City of Hamilton
PUBLIC WORKS COMMITTEE ADDENDUM

Meeting #: 23-018
Date: December 4, 2023
Time: 1:30 p.m.
Location: Council Chambers
Hamilton City Hall
71 Main Street West

Carrie McIntosh, Legislative Coordinator (905) 546-2424 ext. 2729

Pages

5. COMMUNICATIONS

*5.1 Correspondence from Elizabeth Knight respecting Support for Bike Lanes — *3*

6. DELEGATION REQUESTS

*6.4 Delegation Requests respecting Item 8.2 Main Street Two-Way Conversion Implementation and One-way Street Conversion Considerations (PW23074/PED23248) (City Wide) (Outstanding Business List Item) (for today's meeting) — *5*

*a. Ian Borsuk, Environment Hamilton

*b. Lilly Noble

*6.5 Lilly Noble respecting Item 9.1 Terms of Reference – Red Hill Business Park to Highway 6 South Conceptual Link (PED23246) (City Wide) (for today's meeting)

8. STAFF PRESENTATIONS

8.2 Main Street Two-Way Conversion Implementation and One-way Street Conversion Considerations (PW23074/PED23248) (City Wide) (Outstanding Business List Item)

From: Elizabeth Knight [redacted]
Sent: December 1, 2023 8:28 AM
To: clerk@hamilton.ca
Subject: PW committee agenda Dec 3, 2023

Hello Clerks, please add my letter to the public agenda, thank you.

In support of Bike Lanes

Good afternoon committee members. I am in full support of the multi methods of transit that are being planned and implemented city-wide. They are both a safety booster and a valuable way to address climate change.

Bike lanes were recently added to Stonehenge Drive in Ancaster's Meadowlands and on my commute I already see more people cycling and using the new bikelane than prior to their installation, even as the colder weather arrives.This is a real win for the Meadowlands, a historically car dependent community full of families whose kids have reached their teens but have to rely on mom's taxi for their every move as there in no bus in the area. This bike lane will also provide the potential for kids to more safely reach the local schools. I am looking forward to the buildout of the network in Ancaster as a whole, and especially the Meadowlands.

As for bike lanes causing parking restrictions, cars should be stored in driveways, not on public roads whose purpose is to move people, by varying methods, from A to B.

Not everyone who doesn't drive views the HSR as their preferred means of getting around. A bike gets you where you want to go, on your own time schedule. With the E-bike pilot soon to start, dedicated bike lanes are exactly what we need to encourage more people out of cars and onto bikes, e-bikes, cargo bikes, scooters, and other modes of active transportation to help us reach our GHG emissions reduction goals.

Bike lanes and widened sidewalks keep people safe from traffic, encourage more active transportation and encourage more people to choose climate resilient transport options beside the car or even the bus.

Thank you for moving this city forward. We can be a world class leader in sustainable transit so let's get rolling.

Elizabeth Knight
[redacted]

6.4

Request to Speak to Committee of Council

Submitted on Fri, 12/01/2023 - 09:27

==Committee Requested==

Committee: Public Works Committee

Will you be delegating in person or virtually? Virtually

Will you be delegating via a pre-recorded video? No

==Requestor Information==

Name of Individual: Ian Borsuk

Name of Organization: Environment Hamilton

Contact Number: 9055157956

Email Address: iborsuk@environmenthamilton.org

Mailing Address:
51 Stuart Street
Hamilton , Ontario. L8L1B5

Reason(s) for delegation request: I am seeking to provide comment on behalf of Environment Hamilton in favour of proposed traffic calming measures and overall design changes to create safer streets for all.

Will you be requesting funds from the City? No

Will you be submitting a formal presentation? No

CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT
Transportation Division
and
PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT
Transportation Planning and Parking Division

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	December 4, 2023
SUBJECT/REPORT NO:	Main Street Two-Way Conversion Implementation and One-way Street Conversion Considerations (PW23074/PED23248) (City Wide) **(Outstanding Business List Item)**
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Mike Field (905) 546-2424 Ext. 4576 Dipankar Sharma (905) 546-2424 Ext. 3016 Steve Molloy (905) 546-2424 Ext. 2975
SUBMITTED BY: **SIGNATURE:**	Carolyn Ryall Director, Transportation Division Public Works Department 
SUBMITTED BY: **SIGNATURE:**	Jackie Kennedy Director, Engineering Services Division Public Works Department 
SUBMITTED BY: **SIGNATURE:**	Brian Hollingworth Director, Transportation Planning and Parking Planning and Economic Development Department 

RECOMMENDATION

(a) That funding for the detailed engineering design of the two-way conversion of Main Street between Dundurn Street South and Main Street East/King Street East (Delta) in alignment with the principles established by the Main Street Two-Way conversion study, be submitted as Capital Project ID #4032411048 at a value of $1,000,000 through the 2024 annual capital budget process for consideration of Council;

(b) Funding for the implementation of Main Street between Dundurn Street South and Main Street East/King Street East (Delta), following the completion of detailed engineering design, be earmarked in the 2026 capital budget at a value of $26,492,000 and considered for future approval by Council to enable construction targeted to begin in 2026 and completion in 2028;

(c) That the remaining unbudgeted candidate one-way to two-way street conversions and alternative complete street interventions as identified in Appendix “E” to Report PW23074/PED23248 be programmed, and that funding associated with the conversions be identified and brought forward as part of future annual capital budget submissions for consideration of Council.

EXECUTIVE SUMMARY

Between 2017 and 2022, the Main Street corridor from Dundurn Street South to Main Street East/King Street East (Delta) experienced 2,065 collisions, with 73% occurring at intersections and 27% at mid-block locations. Notably, 84 of total collisions involved pedestrians, and 37 involved cyclists. Pedestrians and cyclists have high injury rates when involved in collisions, emphasizing the need for safety improvements. The intersection of Main Street and John Street had the highest frequency of fatal and injury-related collisions in the city, followed by Main Street at Wellington Street. Sideswipe collisions on Main Street were significantly more prevalent compared to the city average, with a higher severity rate, partly attributed to the historical one-way configuration of Main Street.

In May 2022 Council provided direction by motion to convert Main Street from a one-way operation to two-way operation and to report back on how it could be implemented and what resources are required. Further, Council directed to report back on the state of the conversion of other one-way streets to two-way operations, in addition to Main Street. Council also directed that interim immediate safety measures be implemented on Main Street and King Street.

Immediate safety measures were implemented in 2022 to improve safety ahead of two-way conversion. Measures deployed in various locations included lane reductions, traffic barriers, parking changes, pedestrian crossing enhancements, No Right Turn on Red restrictions, signal timing changes, pedestrian count down timers, leading pedestrian interval signals, and selected painted transit lanes. These measures led to a notable reduction in collisions on Main Street and King Street, by about 42%.

WSP Canada Inc. was selected to examine the conversion of Main Street to a two-way operation as per the Council direction. This study focused on finding the most effective method for conversion rather than questioning its necessity. Guiding principles were established to identify opportunities and address safety concerns, pedestrian and cyclist-friendly infrastructure, transit, accessibility, greenery, and parking.

The study excluded a segment of Main Street West, which falls under the jurisdiction of the Ministry of Transportation Ontario. To facilitate the comprehensive conversion, reconfiguration of exit ramps from Highway 403 is essential, and discussions with the Ministry are ongoing. This segment of Main Street would be completed as a future second phase in coordination with Light Rail Transit works, as necessary.

Three design alternatives were evaluated based on safety, traffic flow, pedestrian-friendliness, cyclist network, social equity, transit, parking, and cost. Option three, Asymmetric Lane Capacity, was selected as the preferred solution due to its comprehensive benefits.

Extensive consultations, including public engagement, were conducted, and feedback emphasized pedestrian and cyclist prioritization, cycling infrastructure, reduced side street access, and traffic congestion concerns.

The Main Street Two-Way Functional Design Plans (Option three) are conceptual and need further detailed engineering using a consulting assignment at a cost of approximately $1,000,000. The estimated construction budget includes traffic signal reconstruction ($8,425,000), roadway rehabilitation ($10,000,000), corridor improvements ($3,557,000), and contingency/miscellaneous costs ($4,510,000), totalling $26,492,000. Detailed design is expected to take 24-30 months, with construction over two years, starting in 2026-2028 to avoid disruptions due to light rail transit construction on King Street.

Further to the one-way conversion of Main Streets, Council provided additional direction to be provided with an update and reassessment of all remaining one-way streets in the City. This report also includes a high-level review of all other one-way arterial and collector streets in the City. This review utilized the evaluation framework that was developed as part of the 2018 Transportation Master Plan while taking into

consideration more recent experience collected through the development of the City's Complete Streets Design Manual. The review re-confirmed the benefits of converting many of the remaining one-way streets to two-way operations, which include safer traffic speeds and improved routing opportunities. However, the review also recommends that some streets remain one-way, but with lane reductions. These lane reductions would serve to re-prioritize under-utilized vehicle lanes for other purposes including cycling facilities, expanded pedestrian space, green infrastructure or on-street parking and loading.

A summary of the evaluation of 14 street conversions (excluding Main Street) in Appendix "E" of Report PW23074/PED23248.

Alternatives for Consideration – see page 16

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: Undertaking an engineering consultant assignment to prepare the detailed design drawings and tender documents is estimated to cost approximately $1,000,000. Capital Project ID #4032411048 at a value of $1,000,000 has been included in the 2024 annual capital budget process for consideration by Council.

Implementation (construction) of the Main Street two-way conversion is estimated to cost approximately $26,492,000. Completion of detailed engineering design will further refine the project's budget cost estimate. It is proposed that funding be identified, for Council approval, through the annual capital budgeting process. Funding for implementation would be required for the construction phases, anticipated to begin in 2026 and be completed in 2028. Project costs would be shared across the 2026-2028 budget years. A detailed cost breakdown is included in Appendix "F" to Report PW23074/PED23248.

Staffing: It is proposed that external services, through an engineering consulting assignment, be used to deliver detailed design/contract documents. Internal resources would oversee the work of the consultant and it is anticipated that a project team will be required consisting of approximately four temporary positions within the Engineering Services and Transportation sections, which would be funded through gapping or the capitalization of the project budget. Further, external contract administration support can supplement existing internal resources to aid in delivering the implementation phase of the project.

Legal: N/A

HISTORICAL BACKGROUND

On February 13, 2019, Council approved the Hamilton Strategic Road Safety Program and Vision Zero Action Plan 2019-2025 (Report PW19015) that identifies that no loss of life is acceptable, and that traffic fatalities and injuries are preventable. Further, that the City's goal is to eliminate traffic related injuries and fatalities.

On May 11, 2022, Council unanimously passed a motion entitled 'Safety Enhancements to Major Arterial Roads' which provided direction to undertake the following actions:

(a) That staff identify actions that can be taken immediately to improve safety for all users along Main Street and King Street such as expanded and enhanced pedestrian space, temporary lane reductions, removal of parking restrictions, reduced speed limit, synchronized traffic signal options, no right turn on red restrictions at intersections, and leading pedestrian intervals;

(b) That the conversion of Main Street from one-way to two-way be approved as an immediate safety intervention and that an implementation plan be developed for the conversion of Main Street from one-way to two-way that integrates a Complete Streets redesign that will enable safer use for all people who need to use the streets including public transit riders, pedestrians, motorists and cyclists and that these spaces also contribute to climate resilience by providing shade trees and permeable surfaces;

(c) That staff be directed to undertake engagement with the public and advisory committees on the medium- and long-term vision of Main Street that leverages a Complete Streets, Equity Diversity and Inclusion and Climate Change approach;

(d) That staff consult with Metrolinx and the Ministry of Transportation on the implications of the implementation plan on Light Rail Transit and Highway 403 interchanges;

(e) That staff report back in early 2023 with an implementation plan for the two-way conversion of Main Street that includes an assessment of costs, construction timing and resource requirements;

(f) That the City retain a consultant to prepare the implementation plan for Main Street funded from Vision Zero Priorities Capital Budget (#4662020050) at an upset limit of $400,000; and

(g) That staff update and reassess all remaining one-way streets in the City of Hamilton utilizing the street conversion framework identified in the Transportation Master Plan and report back to Council.

Between May and November 2022, short-term roadway safety enhancements on Main Street and King Street were planned and implemented, including several amendments to By-law No.01-215 (Traffic) and By-law No.01-218 (On-Street Parking) to support the changes (refer to Appendix "D" to Report PW23074/PED23248, pages 25-27).

On June 16, 2022, the Main Street Two-Way Conversion informational webpage (www.hamilton.ca/mainstreetconversion) was published.

On July 5, 2022, a Communications update: Safety Enhancements to Main Street and King Street (CRO22022) was issued to Council outlining progress on the immediate safety enhancements on Main Street and King Streets.

On July 8, 2022, Council approved the Complete Streets Design Manual (PED21020(a)/PW21002(a)) which supports the design of roadways and considers the needs of all road users and supports the principles of Vision Zero.

On July 13, 2022, WSP Canada Inc. was contracted through the City's Roster Consultant procurement process to undertake a Main Street Two-Way Conversion Implementation Study assignment.

On July 27, 2022, a second communications update: Safety Enhancements to Main Street and King Street (CRO22022a) was issued to Council outlining progress on the immediate safety enhancements on Main Street and King Streets.

On August 12, 2022, Council approved five Community Safety Zones (PW22066) and four Automated Speed Enforcement Program operating locations along Main Street and King Street for implementation in 2023.

On September 20, 2022, a third communications update: Safety Enhancements to Main Street and King Street (CRO22022b) was issued to Council outlining progress on the immediate safety enhancements on Main Street and King Streets.

On May 2, 2023, the Engage Hamilton Main Street Two-Way conversion webpage was published publicly (https://engage.hamilton.ca/mainstreetconversion).

On May 10, 2023, the Main Street Two-Way Functional Design Plans were made available for public viewing through the City's Main Street Two-Way Conversion

webpage (www.hamilton.ca/mainstreetconversion), in advance of the Public Information Centre and Community Meetings.

On May 18, 2023, the City hosted a virtual Public Information Centre regarding the Main Street Two-Way Conversion initiative. Further, the Main Street Two-Way Functional Design Plans were added to the Engage Hamilton platform utilizing an interactive online public commenting tool.

On May 25, 2023, an in-person Community Meeting at City Hall was jointly hosted by Ward 1 and Ward 2 offices regarding the Main Street Two-Way Conversion initiative.

On May 29, 2023, an in-person Community Meeting at the Bernie Morelli Recreation Centre was jointly hosted by Ward 2 and Ward 3 offices regarding the Main Street Two-Way Conversion initiative.

On June 5, 2023, the public commenting period concluded for the Main Street Two-Way Functional Design Plans interactive online public commenting tool.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

The conversion of Main Street from one-way operation to two-way operation supports the Council approved Vision Zero Action Plan 2019-2025 and Complete Streets Design Manual. Conversion of Main Street from one-way to two-way operation will require amendments to By-law No.01-215 (Traffic) in accordance with the Ontario Highway Traffic Act, R.S.O. 1990, c. H.8.

RELEVANT CONSULTATION

The following internal and external parties have been consulted during the Main Street Two-Way Conversion study phase and in the development of this report:

- Transportation Division
- Transportation Planning & Parking Division
- Engineering Services Division
- Transit Division
- Financial Planning Administration & Policy Division
- Communication & Strategic Initiatives Division
- LRT Project Office
- Healthy Built Environments Division
- Ministry of Transportation Ontario
- Metrolinx
- Hamilton Strategic Road Safety Committee

- Business Improvement Area Sub-Committee
- Hamilton Police Services
- Ward 1, Ward 2, and Ward 3 Councillor Offices

Studying the conversion of Main Street from one-way operation to two-way operation is exempt from the Municipal Engineers Association Municipal Class Environmental Assessment based upon the provincial framework requirements. Regardless, because of the significance of the project and its importance to the safety of residents and all road users, it was carried out to generally follow the Municipal Class Environmental Assessment process, specifically phases one and two of Schedule B projects. Public and external stakeholder consultation and engagement was undertaken under the environmental assessment framework.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

Council's direction included two components, the first being the implementation of the Main Street two-way conversion and second the plan for conversion of other existing on-way streets to two-way operation.

