

<b>TO:</b>	<b>CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 13, 2018</b>
<b>FROM:</b>	<b>KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR ENVIRONMENTAL &amp; ENGINEERING SERVICES AND CITY ENGINEER</b>
<b>SUBJECT:</b>	<b>COMPLETE STREETS DESIGN MANUAL</b>

<b>RECOMMENDATION</b>
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That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the City of London Complete Streets Design Manual:

- (a) The Complete Streets Design Manual, as summarized in the Executive Summary attached hereto as Appendix A, **BE APPROVED** as the basis for planning and design of City streets; it being noted that the Manual will be subject to future periodic updates; and,
- (b) The Design Specifications and Requirements Manual **BE UPDATED** based on the Complete Streets Design Manual and in coordination with the Design Specifications and Requirements Manual update process.

<b>PREVIOUS REPORTS PERTINENT TO THIS MATTER</b>
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- Civic Works Committee – June 19, 2012 – London 2030 Transportation Master Plan
- Planning and Environment Committee – June 13, 2016 – The London Plan
- Civic Works Committee – November 29, 2016 – Complete Streets Design Manual, Appointment of Consulting Engineer

<b>2015-19 STRATEGIC PLAN</b>
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The City of London Complete Streets Design Manual supports the 2015-19 Strategic Plan through the strategic focus area of Building a Sustainable City. Municipal Council identified a strategy to implement and enhance safe mobility choices for cyclists, pedestrians, transit users, and drivers through the provision of complete streets.

## BACKGROUND

### **Purpose**

This report seeks Municipal Council approval of the Complete Streets Design Manual and direction for staff to update the Design Specifications and Requirements Manual based on the recommendations in the Complete Streets Design Manual and in coordination with the Design Specifications and Requirements Manual updating process that includes industry consultation and considers influences from other processes.

### **Context**

The development of the Complete Streets Design Manual builds upon the London Plan linkages of land use and transportation through the reclassification of street types. The purpose of the manual is to provide design guidance to create the infrastructure that supports the goals and objectives of the street types. The Manual is intended to provide high-order design guidance supplemented by existing design tools.

On November 29, 2016, Municipal Council approved the appointment of MMM Group Limited / WSP to develop the Complete Streets Design Manual. WSP prepared the content of the Manual and assisted with internal and external consultation.

Adopting a complete streets approach to transportation planning and design in London is supported by a number of policies at the provincial and municipal level. These policies provide the direction for the vision, goals and objectives of the Complete Streets Design Manual. Listed below briefly are the most relevant local and provincial policies and City initiatives that have informed and influenced the development of the manual:

- City of London Strategic Plan Convenient and Connected Mobility Choices Strategies
- Provincial Policy Statement (2014) policies that outline the importance of using planning and design measures to provide viable transportation options beyond single-occupant motor vehicle travel
- Accessibility for Ontarians with Disabilities Act (AODA)
- The London Plan's multi-modal vision for the City's street network
- Smart Moves 2030 Transportation Master Plan objectives including the enhancement of active modes and transit via policy, programming, and complete streets design
- London's Rapid Transit initiative
- London ON Bikes Cycling Master Plan
- Vision Zero – London's Road Safety Strategy
- MTO Cycling Strategy (2013) explicit support for complete streets implementation throughout the province
- Our Move Forward, London's Downtown Plan
- The London Urban Forest Strategy

As part of the development of the Complete Streets Design Manual, several precedent complete streets policies and design guidance from comparable mid-size cities and large cities were reviewed:

- Niagara Region Complete Streets Design Guidelines - 2017
- City of Waterloo Complete Streets Policy - 2011
- City of Toronto Complete Streets Design Guideline – 2016
- City of Dallas Complete Streets Design Manual – 2016

## DISCUSSION

### **Vision for Complete Streets in London**

Streets in London will meet the needs of a wide range of users as defined by the place type, feature high-quality pedestrian environments, and integrate seamlessly with transit services, cycling networks, and automobile users. London’s streets will be designed for connectivity and support the use of active and sustainable modes of transportation, and also strongly consider the needs of utility and maintenance providers within the right-of-way. With this balance of modes, users, and places in mind, all future construction, reconstruction, and rehabilitation projects for streets – both large and small – in London will be influenced by principles of “completeness” in both planning and design.

### **What are Complete Streets?**

The London Plan states that “Complete streets are those that are designed to support many different forms of mobility. Complete streets provide physical environments that make all forms of mobility safe, attractive, comfortable and efficient. Complete streets also provide a positive physical environment that supports the form of development that is planned for, or exists, adjacent to the street. In some cases, complete streets may also incorporate corridors for wildlife movement”.

