioritizes the movement of motor vehicles. A CLB Street is also a public space that equitably considers the needs of all road users. Through proper design, CLB Streets can improve safety, accessibility, connectivity, sense of place and the public realm overall.

Report Recommendations

- a) That the Complete Streets Design Manual attached as Appendix "A" to Report PED21020(a)/PW21002(a) be approved as the basis for planning and designing City streets;
- b) That staff be directed to update roadway design manuals and guidelines to reflect Complete Streets Design Manual, including, but not limited to, the Construction and Materials Specifications Manual, Traffic Signal and Pavement Marking Designs Drawings, and other documents identified by staff;

Approve the manual as the basis for planning and designing City streets.

Update municipal street design documents to reflect the changes in the Complete Street Design Manual.

Report Recommendations

- c) That staff be directed to update the relevant sections of the Comprehensive Development Guidelines and Financial Policies to incorporate complete street elements, in consultation with the Development Industry Liaison Group;
- d) That staff be directed to undertake a mapping exercise as part of the Council approved Road Classification Harmonization Study and Right-of-Way Review (Project ID 4031955987) to categorize all existing and planned roadways based on the Complete Streets Typologies and compare existing and future Right-of- Way opportunities and constraints, and to inform future Official Plan updates and on-going planning studies;

Update the engineering and development guidelines, with input from DILG.

Categorize the street network using the typologies as part of the update to the street classification system.

Report Recommendations

- e) That the matter respecting Item ABO, regarding the results of the public consultation on the core components of the Complete Liveable Better Streets Design Manual, and with a recommended Complete Liveable Better Streets Design Manual be identified as complete and removed from the Public Works Committee Outstanding Business List.

Remove the item from the Outstanding Business List.

Implementation

- **Utilize Design Manual for the various types of projects** (e.g. Stand-alone projects, Major Street Projects, Plans and Studies, Operations and Maintenance).
- Continue to disseminate design manual amongst staff, including training sessions.
- **Develop “Resident Guide”** which can be used to educate public on Complete Streets.
- Monitor implementation successes and opportunities for **improvements over time.**





Hamilton

THANK YOU