Main Street Two-Way Conversion Implementation:

From 2017 to 2022, the stretch of Main Street between Dundurn Street South and Main Street East/King Street East (refer to Appendix "A" to Report PW23074/PED23248 – Study Area) experienced a total of 2,065 collisions. It's worth noting that the majority, 73% of these collisions, happened at intersections, while 27% occurred at mid-block locations. When compared to the citywide data, intersections had 16% fewer collisions, while mid-block locations had 15% more compared to Main Street. In terms of safety, Main Street's intersection with John Street has the highest frequency of fatal and injury-related collisions in the entire city. Following closely, the Main Street and Wellington Street intersection takes the second spot, and the Main Street and Victoria Avenue intersection comes in sixth. These numbers highlight that road users face a higher risk of collisions at Main Street intersections compared to other parts of the city.

Out of the 2,065 collisions that occurred on Main Street, 84 of them involved pedestrians, and 37 involved cyclists. Annual collision data shows that 89.7% of pedestrians involved in a collision sustained injuries, and 77.4% of cyclists involved in a collision are injured. These statistics, which reflect both the high injury rates among vulnerable road users and the collision frequency at Main Street intersections, strongly justify the benefit of safety improvements.

Main Street exhibits a notable prevalence of sideswipe collisions, accounting for 49% of all collisions, in contrast to the citywide average of 17%. This pattern also extends to the

severity of sideswipe collisions, with 26% of these incidents resulting in fatalities or injuries, whereas the citywide figure stands at only 8%. The historical one-way setup of Main Street stands out as a contributing factor to both the rate and nature of collisions experienced along the corridor.

Main Street and King Street saw the implementation of immediate short-term safety measures in 2022. The primary goal of these measures was to enhance safety temporarily until the transition to a two-way operation could be realized. These measures were designed to prioritize the protection of vulnerable road users by implementing strategies that create time or space separation between pedestrians and vehicles. The changes encompassed several aspects, including lane reconfiguration, the installation of ladder crosswalks, the establishment of pedestrian buffers, the incorporation of leading pedestrian intervals at signalized intersections, temporary lane control bump outs, expanded street parking, restrictions on right turns on red, enhancements to transit facilities, the establishment of community safety zones, and the operation of automated speed enforcement. To gauge the effectiveness of these safety measures, it is typically necessary to analyze multiple years of data, normally spanning five years. While a full five-year dataset is currently unavailable, an examination of the available collision data following the implementation of these short-term measures reveals a notable reduction in collisions on Main Street and King Street, amounting to an approximate 42% reduction.

WSP Canada Inc. was selected via the roster consultant process to assist in the examination of the conversion of Main Street from a one-way to a two-way operation, as per the Council direction. It is important to note that Council had already made the decision to proceed with the conversion, so the project's scope was explicitly narrowed to determine the most effective method for carrying out this conversion, rather than questioning whether it should be done.

Guiding principles were formulated, and these principles served as a foundation for identifying opportunities by capitalizing on existing safety concerns, Council and public input, and available frameworks, such as the Vision Zero Action Plan, Pedestrian Mobility Plan, Transportation Master Plan, and Complete Streets Design Manual, among others. These identified opportunities encompassed various aspects, including:

1. Enhancing safety for all road users.
2. Developing a pedestrian-friendly corridor.
3. Improving connectivity for cyclists.
4. Prioritizing the efficiency of two-way transit operations.
5. Enhancing accessibility.
6. Addressing parking and loading requirements.
7. Incorporating greenery and streetscaping elements into the design.

The segment of Main Street West, spanning from Paradise Road South to Dundurn Street South, has been excluded from the study. This decision is driven by the fact that a significant portion of this segment falls under the jurisdiction of the Ministry of Transportation Ontario, necessitating their formal endorsement and agreement for any modifications. The recent revisions to the realignment of the light rail transit corridor aids in permitting the full conversion of Main Street, which will incorporate reconfiguration of the Highway 403 exit ramps and intersections. The scheduling of this work, and the future expanded two-way of Main Street will be coordinated with the light rail transit works. In the interim, it is proposed that minor adjustments to this section of Main Street be made. These alterations are strategically recommended to support the initiation of the Main Street conversion process, commencing from Dundurn Street South.

As part of the comprehensive study, three distinct design alternatives for Main Street were identified and evaluated. These alternatives were developed and subjected to a thorough assessment against the backdrop of the opportunities previously identified. In order to systematically analyze and rank these alternatives, in accordance with the guiding principles and Council direction, a set of evaluation criteria was established by the project team. These criteria were pivotal in shaping the alternative designs and ultimately guided the selection of the most viable option.

The key evaluation criteria that informed the decision-making process include:

1. Safety and Conflict Mitigation: Prioritizing the minimization and mitigation of conflicts between motorists and vulnerable road users, ensuring their safety.

2. Traffic Operation: Methodically evaluating the impact of each alternative on roadway capacity and the operational dynamics of intersections.

3. Pedestrian Friendliness: Focusing on the provision of safe, pedestrian-friendly routes that are convenient and accessible.

4. Cyclist Network: Assessing the extent to which each design facilitates cycling, including connectivity to key destinations.

5. Social Health and Equity: Emphasizing the creation of an inclusive and equitable environment for all users of the roadway.

6. Transit Operations: Scrutinizing the impact and compatibility of each design alternative with local transit operations.

7. On-Street Parking: Deliberate on the consequences of each alternative for on-street parking availability.

8. Cost: Carefully estimating the anticipated construction costs associated with the implementation of each conceptual design.

These evaluation criteria were systematically applied to assess each design alternative, ensuring that the ultimate selection aligns with the overarching objectives and principles.

Three distinct design alternatives were formulated to address the challenges and opportunities presented by the corridor:

(i) Alternative One - Do Nothing:

The "Do Nothing" alternative entails maintaining the existing roadway configuration without any significant changes. This option, also referred to as Option One, was assessed based on several key considerations:

- Does not fulfil the objective of enhancing westbound capacity.
- Lacks provisions for pedestrian and cyclist-friendly infrastructure.
- Safety outcomes remain suboptimal under this option.
- Least opportunity for improving social health and equity.
- Does not align with Council's directives.

(ii) Alternative Two - Symmetric Lane Capacity:

Option Two proposes a reconfiguration of the roadway, converting the existing four eastbound lanes into two eastbound lanes and two westbound lanes. Key points regarding this option are:

- Provides balanced eastbound and westbound traffic capacity on Main Street.
- Does not effectively address the high volume of existing eastbound traffic, potentially worsening congestion compared to the current conditions.
- Traffic analysis indicates that this option would likely result in more congestion when compared to Options One and Three.
- Eastbound transit travel times will degrade as a result of congestion.

(iii) Alternative Three - Asymmetric Lane Capacity:

Option three introduces a reconfiguration of the existing roadway, resulting in an asymmetric layout. This design entails one westbound vehicular lane and two to three eastbound vehicular lanes, the specific number depending on the segment of the corridor. This option’s highlights are:

- Provides additional east bound capacity (current prevailing travel demand) when compared to Alternative one and two.
- Provides better safety and conflict mitigation opportunities
- Pedestrian environment is the friendliest of the three options
- Allows for incorporation of cycling facilities Victoria to Sherman (short term) and Dundurn to Sherman (longer term post light rail transit construction)
- Provides improved opportunities for social health and equity
- Provides space to incorporate street trees and green infrastructure

Based on the evaluation of alternative solutions, Option Three – Asymmetric Lane Capacity was determined to be the preferred solution and used to focus the study's efforts, including consultation and engagement. Design alternative Option three, the Main Street Two-Way Functional Design Plan, has been attached as Appendix "B" to Report PW23074/PED23248 – Main Street Two-Way Functional Design Plans.

As previously noted, the study falls under an exemption from the Municipal Engineers Association Municipal Class Environmental Assessment. However, due to the project's significance, the evaluation and analysis for the preferred design underwent a process equivalent to a 'Schedule B' Municipal Class Environmental Assessment Study.

Ensuring comprehensive input, extensive internal and external consultations were conducted, including public engagement. An internal stakeholder group was formed to examine various aspects, including needs, opportunities, constraints, objectives, evaluation criteria, and alternative evaluation.

Three public engagement sessions were organized, and the Engage Hamilton platform was leveraged to supplement the interactive sessions. The primary engagement event was a virtual Public Information Centre held on May 18, 2023, with over 300 participants (see Appendix "D" in Report PW23074/PED23248 for the May 18, 2023, Public Information Centre presentation). Additionally, the public was encouraged to contact the city through email, phone calls, letters, social media, and other means to share their thoughts, desires, and concerns regarding the study.

While all three alternative options were presented, the focus was primarily on option three, as it was identified as the preferred choice based on evaluation criteria. A summary of the consultation and engagement efforts can be found in Appendix "C" in Report PW23074/PED23248 – Public Engagement Report.

Based on the engagement summary, seven key themes emerged:

- Prioritizing pedestrians, cyclists, and transit users.
- Allocating street space for cycling and green infrastructure.

- Extending cycling options along Main Street with enhanced protection.
- Expanding Hamilton's cycling network.
- Reducing side street access to Main Street.
- Minimizing driveways along Main Street.
- Addressing traffic congestion concerns.

The level of public engagement was greater than typical City projects which demonstrates the high level of interest in the conversion of Main Street to two-way operations. Engagement is summarized as follows:

- 362 public engagement session attendees
- 81 unique questions from public engagement session attendees
- 149 e-mails received by the project general e-mail inbox
- 500 comments recorded on the interactive online public commenting tool

All comments from the consultation and engagement process were carefully reviewed and used to inform the development of the final Main Street two-way functional design plan. These comments will continue to guide the detailed design phase, evolving the functional plans into a construction-ready design that considers the feedback from the community collected during the engagement activities.

The Main Street Two-Way Functional Design Plans, referred to as Option Three, should be regarded as conceptual representations and do not constitute a fully engineered design for the Main Street two-way conversion. These functional plans serve the purpose of providing a "proof of concept" and illustrating the general appearance of the detailed design, including how key components will be integrated. These functional design plans played a pivotal role in soliciting public input during the study’s engagement phase.

Advancing from a functional plan to a comprehensively detailed design suitable for tendering and construction requires a thorough engineering process. This ensures that the design aligns with the project's objectives, is pragmatic, and is ultimately feasible for construction. Given the substantial scope of transitioning from a functional design to a detailed one and taking into consideration the current limitations of available internal resources, the engagement of external consulting services would be necessary. It is estimated that a detailed engineering assignment would cost approximately $1,000,000, and this process would be initiated through a formal request for proposal.

The conversion of Main Street from one-way operation to two-way operation represents a significant undertaking. Within the project scope, there are a total of thirty traffic signals, all currently configured to accommodate one-way traffic flow. These signals necessitate reconstruction to support the new two-way traffic flow only. Furthermore,

many of the intersections do not currently meet the Accessibility for Ontarians with Disabilities Act requirements, which demands additional reconstruction efforts. The estimated budget allocation for the reconstruction of these traffic signals is $8,425,000.

The resurfacing of Main Street has already been included in the existing five-year capital plan, due to the need for pavement rehabilitation. It is advantageous to synchronize the resurfacing work with the two-way conversion, capitalizing on economies of scale and enabling seamless coordination with other physical alterations along the corridor. The estimated budget for the resurfacing of Main Street within the project limits is $10,000,000.

In alignment with the overarching objectives of the two-way conversion, a range of supplementary activities are needed. These include geometric adjustments, the creation of median islands, the integration of cycling facilities, the implementation of green infrastructure, and the incorporation of decorative elements such as crosswalks and intersections. The estimated budget allocation to cover the costs associated with these project enhancements is approximately $3,557,000.

A detailed budget cost estimate is included as Appendix “F” to Report PW23074/PED23248– Project Budget Cost Estimate and summarized as follows:

Item:	Budget Estimate:
Traffic Signal Reconstruction	$ 8,425,000
Roadway Rehabilitation	$10,000,000
Corridor Improvements	$ 3,557,000
Contingency & Miscellaneous	$ 4,510,000
Total:	$26,492,000

The construction cost estimate will be further refined through the undertaking of the detailed design process and consider methods to reduce the overall project cost where possible.

Given the extensive nature of the Main Street conversion to two-way operation, it is reasonable to anticipate that the detailed design phase will span approximately 24-30 months. The complexity of the project makes it challenging to execute construction within a single construction season. Consequently, a phased approach is expected, with construction activities spread over a span of two-three years. The specifics of the staging and construction schedule will be defined during the detailed design process.

A preliminary assessment of the project's implementation indicates that the detailed design phase could commence in 2024 and be completed in 2025, followed by construction activities taking place in 2026/2028. This proposed delivery schedule is

strategically planned to facilitate the conversion of Main Street to two-way operation in advance of the commencement of extensive light rail transit construction on King Street. This timeline aligns with the preference of Council, ensuring minimal disruption to the community.

Conversion of existing on-way streets to two-way operation:

The Citywide Transportation Plan identifies an evaluation framework to rebalance streets in a context-sensitive manner. The intent of the evaluation framework is to implement a best complete street outcome, which could be either a one-way or two-way street.

The framework considers a multi-modal transportation assessment, which integrates the application of complete streets typologies and vision zero principles. The evaluation includes a review of potential impacts, such as neighbourhood infiltration, on-street parking/loading, and service operations (example: transit, waste, and emergency response). The framework includes opportunities to facilitate city-building initiatives and opportunities as well as compatibility and/or integration with other transportation infrastructure and servicing plans.

An evaluation summary of fourteen streets conversions which includes existing and proposed implementation timing (excluding Main Street) is provided in Appendix “E” to Report PW23074/PED23248.

Future Enhancements

The conversion of Main Street to two-way operation will achieve several objectives including reduced traffic speeds, improved safety, and improved pedestrian experience. The preferred configuration represents the next step in the evolution of Main Street and Downtown/Lower City transformation. The preferred concept considers needs for transit and vehicular movement prior to and during light rail transit construction.

Following the completion of the light rail transit project, there are further opportunities to evolve Main Street because light rail transit will result in mode shifts away from car travel, and the need to maintain capacity for trunk transit bus routes will be reduced.

One of the key opportunities is the incorporation of a high-quality cycle track between Dundurn Street and Victoria Street which could be created by removing an additional eastbound lane and reconfiguration the sidewalk space. This option could also incorporate additional green infrastructure. A next step in advancing this option would be a community-wide visioning session that utilizes the preferred near-term conversion plan as the starting point.

ALTERNATIVES FOR CONSIDERATION

Council could direct staff to utilize Alternative 3 (symmetrical lane capacity) as the basis for the two-way street design. This alternative is not recommended as it would result in greater levels of congestion than other alternatives and have implications for eastbound transit movement.

Council could choose to maintain the existing road configuration. This alternative does not align with Council's directions and would not lead to the benefits of the two-way alternatives.