### **Stakeholder Consultation**

Key stakeholders were engaged throughout the development of the Manual in order to inform and guide the efforts for the development of the Complete Streets Design Manual. An interactive workshop with key stakeholders was held early in the study on June 2, 2017 to provide input in the early stages of the study. Concepts of complete streets were introduced and participants were able to provide input regarding the direction of Manual. Workshop invitations were extended to a broad range of organizations from the private sector, public sector, special interest stakeholder groups, and City staff. A total of 31 participants attended the workshop, representing the following organizations:

- Accessibility Advisory Committee
- Argyle Business Improvement Association (BIA)
- Bell Canada
- Can-Bike
- City of London Water Engineering
- City of London Development Services
- Cycling Advisory Committee
- Downtown London BIA

- Hyde Park Business Association
- London Development Institute (LDI)
- London Environmental Network
- London Fire Department
- London Hydro
- London Middlesex Road Safety Committee
- London Transit Commission
- Middlesex London Health Unit
- Start Communications
- Tree and Forests Advisory Committee
- Union Gas

At a later stage of the study, follow-up presentations on the draft Manual were provided to a number of groups and committees in order to ensure the Manual meets the objectives set out at the stakeholder workshop:

- Transportation Advisory Committee (April 24, 2018)
- DC External Stakeholder Committee (May 10, 2018 & June 21, 2018)
- Cycling Advisory Committee (May 16, 2018)
- Diversity, Inclusion, & Anti-Oppression Advisory Committee (May 17, 2018)
- Utility Coordinating Committee (May 17, 2018)
- Trees and Forests Advisory Committee (May 23, 2018)
- Accessibility Advisory Committee (May 24, 2018)
- Age Friendly London (May 31, 2018)
- Building and Developer Liaison Forum (June 1, 2018)

Since the Complete Streets Design Manual will be utilized by individuals with a variety of interests, representatives from different service areas including Transportation Planning & Design, Planning (Urban Design & Urban Forestry), Development Services, Construction Administration, Roadside Operations, Water Engineering, Stormwater Management, and Wastewater & Drainage Engineering were involved in the process and provided ongoing feedback throughout the development of the Manual.

A webpage was created on the City website for the Complete Streets Design Manual and the draft report was posted for public review and feedback prior to finalization. A public advertisement was also published in the Londoner requesting public feedback on the draft Manual.

### **Highlights from the Manual**

The Executive Summary of the Complete Streets Design Manual can be found in the attached Appendix A and the entire document is linked here:

<http://www.london.ca/residents/Roads-Transportation/Transportation-Planning/Pages/Complete-Streets-.aspx>

The Complete Streets Design Manual establishes street cross section design parameters based upon the London Plan street context and place types. The Manual serves as a valuable resource for integrating all of these functions and has been written for all practitioners, advocates and citizens involved in the street design process. Application of the complete streets design parameters within future designs will ensure

that Council's goals for the function and the character of the street are met. The Manual consists of six chapters which are outlined below.

### Chapter 1: Complete Streets: Vision and Principles

This chapter sets the stage for complete streets design and includes:

- Introduction to Complete Streets and purpose of the Manual
- Review of Complete Streets Policies in London
- The Vision for Complete Streets in London
- Design / Core Principles for Complete Streets

#### Core Principles



**Prioritize Safe and Accessible Options for People**



**Embed Sustainability**



**Emphasize Vitality**



**Prioritize Connectivity**



**Ensure Context Sensitivity**



### Chapter 2: Elements of Complete Streets

Chapter 2 introduces the range of possible design features that enhance the safety, comfort, and convenience of travel for each mode of transportation and support design for place-making, green infrastructure, and utilities. It includes tools for:

- Pedestrian Facility Design
- Cycling Facility Design
- Transit Facility Design
- Motor Vehicles
- Green Infrastructure
- Utilities and Municipal Services



### Chapter 3: Undertaking Complete Streets Design

This chapter focuses on how the process of street design can be adapted to reflect the complete streets approach and it includes:

- Process Overview
- Planning
- Conceptualizing
- Designing
- Implementing
- Monitoring

In order to achieve a complete streets vision, a comprehensive process that spans from the initial planning and prioritization stage to project implementation and monitoring is required. City staff and consultants who are incorporating complete streets elements into capital projects for new construction, reconstruction, or rehabilitation will be required to complete the following five stage process:

- **Plan:** Identify and prioritize candidate complete streets and begin scoping a project.
- **Conceptualize:** Envision what the complete street design could look like, engage the internal and external stakeholders necessary to support the project, and establish design priorities.
- **Design:** complete the preliminary and detailed design, balancing the trade-offs, priorities, and inputs from stakeholders and project objectives.
- **Implement:** Tender and construct project while communicating with stakeholders.
- **Monitor:** Evaluate the performance of complete streets and integrate lessons learned into future projects.