APPENDICES AND SCHEDULES ATTACHED

Appendix "A" to Report PW23074/PED23248 – Study Area

Appendix "B" to Report PW23074/PED23248 – Main Street Two-Way Functional Design Plans

Appendix "C" to Report PW23074/PED23248 – Public Engagement Report

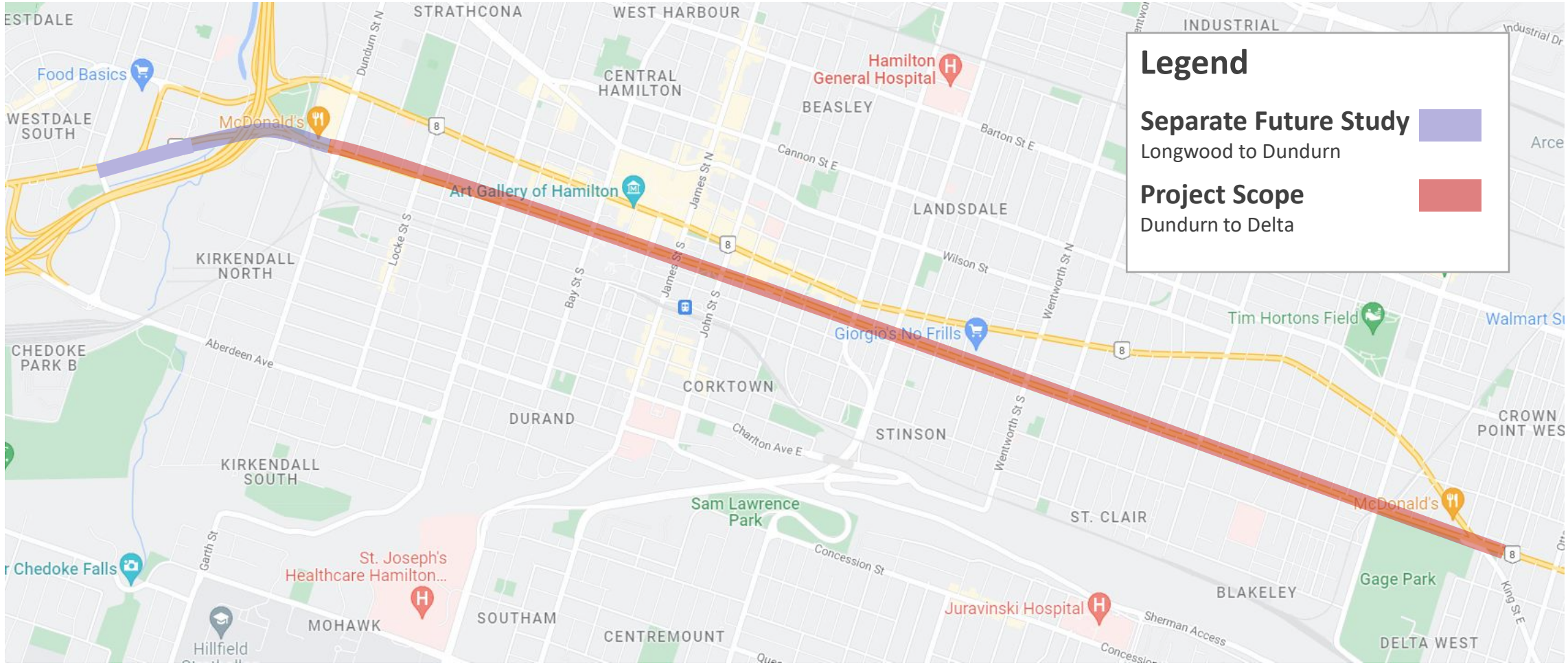
Appendix "D" to Report PW23074/PED23248 – May 18, 2023, Public Information Centre presentation

Appendix "E" to Report PW23074/PED23248 – Remaining One-way Street Conversion Summary

Appendix "F" to Report PW23074/PED23248 – Project Budget Cost Estimate

Project Scope

Focused Area: Main Street from Dundurn St to King Street



Appendix 'B' to Report PW23074/PED23248
Page 1 of 3

wsp

100 COMMERCE VALLEY DRIVE WEST, THORNHILL
L3T 0A1, ONTARIO, TEL. 905-882-1100. FAX. 905-882-0055

LEGEND

PROPOSED / EXISTING	
	TRAFFIC SIGNAL CONTROLLER
	DISCONNECT BOX, SERVICE ENTRANCE
	TRAFFIC JUNCTION BOX
	TRAFFIC HANDHOLE
TSUP / TP	POLE
TSP / TSP	POST
	OVERHEAD LANE CONTROL ARM AND SIGNS
	PAVEMENT MARKING LINES
	PAVEMENT MARKING STENCILS
	PARKING METERS: DOUBLE-HEAD, SINGLE-HEAD
HYD / HYD	FIRE HYDRANT
P.P.I. / P.I.	POINT OF INTERSECTION
T.P. / T.P.	TANGENT POINT

PROPOSED / EXISTING	
	FACE OF CURB, BACK OF CURB
	FRONT OF GUTTER, FACE OF CURB
	FRONT OF GUTTER, FACE OF CURB, BACK OF CURB
	UNCURBED EDGE OF PAVEMENT
	CONCRETE
	VEHICLE APPROACH / DRIVEWAY
	BOTTOM OF PEDESTRIAN CURB DEPRESSIONS
	FENCE LINE
	ROAD ALLOWANCE / PROPERTY LINE

- EXISTING SGINALIZED INTERSECTION
- PROPOSED SGINALIZED INTERSECTION
- HSR EXISTING TRANSIT STOP
- HSR FUTURE TRANSIT STOP
- HSR EXISTING TRANSIT STOP - REMOVAL

POLE CODES FORMAT: TYPE, LENGTH, OWNER, POLE NO. (MAY BE TRUNCATED)

TYPE:		OWNER:	
CP	CONCRETE	B	BELL TELEPHONE
CP-T	CONCRETE-TEMPORARY	C	CITY, STREET LIGHTING
DP-C	DECORATIVE-CONCRETE	HO	HYDRO ONE
DP-M	DECORATIVE-METAL	HU	HORIZON UTILITES
MP	METAL	MTO	MINISTRY OF TRANSPORTATION
SU	SIGNAL UTILITY	T	CITY, TRAFFIC
WP	WOOD	T-HD	CITY, TRAFFIC, HEAVY DUTY
WP-T	WOOD-TEMPORARY	PVT	PRIVATE

PARKING REGULATIONS

NREGS	NO REGULATIONS	NPLZ	NO PARKING LOADING ZONE
NPA	NO PARKING ANYTIME	CVLZ	COMMERCIAL VEHICLE LOADING ZONE
NSA	NO STOPPING ANYTIME	SBLZ	SCHOOL BUS LOADING ZONE
NSAM	NO STOPPING 7am-9am	WCLZ	WHEELCHAIR LOADING ZONE
NSPM	NO STOPPING 4pm-6pm	ASP	ALTERNATE SIDE PARKING

STANDARD PRACTICES, UNLESS NOTED

- DIMENSIONS WITH DECIMAL PLACES ARE METRES; WHOLE NUMBERS ARE MILLIMETRES
- SIDEWALKS AND ISLANDS AT ALL PEDESTRIAN CROSSINGS TO HAVE WHEELCHAIR DEPRESSIONS BETWEEN CROSSWALK LINES
- DIRECTIONAL LINES IN PEDESTRIAN CROSSINGS NOT SHOWN
- CROSSING STRIPES FOR LADDER CROSSWALKS TO BE 450mm WIDE WITH 450mm SPACING.
- POINT OF INTERSECTION TO CROSSWALK: 0.6m
- POINT OF INTERSECTION TO TERMINUS OF LONGITUDINAL PAINT LINES WHERE NO STOP BAR: 3.0m
- STOP BAR WIDTH: 0.3m AT 1.0m SET-BACK FROM CROSSWALK
- SPEED LIMIT 50 km/h
- BICYCLE SIGNING AND MARKINGS FROM OTM BOOK 18 AND TAC, BIKEWAY TRAFFIC CONTROL GUIDELINES FOR CANADA, FEB. 2012.
- LANE DIMENSIONS TO ℄ OF MARKINGS, AND EDGE OF ASPHALT

0 10 20 30 40 50 METRES

No.	DATE	DRAWN	REVISION DETAILS
1	2023-09-07	TDC	ISSUED FOR FINAL SUBMISSION - CONCEPTUAL DESIGN

APPROVAL:

SENIOR PROJECT MANAGER OF TRANSPORTATION ENGINEERING

MM/DD/YY

MANAGER OF TRANSPORTATION OPERATIONS

MM/DD/YY

FUNCTIONAL DESIGN PLAN

MAIN STREET WEST FRID STREET TO MACNAB ST S

IN THE CITY OF HAMILTON

PREPARED BY THE CITY OF HAMILTON,
TRANSPORTATION OPERATIONS, PUBLIC WORKS DEPARTMENT

SURVEY DATE: YYYY.MM	CHECKED: JS	SCALE: 1:500
PRINTED: 2023-09-07	DESIGN: TDC, MY	DRAWING No.: DT:1

LOCATION FRID STREET TO MACNAB STREET SOUTH DT:1


MATCHLINE B-B'
JAMES ST S
HUGHSON ST S
JOHN ST S
CATHARINE ST S
WALNUT ST S
FERGUSON AVE S
SPRING ST
MATCHLINE C-C'
BOWEN ST
MAIN ST E
HSR
EX. DRIVEWAY
MODIFY CURB RADIUS TO ACCOMMODATE NEW SB RIGHT TURN FROM JAMES ST
RIGHT TURN ONLY LANE (BUSES EXCEPTED)
NEW TRANSIT STOP MOVED DOWNSTREAM OF JAMES INTERSECTION WITH NEW BUS QUEUE JUMP LANE
MODIFY CURB RADIUS TO ACCOMMODATE NEW WB RIGHT TURN TO HUGHSON ST S
MODIFY CURB RADIUS TO ACCOMMODATE NEW WB RIGHT TURN TO JOHN ST S
MODIFY CURB RADIUS TO EXTEND SIDEWALK AT INTERSECTION
ADD PEDESTRIAN REFUGE ISLAND TO PROVIDE LEFT TURN SHADOW & ENHANCE PEDESTRIAN SAFETY
MODIFY CURB RADIUS TO ACCOMMODATE NEW SB RIGHT TURN FROM CATHARINE ST S
MAINTAIN LOADING CAPACITY WITH DEDICATED CURBSIDE LOADING ZONE ON NORTH SIDE
MODIFY CURB RADIUS TO ACCOMMODATE NEW SB RIGHT TURN FROM WALNUT ST S
MODIFY CURB RADIUS TO ACCOMMODATE NEW WB RIGHT TURN TO FERGUSON AVE S
MATCHLINE C-C'
WELLINGTON ST S
WEST AVE S
VICTORIA AVE S
EAST AVE S
EMERALD ST S
TISDALE ST S
ERIE AVE
ONTARIO AVE
GRANT AVE
WENTWORTH ST S
MATCHLINE D-D'
ADD PEDESTRIAN REFUGE ISLAND TO PROVIDE LEFT TURN SHADOW & ENHANCE PEDESTRIAN SAFETY
MODIFY CURB RADIUS TO ACCOMMODATE NEW SB RIGHT TURN FROM WELLINGTON ST S
MODIFY CURB RADIUS TO ACCOMMODATE NEW WB RIGHT TURN TO VICTORIA AVE S
CONSIDERATION FOR PROTECTED INTERSECTION WHERE THERE ARE TRAFFIC SIGNALS AND CYCLING LANES
CONSIDER BARRIER SEPARATOR TREATMENT SIMILAR TO HUNTER STREET OR RAISED CYCLING FACILITY INCLUDING CONSIDERATION FOR RAISED CROSSINGS, BOTH SIDEWALKS AND CYCLE LANES
1.8m EB Bike Lane
CONCEPTUAL DESIGN
LEGEND

STANDARD PRACTICES, UNLESS NOTED

- DIMENSIONS WITH DECIMAL PLACES ARE METRES; WHOLE NUMBERS ARE MILLIMETRES
- SIDEWALKS AND ISLANDS AT ALL PEDESTRIAN CROSSINGS TO HAVE WHEELCHAIR DEPRESSIONS BETWEEN CROSSWALK LINES
- DIRECTIONAL LINES IN PEDESTRIAN CROSSINGS NOT SHOWN
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- BICYCLE SIGNING AND MARKINGS FROM OTM BOOK 18 AND TAC, BIKEWAY TRAFFIC CONTROL GUIDELINES FOR CANADA, FEB. 2012.
- LANE DIMENSIONS TO ℄ OF MARKINGS, AND EDGE OF ASPHALT

0 10 20 30 40 50 METRES

wsp
100 COMMERCE VALLEY DRIVE WEST, THORNHILL
L3T 0A1, ONTARIO, TEL. 905-882-1100. FAX. 905-882-0055

No.	DATE	DRAWN	REVISION DETAILS
1	2023-09-07	MY	ISSUED FOR FINAL SUBMISSION - CONCEPTUAL DESIGN

APPROVAL:

SENIOR PROJECT MANAGER OF TRANSPORTATION ENGINEERING

MM/DD/YY

MANAGER OF TRANSPORTATION OPERATIONS

MM/DD/YY

FUNCTIONAL DESIGN PLAN

MAIN STREET EAST
JAMES STREET SOUTH TO WENTWORTH STREET SOUTH

IN THE CITY OF HAMILTON

PREPARED BY THE CITY OF HAMILTON, TRANSPORTATION OPERATIONS, PUBLIC WORKS DEPARTMENT

SURVEY DATE: YYYY.MM	CHECKED: JS	SCALE: 1:500
PRINTED: 2023-09-07	DESIGN: TDC, MY	DRAWING No.: DT:2

LOCATION JAMES STREET SOUTH TO WENTWORTH STREET SOUTH

DT:2


MAIN ST E
MATCHLINE D-D'
MATCHLINE E-E'
SANFORD AVE S
MYRTLE AVE
GLADSTONE AVE
BURRIS ST
FAIRLEIGH AVE S
HOLTON AVE S
PROCTOR BLVD
EASTBOURNE AVE
ST CLAIR AVE
SHERMAN AVE S
GARFIELD AVE S
FAIRHOLT RD S
BLAKE ST
ASHFORD BLVD
BARNESDALE BLVD
CARRICK AVE
SPRINGER AVE
PROSPECT ST S
ALBERT ST
MELROSE AVE
LENISTER AVE
BALSAM AVE S
CONNAUGHT AVE S
GAGE AVE S
EAST BEND AVE S
HILDA AVE
GLENDALE AVE S
KENSINGTON AVE N
KING ST E
Gage Park
RECONFIGURE EXISTING CENTRE MEDIAN
CONCEPTUAL DESIGN
100 COMMERCE VALLEY DRIVE WEST, THORNHILL
L3T 0A1, ONTARIO, TEL. 905-882-1100. FAX. 905-882-0055
1 2023-09-07 MY ISSUED FOR FINAL SUBMISSION - CONCEPTUAL DESIGN
No. DATE DRAWN REVISION DETAILS
APPROVAL:
SENIOR PROJECT MANAGER OF TRANSPORTATION ENGINEERING
MM/DD/YY
MANAGER OF TRANSPORTATION OPERATIONS
MM/DD/YY
FUNCTIONAL DESIGN PLAN
MAIN STREET EAST
SANFORD AVENUE SOUTH TO
THE DELTA AT KING STREET
IN THE CITY OF HAMILTON
PREPARED BY THE CITY OF HAMILTON,
TRANSPORTATION OPERATIONS, PUBLIC WORKS DEPARTMENT
SURVEY DATE: YYYY.MM
CHECKED: JS
SCALE: 1:500
PRINTED: 2023-09-07
DESIGN: TDC, MY
DRAWING No.: DT:3
LOCATION SANFORD AVENUE SOUTH TO THE DELTA
DT:3

Hamilton Main Street Two-Way Conversion

Engagement Summary

September 2023

TABLE OF CONTENTS

PROJECT BACKGROUND

WSP was retained by the City of Hamilton to carry out a Main Street Two-Way Conversion Study for the two-way conversion of Main Street, from Longwood Drive North to King Street East, a 6.7 kilometre corridor.

The study was initiated following a Council direction to convert the street to two-way operations. Recognizing that the decision *to* convert the street had already been made by Council, the project explicitly did not consider whether the street *should* be converted, but instead focused on *how to* best convert it to two-way traffic.

The Study is *Exempt* from the Municipal Engineers Association Municipal Class Environmental Assessment (MCEA; as amended, 2023). However, the City of Hamilton recognizes the significance of this project to the City and its residents; as such, the project is being carried out to generally follow the MCEA process.

The overall structure of the Study is as follows:

- Develop a problem and opportunity statement
- Develop design alternatives for the corridor
- Evaluate the design alternatives
- Select a preferred design for the conversion of the Main Street from a one-way road to a two-way road, with a focus to improve safety for all road users.

ENGAGEMENT APPROACH

The City conducted internal and external engagement. Internal engagement began with an in-person workshop with representatives from a wide range of City departments to identify key opportunities and concerns, and to establish design priorities for the two-way conversion. A second internal engagement session was held following the development of a draft design concept, which allowed staff to share technical feedback on the design.

External engagement included an online Public Information Centre, three in-person neighbourhood meetings and meetings with stakeholder groups including businesses impacted by the project. The public was also encouraged to provide feedback through the City's "Engage Hamilton" web site. Draft design drawings were posted on the website to allow members of the public to provide comments on specific locations along the corridor. Finally, some members of the public engaged in discussion related to the project occurred on social media (e.g. Twitter).

The following sections provide a summary of:

- "**What Was Said**" – verbatim quotes and summary data from engagement activities;
- "**What We Heard**" – key themes that emerged from our engagement efforts; and
- "**What We Did**" – overview of how we did or did not use the feedback received.

WHAT WAS SAID

Throughout the engagement process, two town halls, various BIA meetings and online engagement activities were held. In total, approximately 900-1000 people attended the sessions.

ONLINE PIC

On May 18th, 2023 a PIC meeting was held online for the discussion of the Main Street Conversion Study. 300 members of the public attended, with 55 leaving comments and suggestions.

Throughout the meeting, attendees had the opportunity to provide live comments through the “chat” functionality. The most common theme of these comments were related to concerns with traffic volumes or congestion. Many commenters were concerned that, with bike lanes and the future LRT project, reducing the number of vehicle lanes would increase traffic congestion along Main Street and nearby streets while also reducing accessibility to the downtown core. There was also confusion over the decision to use asymmetric lane configuration along the corridor. Some sample comments include:

> *With the Main Street conversion, there will be a re-direction of volume away from Main Street. How will this affect the residential streets for drivers trying to avoid traffic?”*
>
> *Have there been any traffic studies of the impact of reducing traffic coming into Hamilton from the 403? Would vehicles be forced to stop in the driving lanes of the highway? This also seems like a safety issue.*
>
> *3 or 4 westbound lanes on King Street West are being lost to LRT and you add 1 westbound lane on Main. How are commuters who work in the downtown office towers going to go west out of the downtown to 403, Westdale, Dundas at the end of the day?*

The second most frequent topic was to request certain types of cycling infrastructure along Main Street. Many of these commenters were supportive of the project but were concerned that the proposed ideas were not enough to ensure cyclists' safety. Bi-directional cycle tracks, like those along Cannon Street, concrete or planter barriers, and crosswalks were all suggested. Some comments include:

> *Was there any consideration of a Cannon-style treatment where it's a bidirectional cycle track along a 1way street with parking on the opposite side? Wide bidirectional tracks are easier to protect, and protected tracks are much much safer for cyclists and easier to plow. Montreal has proven how nice 1way+bidirectional cycling can be.*

> *RE: bike lane physical separation from cars - those concrete flower planters would be really pretty, feel safer, and would help with that greenification (if there's room!)*
>
> *As a cyclist I am very excited at the idea of a separated bike lane in the Main Street Corridor! But it's SO important to include STRONG separation between the bike lane and traffic - not just little plastic posts that cars can more or less drive over. It just doesn't feel safe otherwise. In a previous city I lived in they used concrete planters with flowers to divide the bike lane from the traffic lane which was lovely and very functional.*

There were also many comments related to the timeline of the project, especially as it relates to the construction of the LRT. Members of the audience felt that it is important to keep the public up to date with projected timelines as they change so that residents can have positive expectations for the completion of current and future active transportation projects. One such comment states:

> *"The stretches of bike lane west of Victoria and (if I remember correctly) east of Sherman are slated for "post-LRT." Are there any more specific dates or criteria you might provide for this to happen? (I think it's critical to connect existing cycle infrastructure - in this case all the way from Locke to Gage - as early as possible to encourage a modal shift from car to active transportation DURING the LRT construction)."*

Safety, connectivity of the cycling network, and beautification of public space were also topics of concern. Concerns for the supposed safety of the proposed designs were expressed. One person suggested that one-way streets are safer than two-way, while others expressed safety concerns related to the increase of two-way vehicle left turns or signal timing for pedestrian crossings.

> *One-way streets are demonstrably safer than two-way streets. This has been known since the original one-way conversion was implemented back in the 1950s.*
>
> *Will signal timing at the Delta intersection be evaluated? The current two stage process crossing on the east side feels unsafe as you sit at the point with traffic flying by at high speeds.*

Some commenters identified themselves as cyclists supporting the project, but expressed a desire to see more connectivity with the proposed Main Street bike lanes and the surrounding cycling network.

> *Why are bike lanes only proposed from Victoria to Sherman? To be meaningful connection should extend as far as possible on the corridor. Understand interim, but this is an important corridor to link cycling facilities across the lower city.*
>
> *Having plenty of experience with urban cycling, I am concerned about the inconvenience and potential safety issues of having to connect to bike lanes on other streets rather than travelling along a continuous dedicated cycling route.... Could bike lanes not be implemented all the way along Main Street, with concessions made for rail crossings? I would hope to see this as part of a complete Main Street revitalization in the future.*

There were many enthusiastic comments related to proposed beautification ideas for the public realm. Street trees, decorative crosswalks, and flexible green spaces were all supported by participants.

> *Decorative crosswalks would be awesome! We need to put aesthetics closer to the top of our development priorities.*
>
> *Seattle has some great examples of integrating green and pervious elements into the streetscape, would encourage inspiration from there.*

TWITTER THREAD

A comment thread on Twitter on May 30th, 2023, expressed a desire for a heavy reduction of driveways along Main St:

> *Something I'd really like to see [Maureen Wilson], [Cameron Kroetsch], [Nrinder Nann] push for is reduction of driveways, and modal filters onto Main St. It's possible to remove hundreds, if not thousands of conflict points from Main St by doing this.*

This particular tweet was liked 19 times, retweeted 4 times, and viewed 2,865 times. The thread continues with a discussion about the effectiveness of fewer driveways on reducing conflict possibilities between cyclists, pedestrians, and motor vehicles. Raised sidewalks were mentioned as an alternative with a similar result, but it was noted these could possibly encumber those with mobility issues by forcing them to move up and down at every crossing.

In the same thread regarding the removal of conflict points, one user comments a suggestion to have less side streets feeding out onto Main St and King St:

> *I'd love if there were fewer through streets to Main and King. Every side street doesn't need feed out to them- make them dead ends, which reduces traffic within the neighbourhoods and increases safety of main and king.*

This would have the benefit of reducing conflict points even further while increasing safety on side streets, as stated by one of the replies.

IN-PERSON TOWN HALLS

Two Town Hall Community Meetings were held on May 25 and May 29, 2023. 12 respondents left a total of 26 comments that were collected on paper. Many respondents had concerns about the cost of the conversion project, and whether Metrolinx would be covering the expected costs. Others were also concerned about the traffic volumes on nearby streets, such as King St, and how these would be affected by the conversion, stating that the expected increased traffic volume on other streets needs considering. Finally, there were a couple positive comments regarding the idea for decorative crosswalks, raised cycle tracks, and off-peak parking. Some samples include:

> *I am hoping that a continuous bike lane will be built into the plan. I know that it may not work in phase 1, but I hope that it is taken into consideration.*
>
> *...we need to understand where traffic can flow elsewhere when Main converts. People using Main as a solution to other roadways not functioning well. Yes there's also a volume issue, but I think its worthwhile to see where traffic flows elsewhere and what could be done from there.*
>
> *is Metrolinks paying for the conversion if no why not?*

STAKEHOLDER COMMENTS

LOCAL BUSINESS OWNERS

Comments were received by email from two businesses on nearby King St. with a longstanding history in the area. The businesses are concerned about the project, namely that the conversion will slow traffic into the downtown, negatively affecting the ease with which their employees and customers can reach their business. They specifically note the impact this will have on the Highway 403 access ramp and express concerns related to emergency vehicle navigation. Furthermore, they worry that this traffic issue on Main St will flow into nearby streets, negatively affecting their east and westbound traffic flows as well. They would like to see more traffic modeling done for this project showing that these issues have been considered and accounted for.

The businesses final concern is the topic of the project timeline. They would like to see a general schedule and scope of construction so they may prepare accordingly. They would also like to know how this is integrated with the construction of the LRT line, and are confused why this project is underway when these things have not yet been outlined.

A summary of their concerns, as stated by the business, is as follows:

> *as businesses - we need easy access for our customers, staff and supply chain - we feel that the results of the 1st stage of traffic slowing need to be evaluated before further actions are taken - there is no need to change main street @ this time without definitive plans on the timing and scope of construction of LRT and a complete review of the traffic flow which will include the ingress and egress to the 403.*

DOWNTOWN HAMILTON BIA SUBCOMMITTEE

Comments were received from a representative of the Downtown Hamilton BIA that were collected during a subcommittee meeting.

One of the main concerns of the committee was the amount of westbound lanes on Main and nearby King St., due to the upcoming LRT project construction. They believe this will culminate in an increase in traffic congestion in the downtown area. Adding to this would be the permission of left turns and bus stops in the westbound lane along Main St. Members of the BIA subcommittee would like to see these concerns considered in some way in the final design.

The BIA members were also excited at the idea of painted crosswalks and streetscape improvements, and are willing to work with the City in accomplishing these ideas.

ONLINE MAP COMMENTS

The City of Hamilton presented three technical drawings of proposed redesigns for Main Street on their Engage Hamilton site. Over the course of three weeks, members of the public could leave comments on specific locations of the drawings; in total, over 500 comments were received. Each comment was categorized by sentiment, namely if it was negative, positive, or neutral, and assigned a sentiment score ranging from -1 as wholly negative to +1 as wholly positive.

DESIGN DRAWING 1

For Design Drawing 1, 176 comments were received. Of the 176 comments, 48% were negative, 7% were positive, and 45% were neutral. The main themes that emerged are as follows:

- Reduce lane widths to 3.0 metres
- Reduce number of driveways, or where there are driveways, introduce continuous/raised sidewalks

- Reduce side street access to Main St
- No on-street parking anywhere along Main
- Replace one of the EB vehicle lanes with a bike lane
- Increase corner curb bump-outs to reduce turning speed and reduce pedestrian crossing time
- Extend centre medians at intersections to provide pedestrian refuges when crossing
- Include a bus-only or HOV lane throughout the length of Main St

Some sample comments include:

> *Remove on-street parking on all parts of Main St - especially west of downtown. Traffic is already going to struggle with volumes on 3 lanes only, on street parking is going to make it awful and slow both transit and private vehicles for the benefit of a select few private vehicles. It makes no sense.*
>
> *Suggest tall grasses, pollinator gardens and/or other beautification to increased curbs. See new Montreal streetscapes for examples.*
>
> *Do not have Frid Street exit onto Main Street. This can only increase traffic around an already busy intersection. Have them exit onto Dundurn from Chatham.*
>
> *Rather then just a painted buffer, utilize this area to pull out the curb, improve the cycling and pedestrian crossing of the ramp, and reduce perceive speed on the corridor. Paint alone does nothing to influence driver speeds.*

DESIGN DRAWING 2

For Design Drawing 2, 183 comments were received. Of the 183 comments, 42% were negative, 3% were positive, and 56% were neutral. The main themes that emerged are as follows:

- Reduce number of driveways along Main
- Reduce turn lanes onto smaller side streets, with some suggested to become pedestrianized or one-way (such as Hughson St S)
- Limit access onto Main from smaller side streets
- Add corner curb bump-outs on many of the crosswalks to reduce pedestrian crossing time, and/or make the crosswalks raised
- Any cycling facilities must be separated with a concrete curb at the minimum. The traffic speeds and volumes on Main are too high for a painted buffer to be a safe option for cyclists
- Bike lanes should extend throughout the length of Main (many comment this segment is too short)

Some sample comments include:

> *This parking lot [at Giorgio's No Frills] already has accesses on Main, King and Erie (which goes to both Main and King); the other Main access is literally 20 feet west. Lets eliminate this driveway.*
>
> *The stretch between Wentworth and Tisdale is too long to not have a designated (lighted) pedestrian crossing. Its hot in the summer, and cold and windy in the winter. Pedestrians will be tempted to rush across the three lanes of road, risking collisions. I suggest a pedestrian crossing (zebra stripes and flashing lights on request) close the the HSR stop on the south side of Main. Maybe at Ontario, maybe at Erie.*
>
> *Bus-Only lane should extend through entire city core at the very least during rush hour.*
>
> *Sidewalk on main here [at Main and James St S] is very narrow, I would not recommend increasing the turn radius here without increasing sidewalk width.*
>
> *It would be irresponsible to put a bike lane here without physical protection. The speeds here will be too fast, there is too much traffic, there will be too many temptations for drivers and delivery trucks to park in it, and it will be impossible to keep clear of snow in the winter since car and truck tires will squash any windrows and knock snow into the bike lane.*

DESIGN DRAWING 3

Design Drawing 3, 220 comments were received. Of the 220 comments, 25% were negative, 7% were positive, and 68% were neutral. The main themes that emerged are as follows:

- Replace street parking with bike lanes or space for green infrastructure (many of the businesses along Main St are already serviced by ample parking lots. Many comments note that additional on-street parking would be redundant)
- Add corner curb bump-outs on many of the crosswalks to reduce pedestrian crossing time, and/or make the crosswalks raised
- Add more crosswalks for pedestrians (one comment notes that from Albert to Gage, a distance of 8 blocks, has no safe pedestrian crossing options)
- Reduce the speed limit to 40km/h
- Extend bike lanes to Gage Ave S as this would provide connectivity to an already established cycling facility on Gage, as well as provide bike access to Gage Park
- Many comments cited issues with the Main and King intersection. Many children jaywalk across Main to access Gage Park. The alignment of the eight lanes of traffic are confusing, while the landing in front of Pizza Pizza is too narrow and exposed to oncoming traffic;

many people have been injured or killed there in the past. A realignment of the roads and (pedestrian controlled) crossings would be helpful here.

Some sample comments include:

> *Shoppers Drugmart has a large parking lot. There is no need for a parking lane on this block and this section should be entirely greenspace/planting with at least one shade tree.*
>
> *Agree 100%. Propose extension of cycling facilities in lieu of on-street parking, shown to generate more revenue for businesses then street parking and improves the network connectivity.*
>
> *Bike lanes that just end suddenly are moderately dangerous, and they discourage cycling. If a person can't follow an intuitive route on a bicycle, they are less likely to try again. Extend the bike lanes to Gage.*
>
> *Place METAL or CONCRETE bollard here [at Main and King] to stop vehicles that exit the roadway. After multiple people were killed here ensuring nobody gets hurt here again should be a priority. Could make it a nice concrete planter too with a tree or something. There are no sitelines [sic] to maintain here.*
>
> *From Albert to Gage there is not one single place for pedestrians to safely cross Main. That's a long stretch and people are going to cross it unsafely unless at least 2 safe crossings are added. People live here and have to play chicken to cross this street.*

WHAT WE HEARD

The feedback received throughout the project's initial engagement sessions was incredibly valuable to help provide a foundation for the study and ensure the team is aware of the community's priorities and objectives for Main Street. The following section highlights some of the common themes that emerged through the engagement activities.

KEY THEMES

- **Prioritize people walking, cycling, and using transit:** Streets should be designed with all users in mind and should make all community members feel safe and comfortable regardless of what type of transportation they are using. More pedestrian crossings should be added, while some existing crossings should have pedestrian-controlled signals. Bike lanes should be prioritized over on-street parking. Bus-only lanes should be added throughout the length of the corridor.
- **Prioritize street space for cycling and green infrastructure:** Many of the businesses along the roadway have large parking lots. As such, Main Street should be reducing its

on-street parking in favour of increased cycling options or beautification efforts such as planters and street trees.

- **Cycling options along Main Street should be lengthened and have increased protection:** in addition to the bike lanes proposed, cycling infrastructure should be expanded throughout the length of the corridor. In addition, more protected facilities should be included, such as concrete curbs or planters.
- **Expand Hamilton's cycling network:** there should be more connectivity to the existing bike lanes that connect directly to Main St, such as on Gage Ave.
- **Reduce side street access to Main St:** many of the smaller side streets do not need direct access to Main St. Reducing the number of access points would also reduce the number of potential conflict zones along the corridor
- **Reduce driveways along Main St:** there is a redundancy in the amount of driveways along the corridor as many of these offer multiple access points to the same parking lot. Reducing or narrowing the driveways along Main St can help reduce potential conflict points between cyclists and vehicles.
- **Traffic congestion must be addressed:** many respondents expressed concern with potential issues with increased traffic congestion both along Main St and smaller side streets due to the proposed redesigns. Members of the public and key stakeholders would like to see a more clear and structured process for addressing traffic concerns.

WHAT WE DID

The project team has carefully reviewed all comments received and will be carrying this feedback forward as the project advances to detailed design.

The team has also completed a detailed review of side street accesses onto Main Street and has identified several candidate locations for a partial closure or one-way conversion of the side street to deter cut-through traffic on local neighbourhood streets and to minimize conflicts.

Main Street Two-Way Conversion

Public Information Centre

May 18, 2023

wsp

Hamilton

Land Acknowledgment

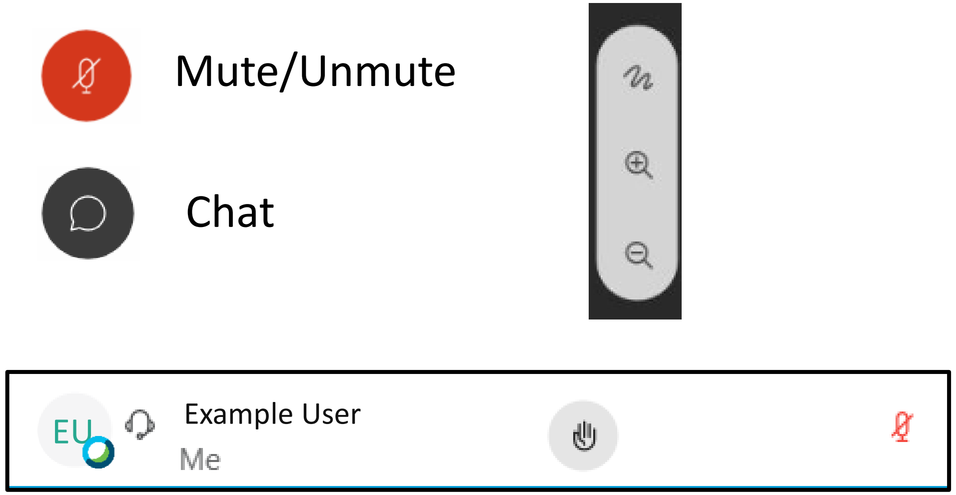
The City of Hamilton is situated upon the traditional territories of the Erie, Neutral, Huron-Wendat, Haudenosaunee and Mississaugas. This land is covered by the Dish With One Spoon Wampum Belt Covenant, which was an agreement between the Haudenosaunee and Anishinaabek to share and care for the resources around the Great Lakes. We further acknowledge that this land is covered by the Between the Lakes Purchase, 1792, between the Crown and the Mississaugas of the Credit First Nation.