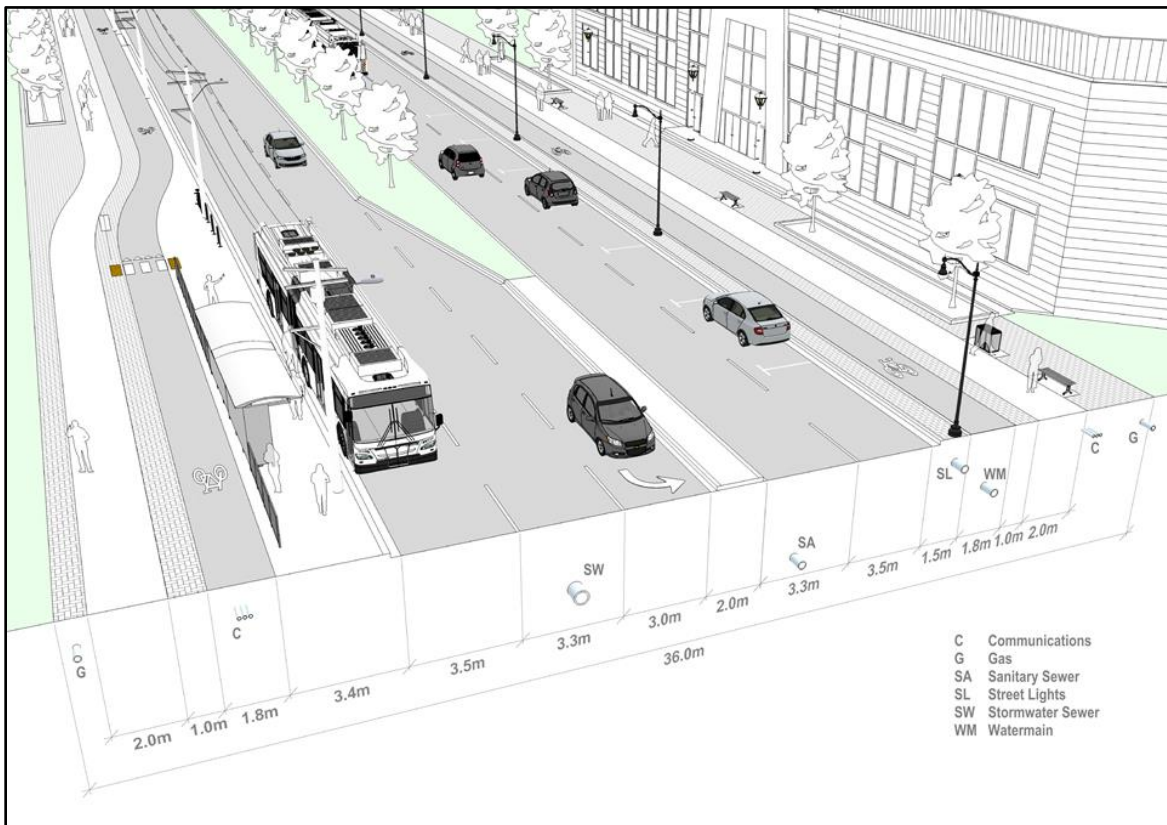
### Chapter 4: Street Design

Chapter 4 illustrates conceptual cross sections for each street classification, as defined in the London Plan. For each street type, a three-dimensional rendering is provided showing how the space in the right-of-way should be allocated and how individual street elements are integrated to form a complete street.

The London Plan introduced a table which gives direction on which design features should be included on each type of street classification. The Complete Streets Design Manual turns this table into cross sections for each street classification illustrating how the various aspects of street design can fit together. This chapter includes design guidance for the following street types:

- Rapid Transit Boulevards
- Urban Thoroughfares
- Civic Boulevards
- Main Streets
- Neighbourhood Connectors
- Neighbourhood Streets
- Rural Thoroughfares
- Rural Connectors

Below is an example of a Civic Boulevard typical cross section. Civic Boulevards (e.g., Adelaide Street or Commissioners Road) provide multi-modal connections between different neighbourhoods across the city including downtown.