Today, the City of Hamilton is home to many Indigenous people from across Turtle Island (North America) and we recognize that we must do more to learn about the rich history of this land so that we can better understand our roles as residents, neighbours, partners and caretakers.

Webex Instructions

Rules and How-To:

- Participants will remain muted during presentation
- Questions can be asked by using the Chat Function
- Please keep questions as brief as possible
- Magnifying glass can be used to zoom in on an item



Introductions

Mike Field
Acting Director of Transportation
Transportation Division
Public Works Department

Dipankar Sharma
Manager, Infrastructure Renewal
Engineering Services Division
Public Works Department

Danny Pimentel
Project Manager, Active Transportation
Transportation Planning & Parking Division
Planning & Economic Development Department

Justin Jones
Community Engagement Specialist and
Active Transportation Planner
WSP Canada

Olivia Falcone
Transportation Planner
Planning, Transportation & Infrastructure
WSP Canada

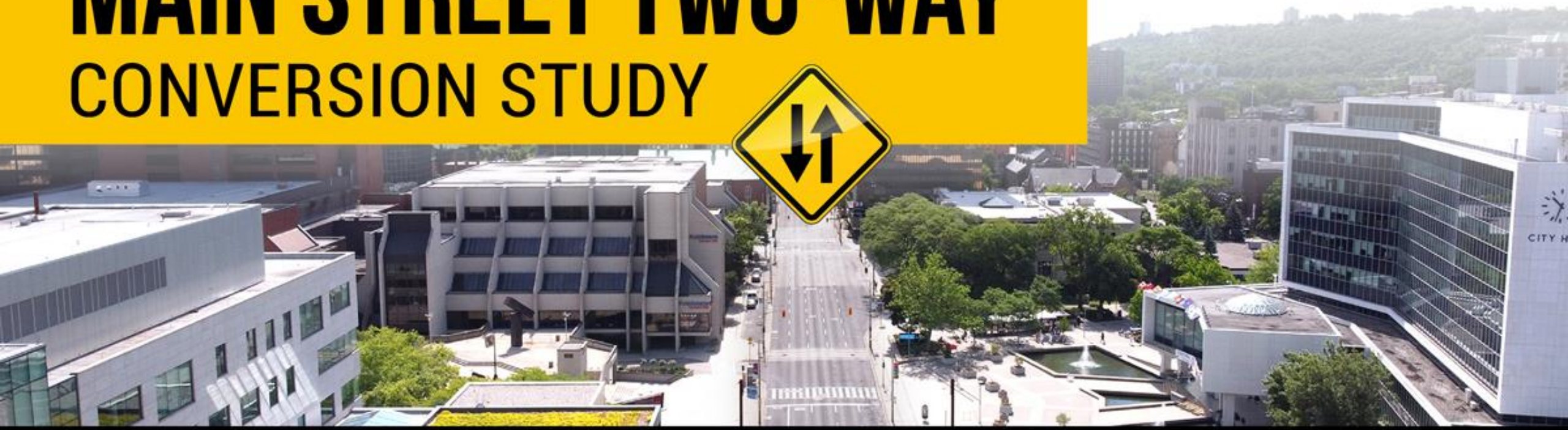
Regrets:
Brian Hollingworth
Director of Transportation Planning & Parking

Jackie Kennedy
Director of Engineering Services

James Schofield
Project Manager, WSP Canada

WE WANT TO HEAR FROM YOU!

MAIN STREET TWO-WAY
CONVERSION STUDY



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Agenda

1. Project Background
2. Existing Conditions
3. Design Alternatives
4. Next Steps
5. Q&A

1 Project Background

Council's Direction

Safety Enhancements to Major Arterial Roads: May 11, 2022

- Identify actions that can be taken immediately to improve safety for all users along Main Street and King Street;
- Convert Main Street to two-way operation integrating complete streets and climate resiliency to enable the safer use of road users including transit riders, pedestrians, motorists and cyclists;
- Undertake public engagement that leverages a Complete Streets, EDI and Climate Change approach; and
- Consult with Metrolinx and MTO regarding two-way conversion considerations for LRT and the 403 interchanges.

Note that above is paraphrased based on Hamilton City Council 22-011 Minutes, May 11, 2022

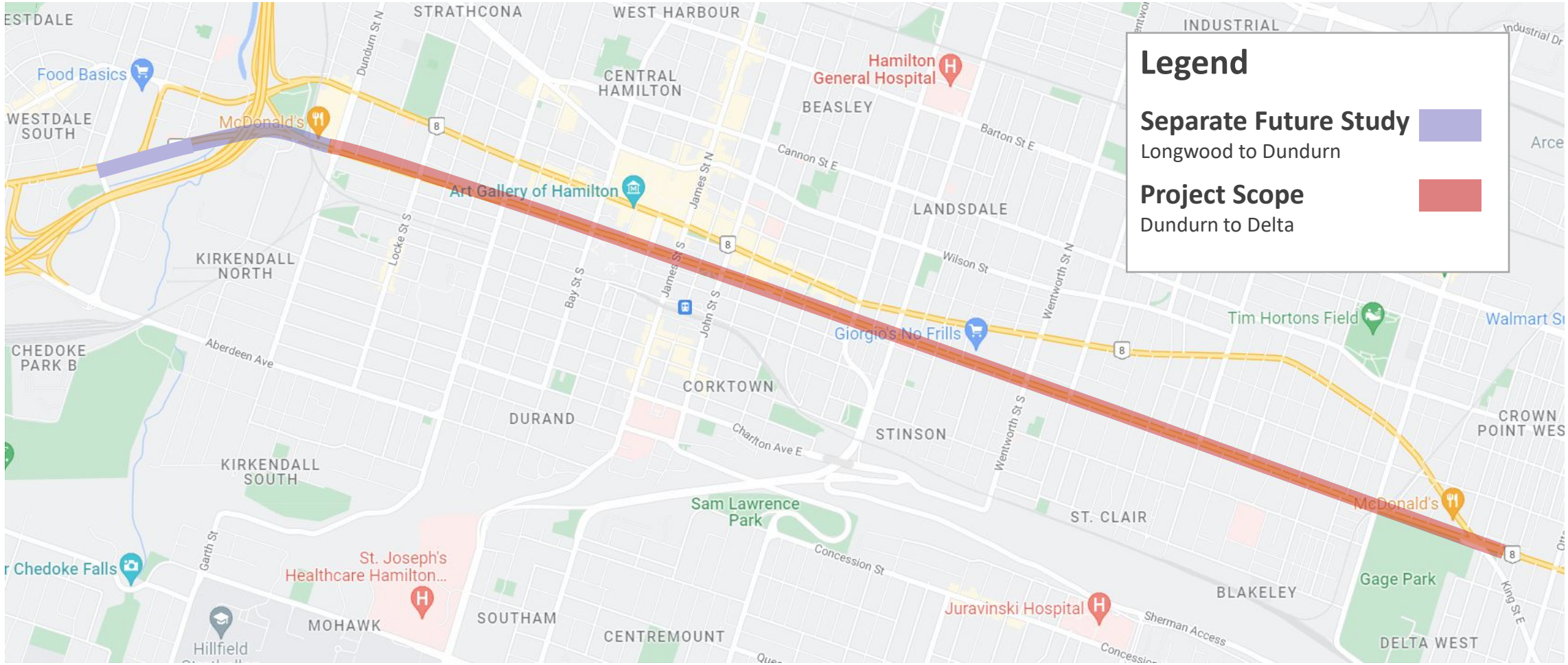
Problem and Opportunity Statement

Main Street has historically been a corridor that is unsafe for vehicles, pedestrians and cyclists. In recent years, three major intersections on Main Street were among the top ten intersections with the highest collision rates in the City. In 2022, Council approved a motion focused on the development of further safety enhancements on major arterial roads, including the conversion of Main Street from a one-way to a two-way road. In the coming years, the lower city will also be transformed through the LRT project.

The City has identified an opportunity to plan and implement a roadway redesign for Main Street that is safe, comfortable and vibrant for residents and visitors. In a first phase, an interim solution is needed to convert to a two-way street, to improve safety for all users, to create a more pedestrian-friendly corridor, and to provide two-way transit services along Main Street, targeted prior to the start of LRT construction.

Project Scope

Focused Area: Main Street from Dundurn St to King Street



Study Project Timeline

We are Here

May
Public Information Center

July
Report to Council

Fall 2022

Data Collection and Background Research

Development and Evaluation of Alternatives

Winter 2022/23

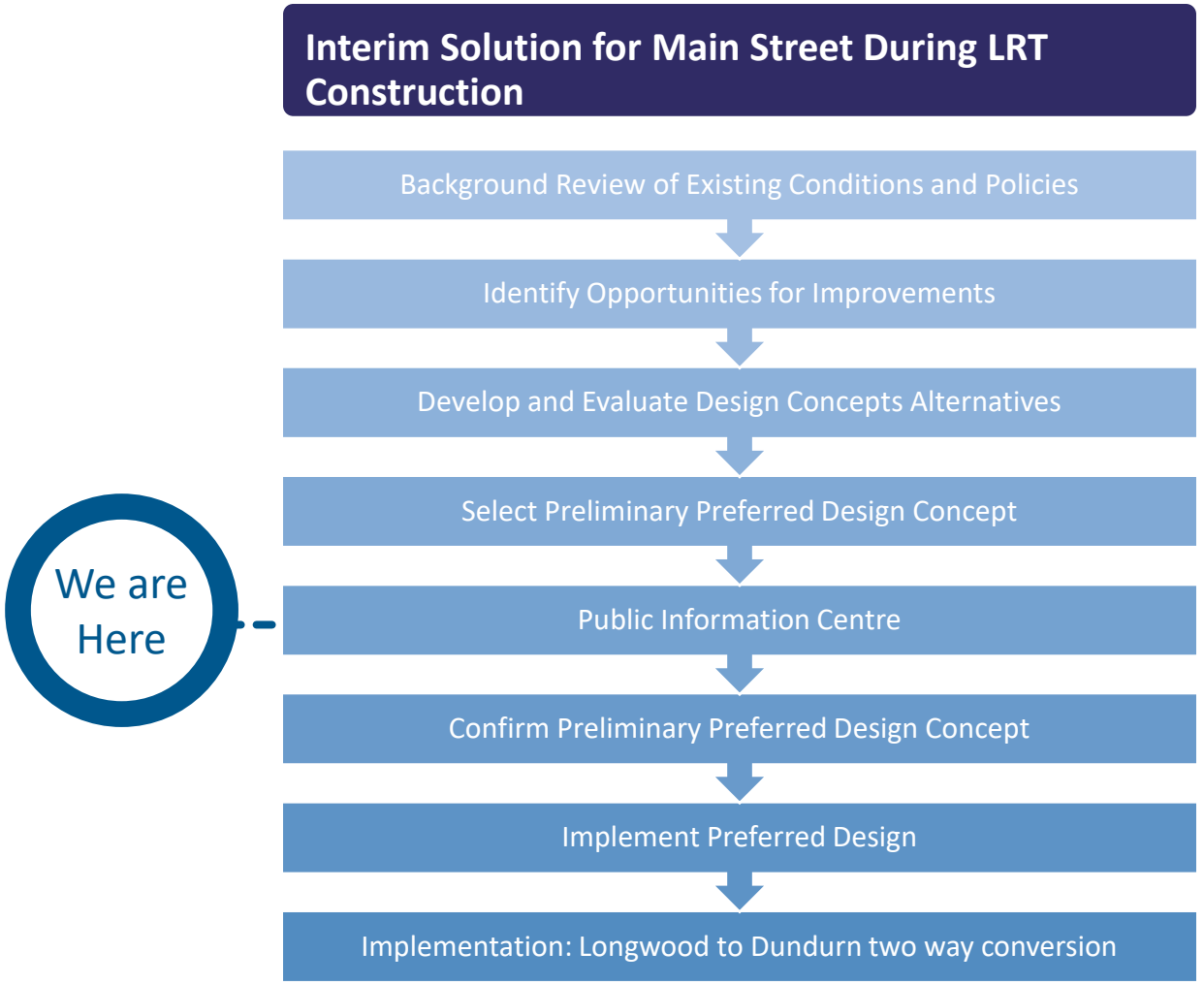
Evaluate and Select Preferred Alterative

Internal and External Engagement

Spring 2023

Finalize Plan & Confirm Design Concept

Study Project Phases



Municipal Class Environmental Assessment

The current project (interim solution) is Exempt from the MCEA:

- Exempt from Phases 1-4 of the MCEA; it can go straight to Phase 5: Implementation

Recognizing the high public profile of this project, and the value of community engagement, we are going **above and beyond** the MCEA requirements by engaging the community and following an MCEA style process.

2 Existing Conditions

Vision Zero Hamilton

Vision Zero uses a data-based approach to road safety with the goal of reducing traffic related serious injuries and fatalities towards the only acceptable goal: **zero**.

TRADITIONAL APPROACH		VISION ZERO
Traffic deaths are **INEVITABLE**		Traffic deaths are **PREVENTABLE**
PERFECT human behaviour	VS	Integrate **HUMAN FAILING** in approach
Prevent **COLLISIONS**		Prevent **FATAL AND SEVERE CRASHES**
INDIVIDUAL responsibility		**SYSTEMS** approach
Saving lives is **EXPENSIVE**		Saving lives is **NOT EXPENSIVE**

Corridor Collision Review

2,065 collisions from on Main Street between 2017-2022

1,517 Intersection Collisions

- Make up 73% of the collisions (City-wide average is 57%)

548 Midblock Collisions

- Make up 27% of the collisions (City-wide average is 42%)