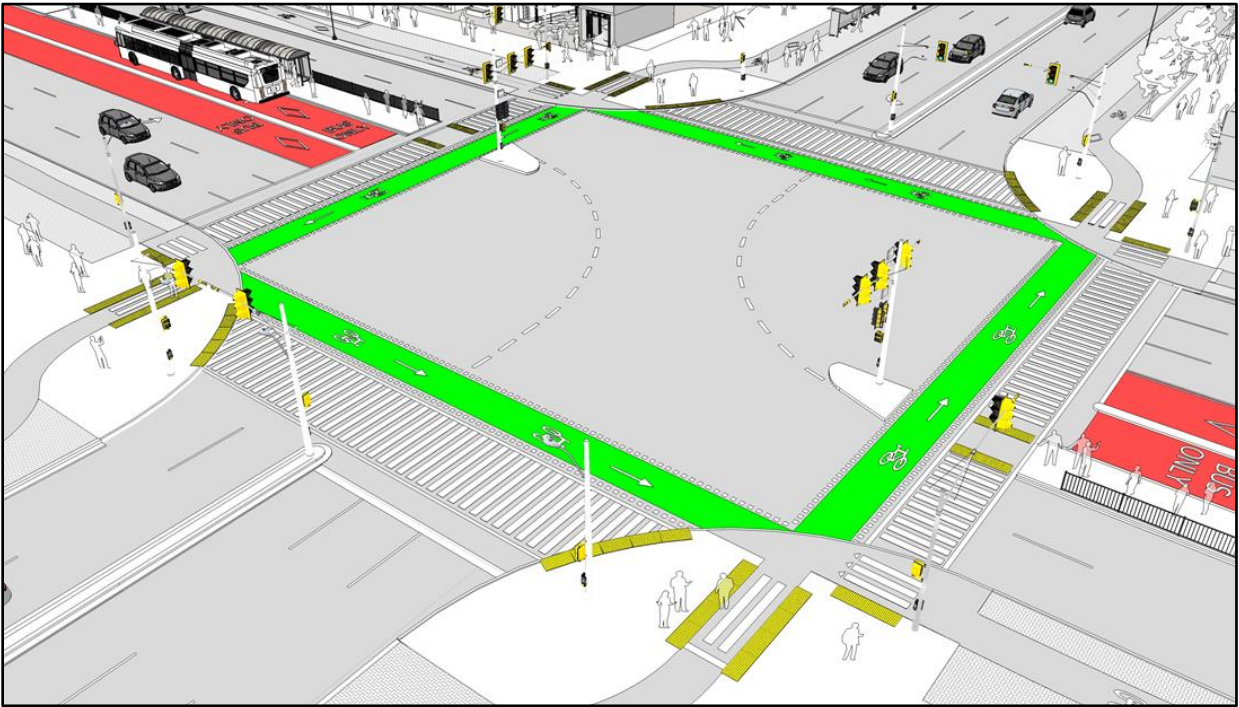
**Civic Boulevard Typical Cross-Section**

Chapter 5: Street Design for Intersections

Chapter 5 provides examples for intersection treatments and illustrates how different street classifications would intersect. Intersections have greater potential for conflict than mid-block locations, as such different strategies to inform intersection design and mitigate conflicts were developed. This chapter includes design guidance for the following intersection types:

- Rapid Transit Boulevard Intersecting a Main Street
- Urban Thoroughfare intersecting a Civic Boulevard (Signalized)
- Urban Thoroughfare Intersecting a Civic Boulevard (Roundabout)
- Urban Thoroughfare Intersecting a Neighbourhood Connector
- Civic Boulevard Intersecting a Neighbourhood Street

Below is an example of a Rapid Transit Boulevard intersecting a Main Street. This intersection rendering highlights several of the features that are unique to the Rapid Transit Boulevard street type with its centre running bus rapid transit design where transit is given a high priority, intersecting a Main Street. The pedestrian realm is given a high priority for both these street types.



**Rapid Transit Boulevard Intersecting a Main Street**

### Chapter 6: Moving Forward with Complete Streets

Chapter 6 provides methods used to measure performance of complete streets projects. These include safety, accessibility, sustainability, connectivity, vitality, and support for multi-modal travel. Analysis that is undertaken should be relevant to specific projects, consistent across projects (to facilitate cross-project evaluation) and directly inform planning and design.

### **Implications**

#### Financial

Transportation projects in the City are already being designed and constructed with the complete streets philosophy in mind. The role of the Manual is to improve, standardize and formalize this design philosophy. In broad terms, the Manual recommendations will have a negligible impact on costs with some exceptions. Narrower lane widths are proposed to control driver speeds which can reduce costs. Separation of cycling facilities into the boulevard on major roads can also reduce the cost of these facilities slightly. Slightly increased sidewalk widths and locally improved cycling facilities potentially offset these cost reductions.