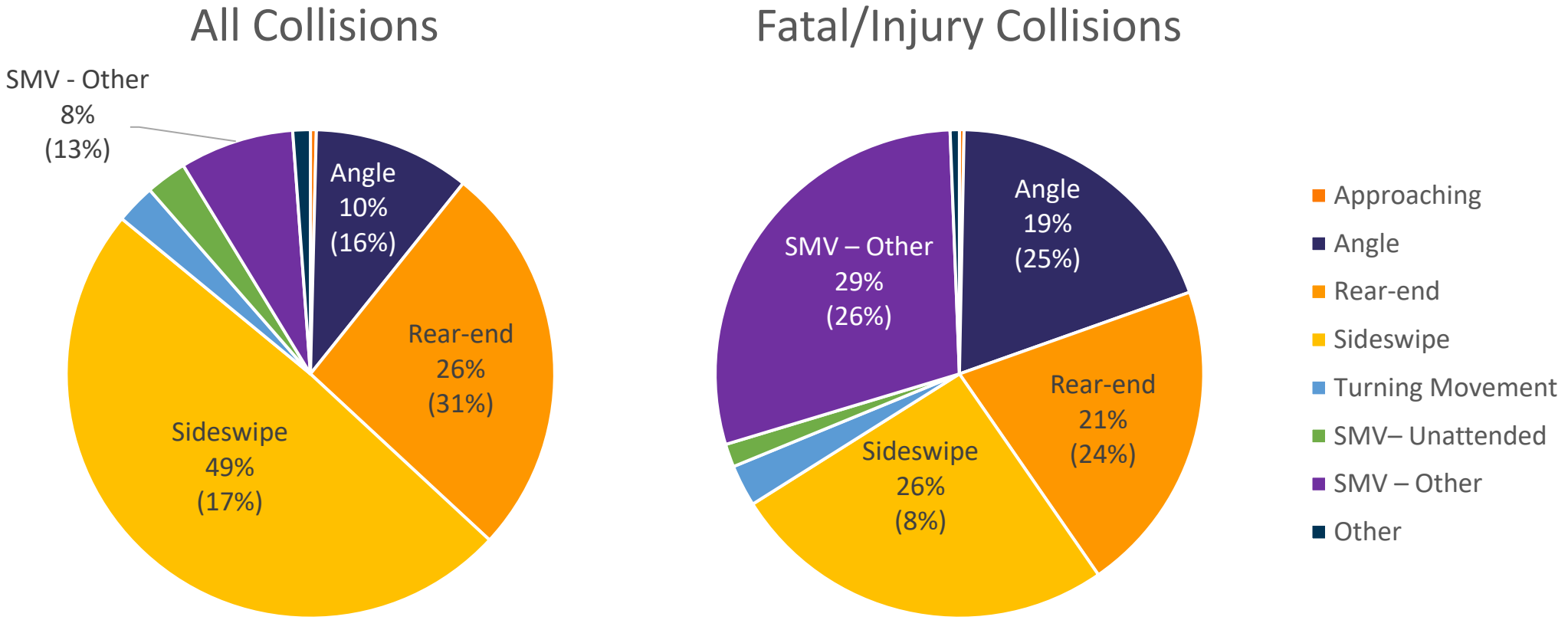
84 Pedestrian-involved Collisions

- 89.7% of pedestrians involved in a collision are injured

37 Cyclist-involved Collisions

- 77.4% of cyclists involved in a collision are injured

Types of Collisions along the Corridor



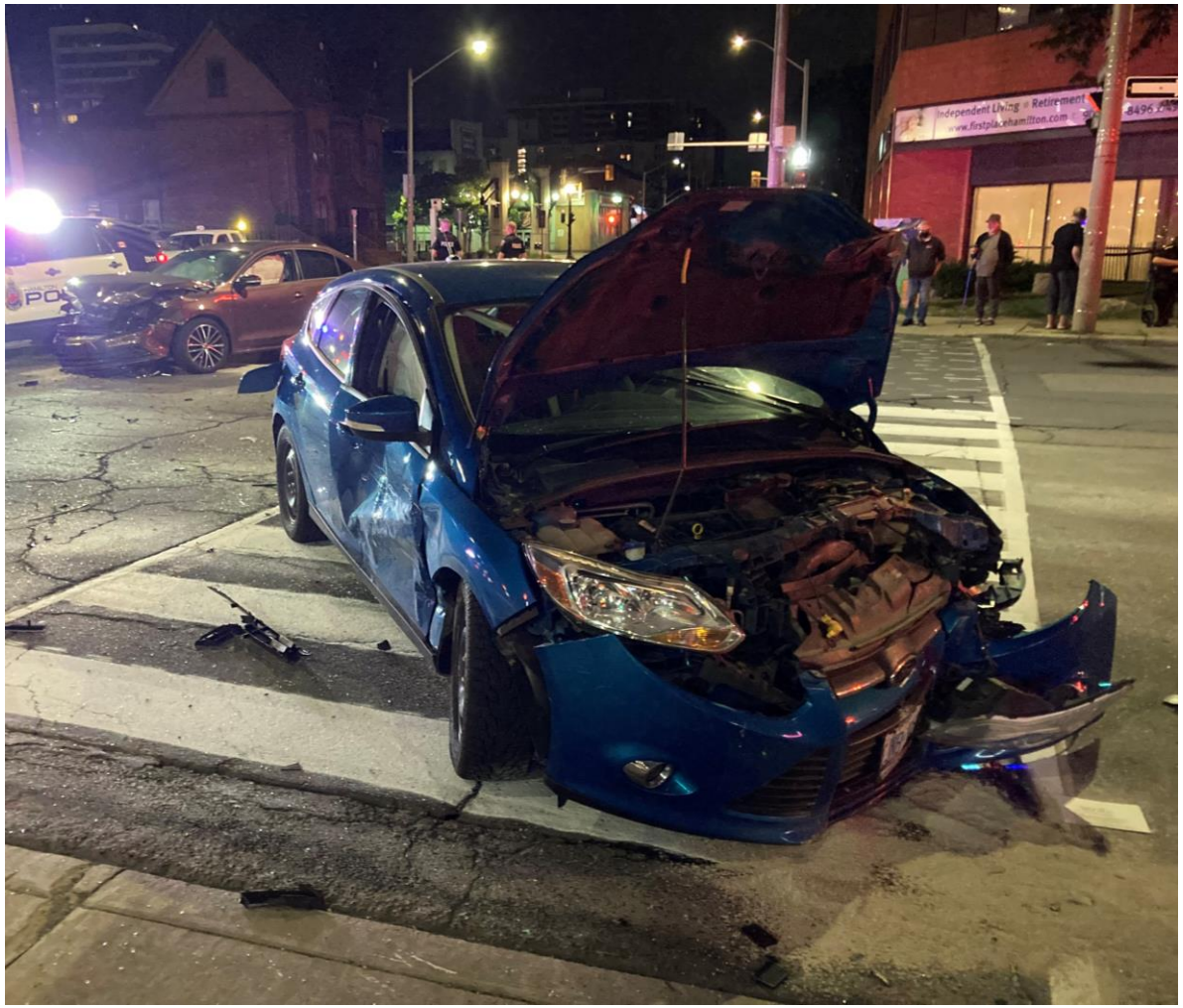
Note: City-wide Averages displayed in brackets

Intersections with the Highest Fatal & Injury Collisions

Speeding On Main Street

- Speeding accounted for 18% of all reported collisions in 2021 City-wide
- Maximum Speed on Main Street is **50 km/h**
- The 85th percentile speed of vehicles exiting from Highway 403 is **70 km/h**

Safety Concerns



Existing Issues

- High number of recorded collisions
- Elevated risk to pedestrians and cyclists due to traffic volumes, operating speeds, and exposure
- Limited separation between motor vehicle traffic and pedestrians/cyclists

The City's Vision Zero Action Plan calls for the elimination of fatal and injury collisions.

Active Transportation Facilities

Existing Issues

- Non-continuous cycling facilities in poor condition with poor markings
- Lack of complete streets design
- Hostile pedestrian environment
- Poor connectivity to other travel routes

The City's Complete Streets Guideline was approved by Council in 2022.

Land use and Built form

Existing Issues

- Buildings close to the right-of-way limit opportunities to widen right of way
- Improvements will generally require reallocation of space within existing right of way
- Multiple planned developments

The City hit an all-time record for building permits in 2022 valued at $2.1 billion.

Infrastructure condition

Existing Issues

- Deteriorating roadway surfaces
- Sidewalk discontinuities
- Inconsistent AODA compliance
- Decreased ride quality for Transit vehicles
- Increased maintenance costs

AODA says accessible exterior paths of travel ensure that everyone has the basic freedom of movement.

Opportunities

Safety

- Improved pedestrian and cycling safety at intersections
- Additional pedestrian crossing locations
- Reduced pedestrian crossing distances and slow turning motor vehicles

Accessibility

- Plans for accessible transit stops
- Wider pedestrian facilities to increase accessibility, comfort and safety
- Address other accessibility concerns along the corridor
- Additional on street parking

Connectivity

- Enhanced cycling network connectivity with new cycling facilities
- Improved connectivity to transit terminals for pedestrians and cyclists

Infrastructure Condition

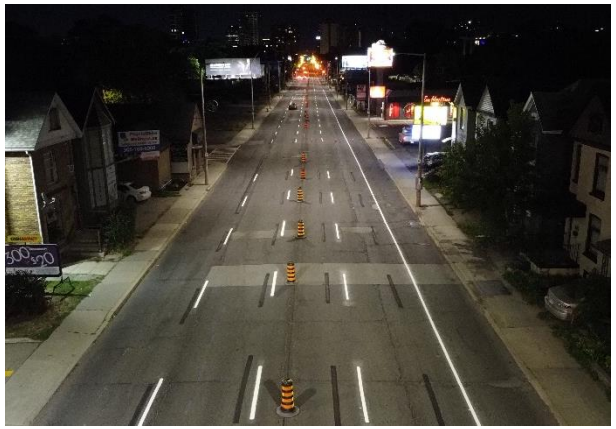
- Improve the condition of infrastructure, including pavement, sidewalks, etc.

2022 Immediate Safety Measures

Interim Safety Solutions:

- Council directed immediate actions for improving safety for road all users on Main Street and King Street.
- Goal to improve safety, particularly vulnerable users through the measures that separate pedestrians by either time or space from vehicles.
- July 2022 implementing of short-term roadway safety enhancements on Main Street and King Street began and completed in the fall.

Implementing Interim Changes



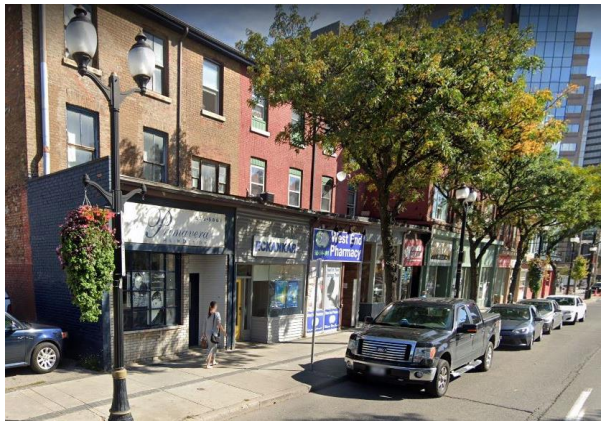
Lane Reconfiguration

Ladder Crosswalks

Pedestrian Buffers

Leading Pedestrian Intervals & Countdown Timers

Lane Control Bump Outs



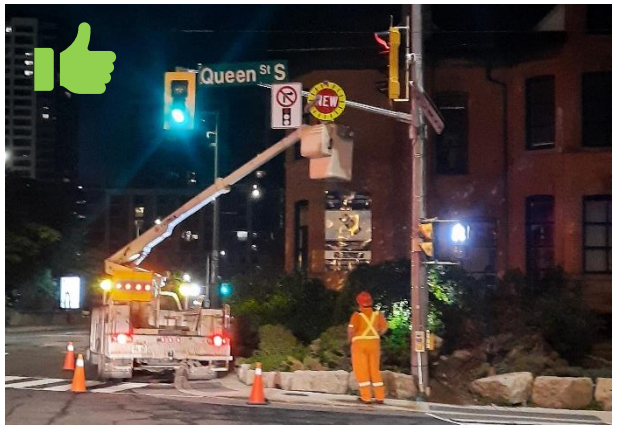
Expanded Street Parking

Implementing Interim Changes

Transit Enhancement

Transit Signal Priority

King St Bus Only Lane



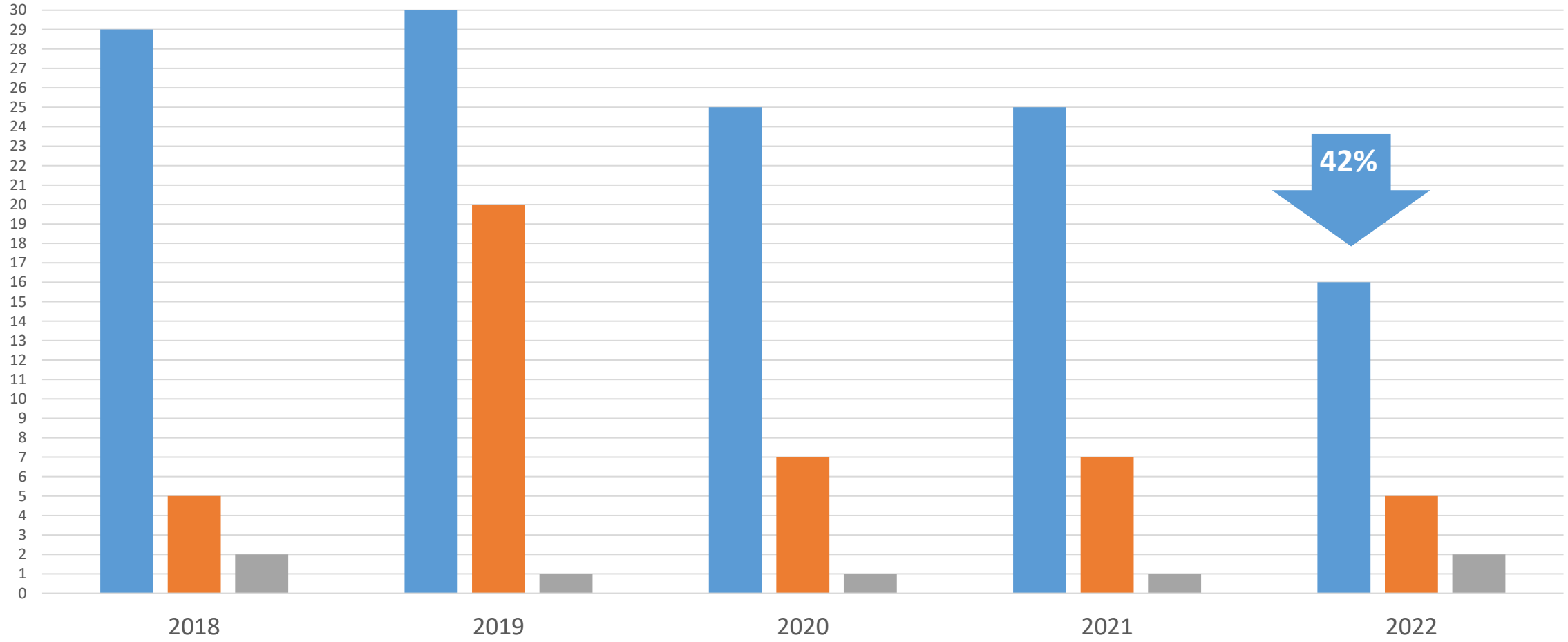
No Right Turn on Red

Community Safety Zones

Automated Speed Enforcement

2022 Immediate Safety Measures

Main Street Injury Collision Summary
Dundurn Street to King Street
Time Period: September 1 - January 31



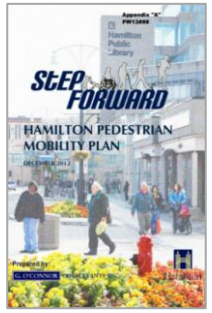
3 Design Alternatives

Design Objectives

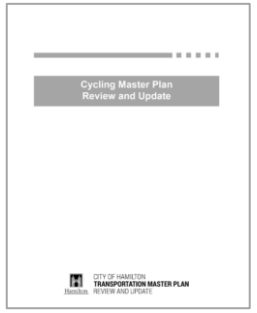
- Increase safety for all road users
- Pedestrian-friendly corridor
- Improved cycling connectivity
- Prioritize 2-way transit
- Enhance accessibility
- Consider parking and loading needs
- Add greenery and streetscaping elements

Existing Policy Framework

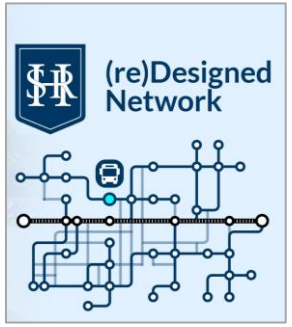
Vision Zero Action Plan (2019)



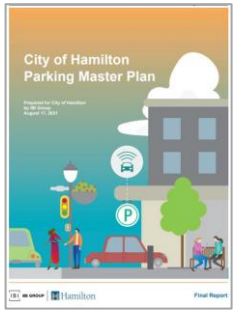
Pedestrian Mobility Plan (2012)



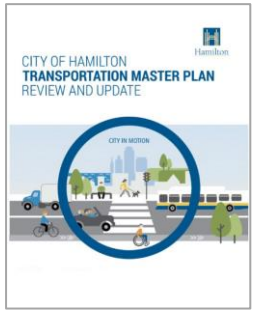
Cycling Master Plan (2018)



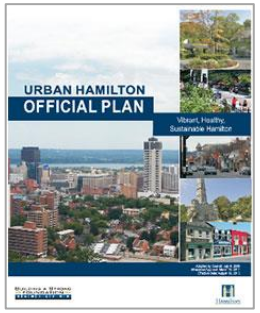
(re)Envision the HSR (2019)



Parking Master Plan (2021)



Transportation Master Plan (2018)



Urban Hamilton Official Plan (2013)

Complete Streets Design Manual (2022)