The Complete Streets Manual recommendations have been integrated into the creation of the Development Charges Background Study currently underway to support the 2019 bylaw. The results of the cost analysis for the development charges project costing suggests that the manual recommendations have a negligible influence on the major roadworks program costs. Given the major roadworks represents the majority of Transportation costs, the Manual will have a negligible impact on the development charge rate.

The current Development Charges Bylaw supports active transportation with a DC contribution to the cycling facilities annual program. The Complete Streets Manual recommends bike lanes on some neighbourhood connector streets (primary collectors) subject to a complementary Cycling Master Plan update to identify these routes. The additional cost due to the wider pavement width to accommodate the bike lanes are



proposed to be claimable from the CSRF annual program. This will create some additional incremental pressure on this annual program.

Reconstruction projects supported by rate-based lifecycle renewal accounts will experience similar trade-offs and negligible cost impacts. However, the project management transition from reinstating existing conditions to a complete streets approach that has been underway for several years does generate additional community interest in projects, scrutiny of designs and pressure on project management and staff resources. Implementation of complete streets improvements such as revised street widths or additional sidewalks in established neighbourhoods commonly get contentious.

### *New Developments*

As stated earlier, the Complete Streets Design Manual establishes street cross section design parameters based upon the London Plan street context and place types. Some corridors like Neighbourhood Streets accommodate predominantly residential land use and are strongly associated with the Neighbourhood Place Type detailed in the London Plan. The City's vision for these corridors includes narrow travel lanes and low volumes of traffic, vibrant community life, and street design that supports active transportation and transit connections to essential local amenities. The Complete Streets Design Manual takes direction from The London Plan and proposes sidewalks on both sides of Neighbourhood Streets. This London Plan policy is currently subject to appeal and the Complete Streets Design Manual will be updated to comply with any OMB decisions. The implementation of this specific complete streets update to the Design Specifications and Requirements Manual is not proposed for implementation until the policy is in effect.

The Complete Streets Design Manual also recommends the construction of barrier curbs on neighbourhood streets to provide better separation between motor vehicles and pedestrians and to reduce boulevard snow plow damage. Semi-mountable curb has been permitted on neighbourhood streets and some neighbourhood connectors in the past which reduces road safety and results in complaints from residents related to vehicles leaving the road and driving on the boulevard. Discussions with the development industry on this topic have resulted in agreement to a phased in implementation of this new standard which has been integrated into the recent Design Specifications and Requirements Manual update.

### *Property Requirements*

The London Plan introduced a table containing eight street classifications and provides direction on which design features should be included on each type of street classification. The London Plan identifies right-of-way widths for each street type. The Complete Streets Design Manual illustrates with cross sections how the various aspects of street design can fit together. This exercise validates and confirms the ROW widths in The London Plan for application to developments and associated road widening dedications.

The Manual provides considerations for project designers of reconstruction projects to assess existing and proposed conditions of existing road corridors based on relative priority of each use of the particular street type. The tools identified in the Manual, will allow staff to look for ways to mitigate and optimize property impacts when designing reconstructions of existing streets.

## CONCLUSION

The London Complete Streets Design Manual is a tool that will change the way streets are designed in London. The complete streets approach is about considering the needs of pedestrians, cyclists, transit riders, and motorists and building streets that balance these needs, prioritize road safety and compliment the surrounding land use. There are a number of local policies that support the Complete Streets Design Manual, including the London Plan, the Transportation Master Plan, and Vision Zero.

The Complete Streets Design Manual will be for everyone responsible for infrastructure on City streets including City staff, developers, consultants and utility companies. Londoners with a passion for improving the character of their community also have an interest. Significant internal and external stakeholder consultation was completed through workshops, interactive presentations and document review in order to ensure the goals and vision of interested participants were incorporated.

Complete Streets Design Manual will be a powerful tool that practitioners, advocates, and all Londoners can use to transform the way streets are designed and to achieve city-building visions.

### Acknowledgements

Michelle Morris, Engineer In Training and Maged Elmadhoon, P.Eng. Traffic & Transportation Engineer lead the development of the manual.

The project team included City representatives from Environmental and Engineering Services (Transportation Planning & Design, Construction Administration, Roadway Lighting and Traffic Control, Road Operations, Water Engineering, Stormwater Management and Wastewater & Drainage Engineering) Planning (Urban Design and Urban Forestry), Development & Compliance Services.

SUBMITTED BY:	RECOMMENDED BY:
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Attach: Appendix A – Executive Summary, Complete Streets Design Manual

cc: John Fleming, Managing Director, Planning and City Planner  
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Chief Building Official  
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