Evaluation Criteria

Safety/Conflict Mitigation

Mitigate conflicts between motorist and cyclists

Two-Way Traffic Operations

Impact to two-way roadway capacity and intersection operations

Pedestrian Friendliness

Have access to safe, walkable and convenient pedestrian routes

Cyclist Network

Provide cycling facilities and connectivity to destinations

Social Health & Equity

Provides a fair and accessible environment for users

Transit Operations

Impact and compatibility with local transit

On-street Parking

Impact to on-street parking supply

Cost

Anticipated cost to construct the conceptual design

Green and Resilient Infrastructure

Provide opportunities for greening, permeable surfaces and beautification

Design Options

1. **Option 1:** Do Nothing

2. **Option 2:** Symmetric Lane Capacity

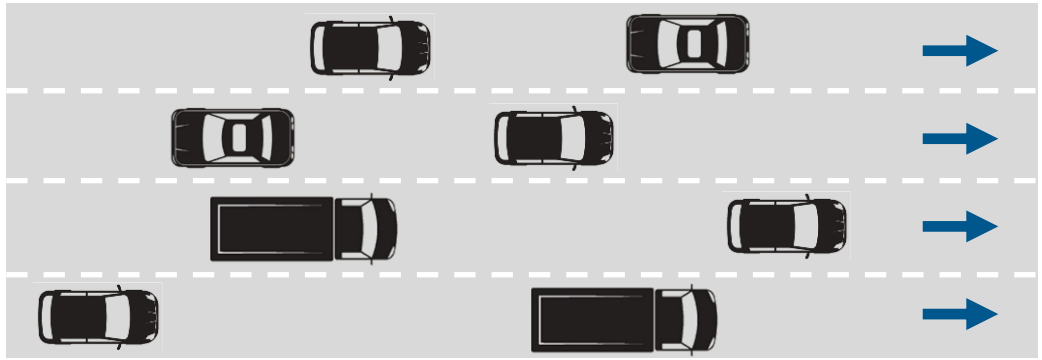
3. **Option 3:** Asymmetric Lane Capacity*

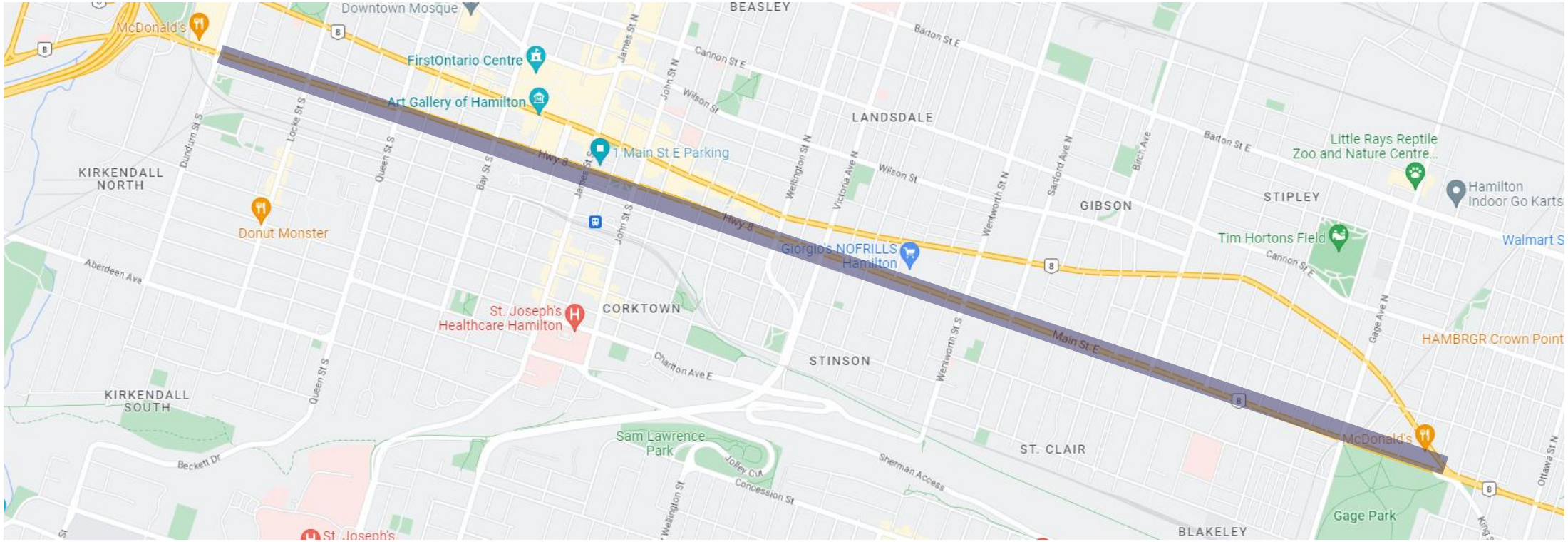
*Note – design changes along the corridor, but with favour to eastbound direction

Option 1
Do Nothing

Option 1: Do Nothing – 4 Eastbound Lanes

- Does not address objective of improving westbound capacity
- Not pedestrian- and cyclist-friendly
- Poor safety outcomes
- Does not improve social health and equity

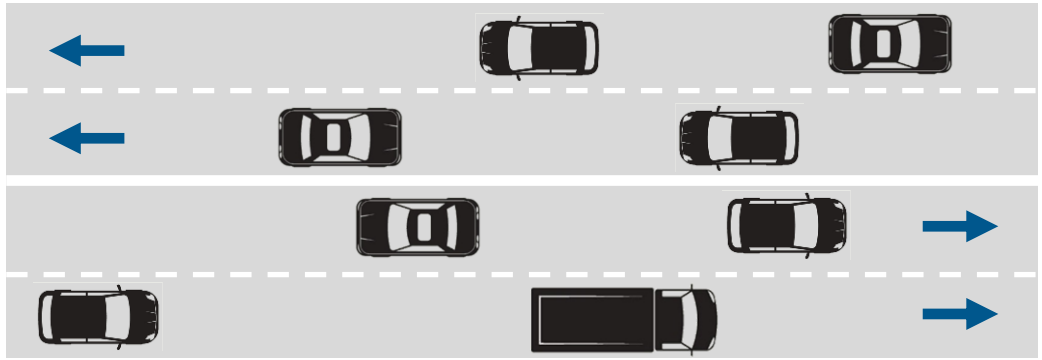


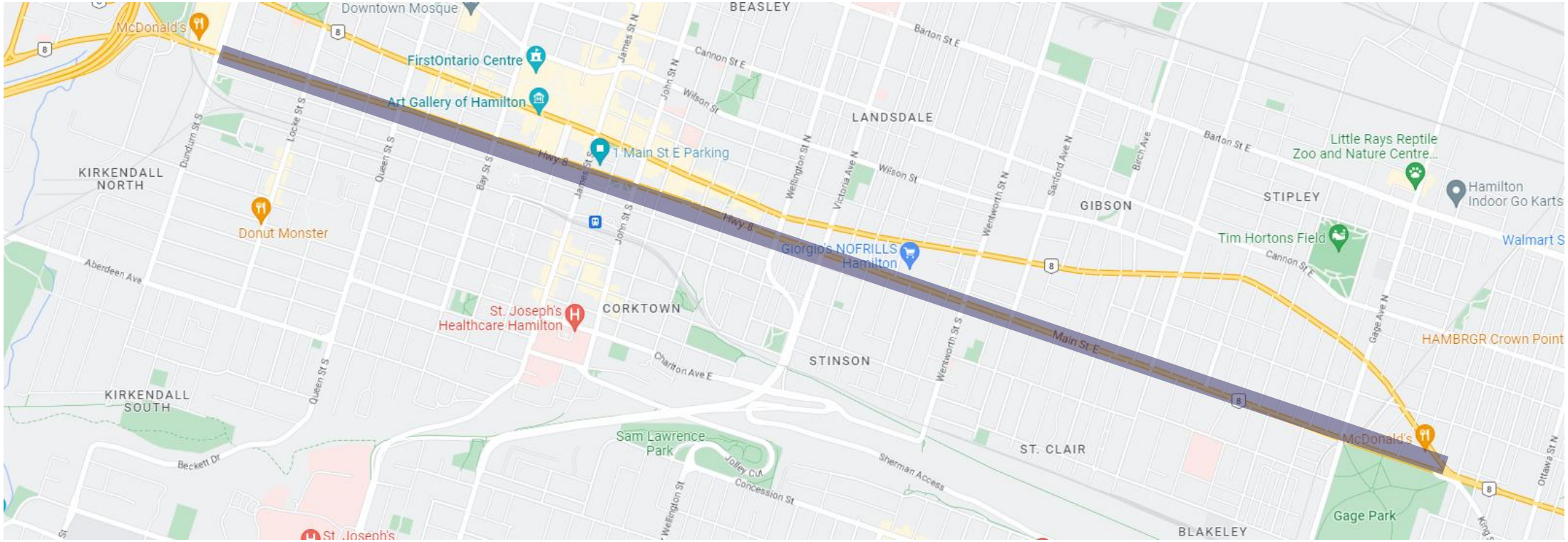


Option 2
Symmetrical Lane Capacity

Option 2: Symmetrical Lane Capacity

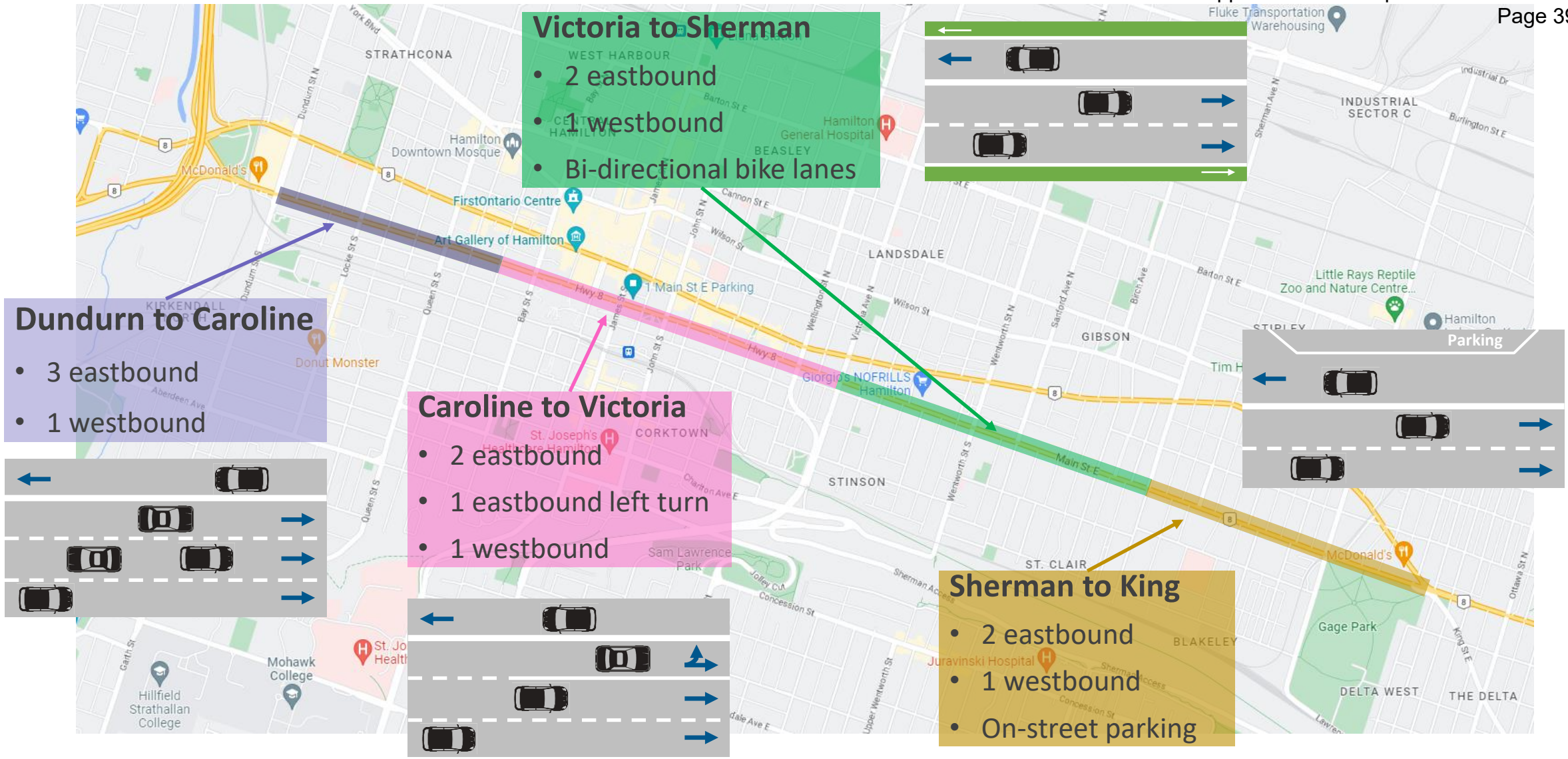
- Provides equal amounts of westbound and eastbound capacity on Main Street
- Traffic congestion worse than Option 1 or Option 3



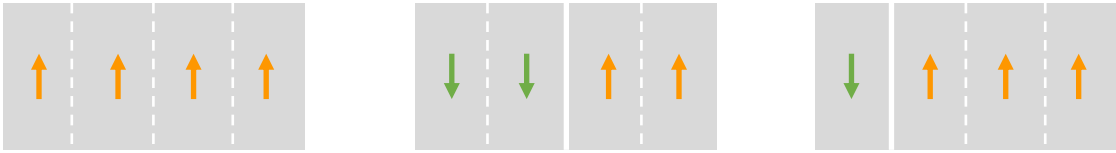


Option 3
Asymmetrical Lane Capacity

Option 3: Asymmetric Lane Capacity Overview



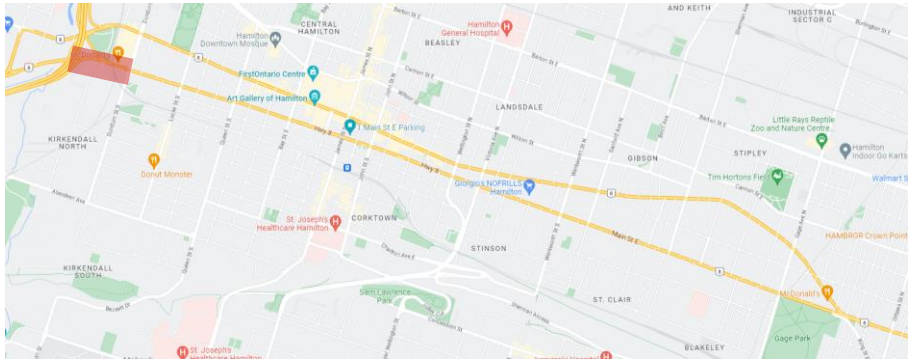
Design Alternatives Ranking & Evaluation

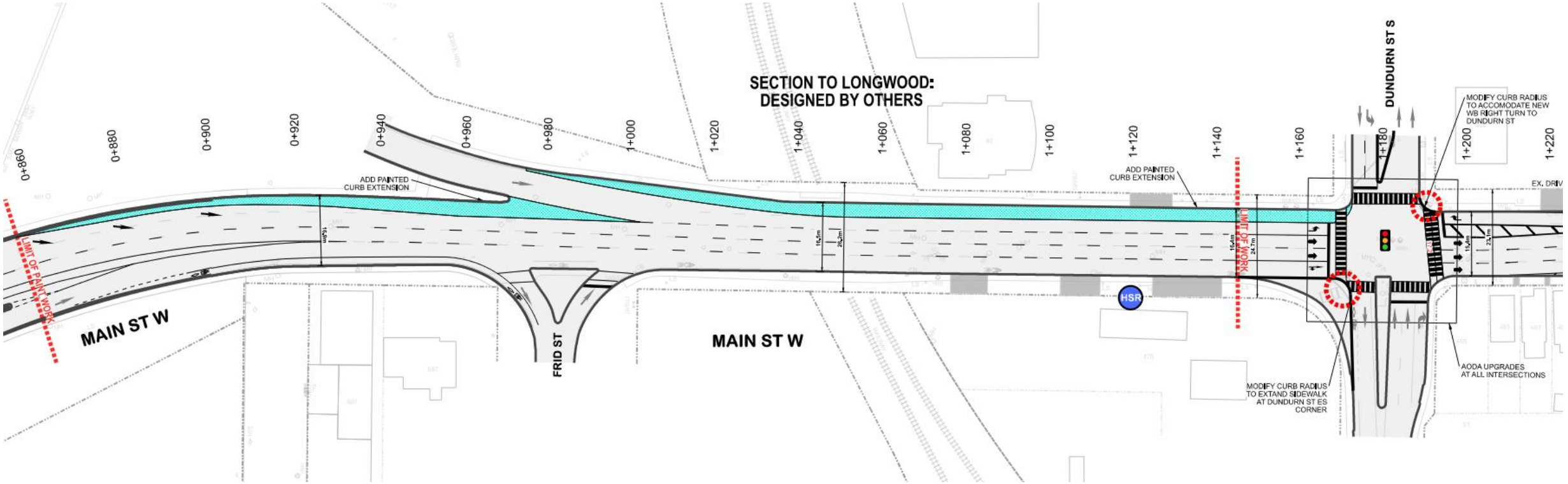


Criteria	Option 1 Do Nothing	Option 2 Symmetric Lanes	Option 3 Asymmetric Lanes
Two-Way Traffic Operations			
Safety/Conflict Mitigation			
Pedestrian Friendliness			
Cyclist Network			
Transit Routing			
On-street Parking			
Cost			
Social Healthy & Equity			
Green and Resilient Infrastructure			
Carry Forward	**No**	**No**	**Yes**

A Closer Look: Hwy 403 to Dundurn

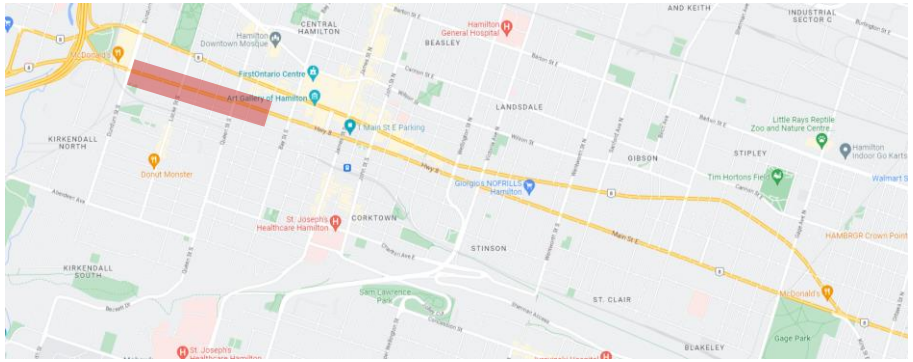
Note: Ramp realignments are subject to endorsement/agreement by the Ministry of Transportation

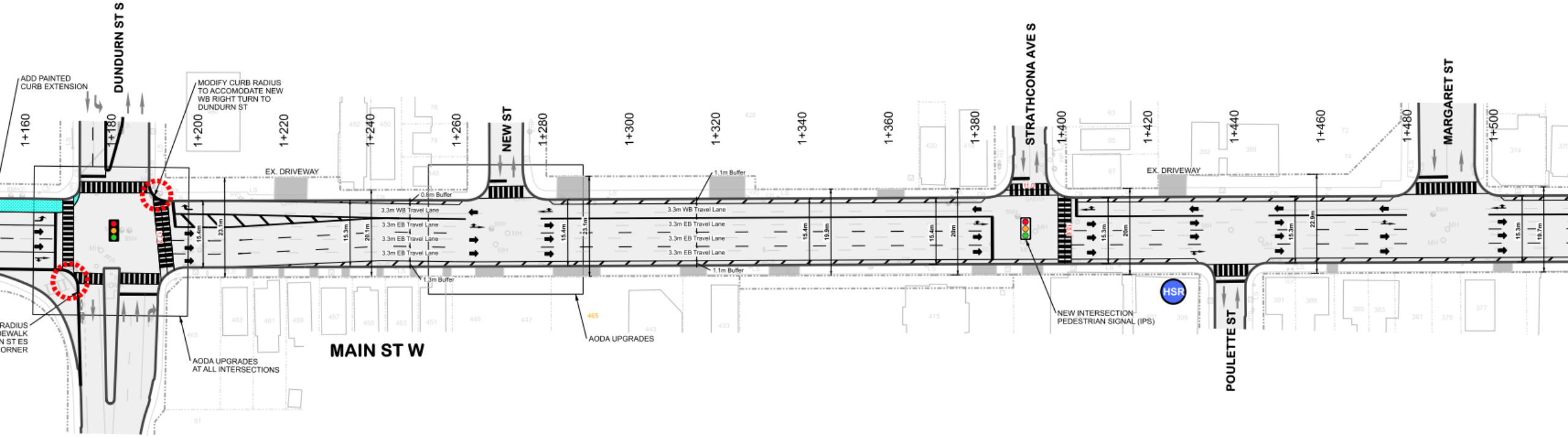




A Closer Look: Dundurn to Caroline

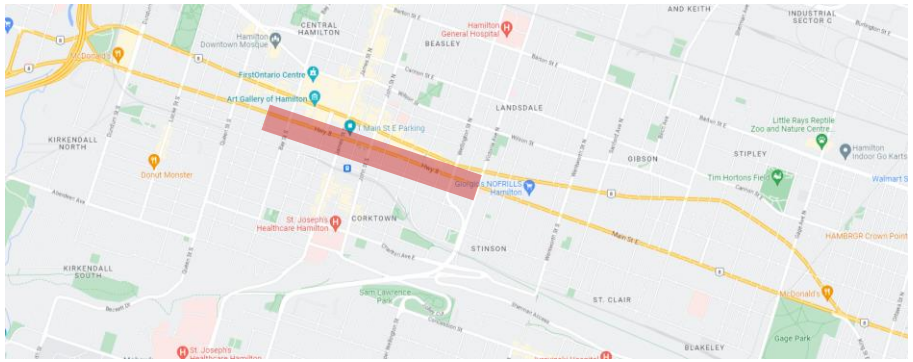
3 eastbound lanes and 1 westbound lane

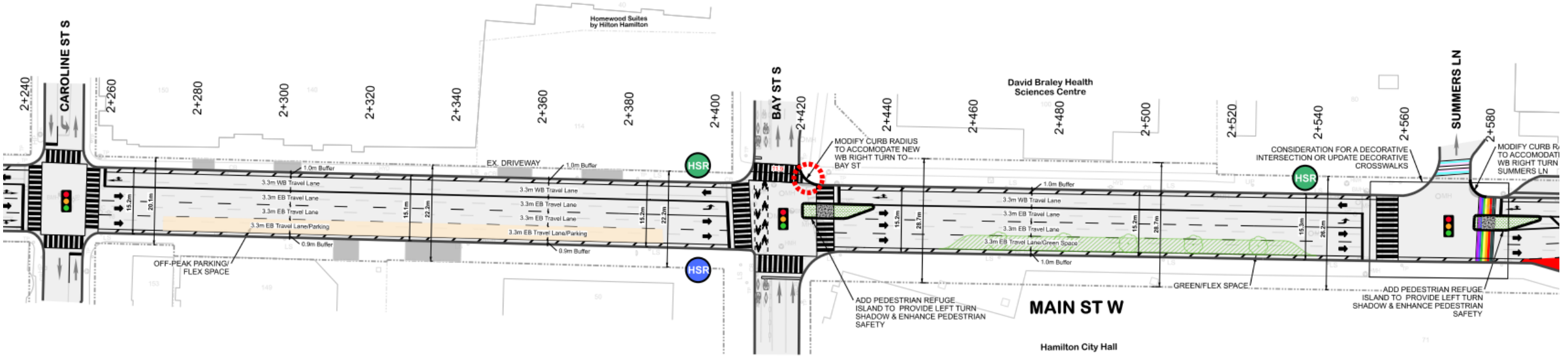




A Closer Look: Caroline to Victoria

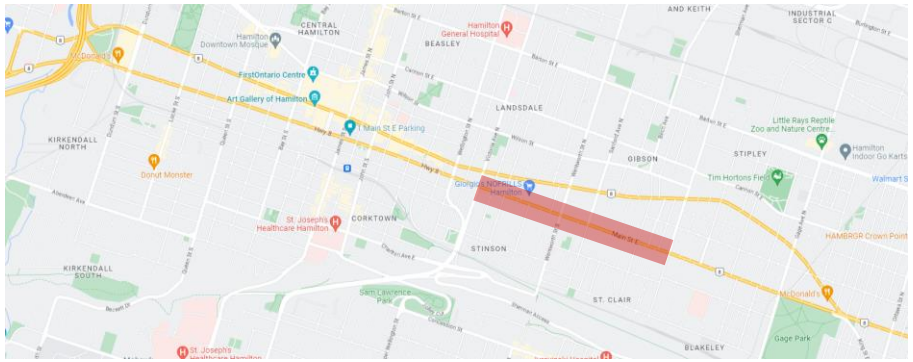
2 eastbound lanes, 1 eastbound left turn lane, and 1 westbound lane

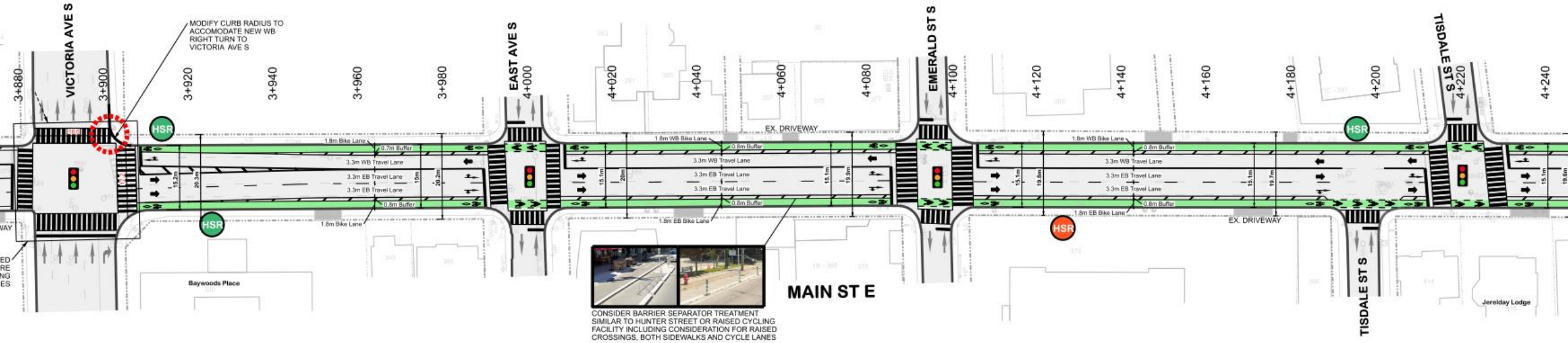




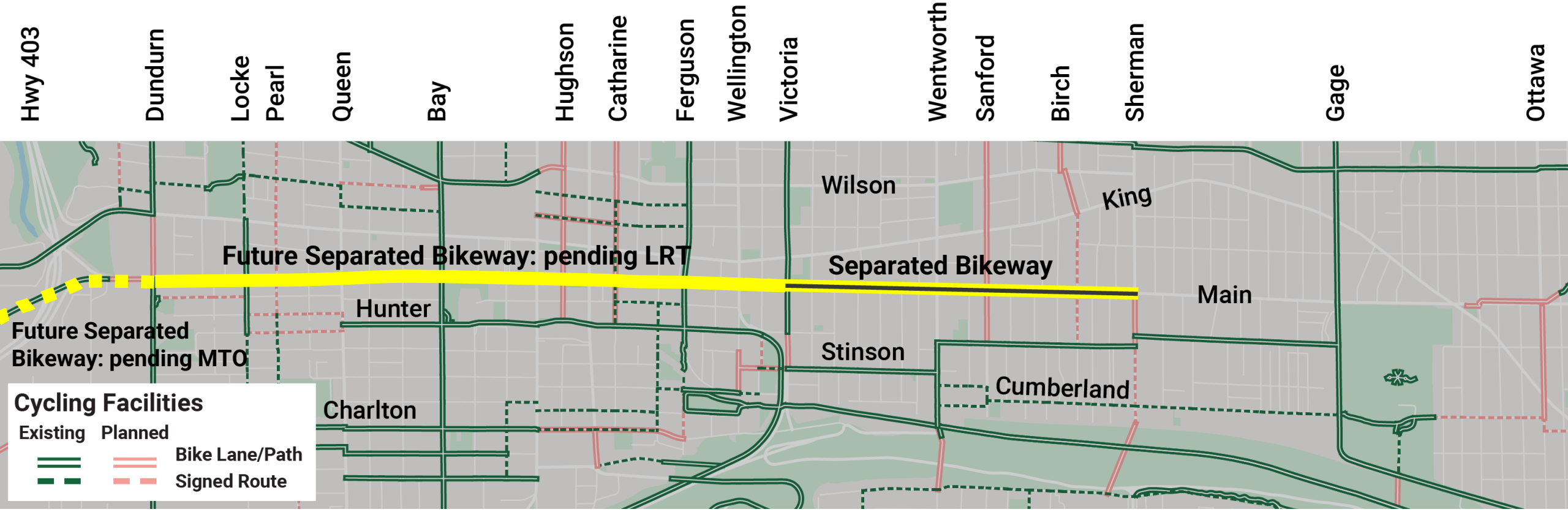
A Closer Look: Victoria to Sherman

2 eastbound lanes, 1 westbound lane, and bi-directional cycling lanes



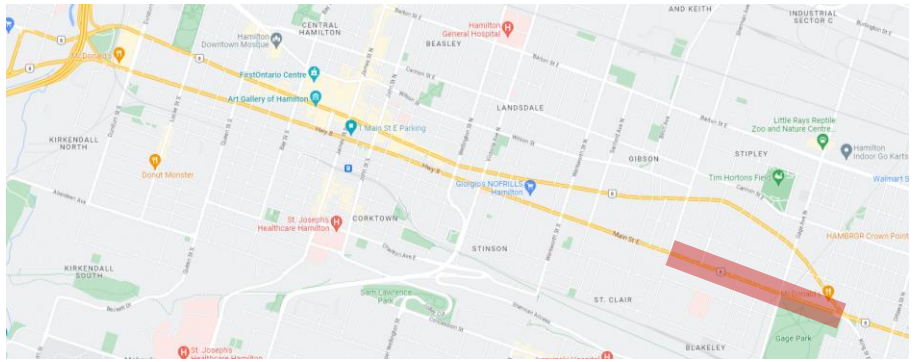


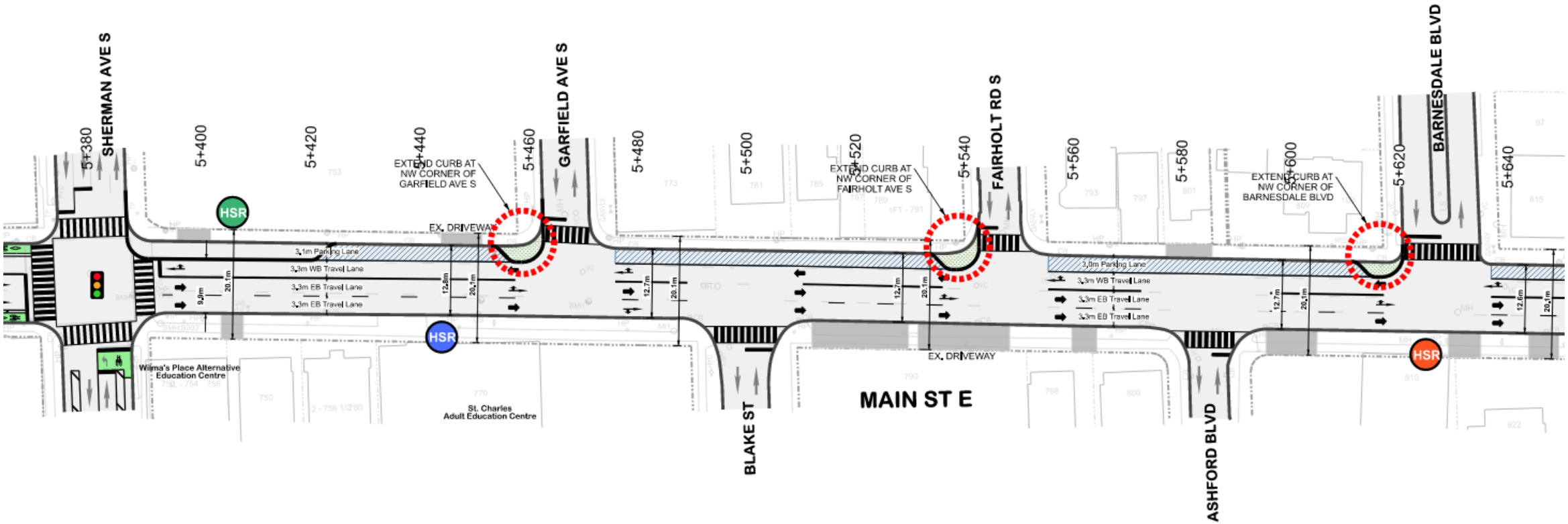
Cycling Network Context



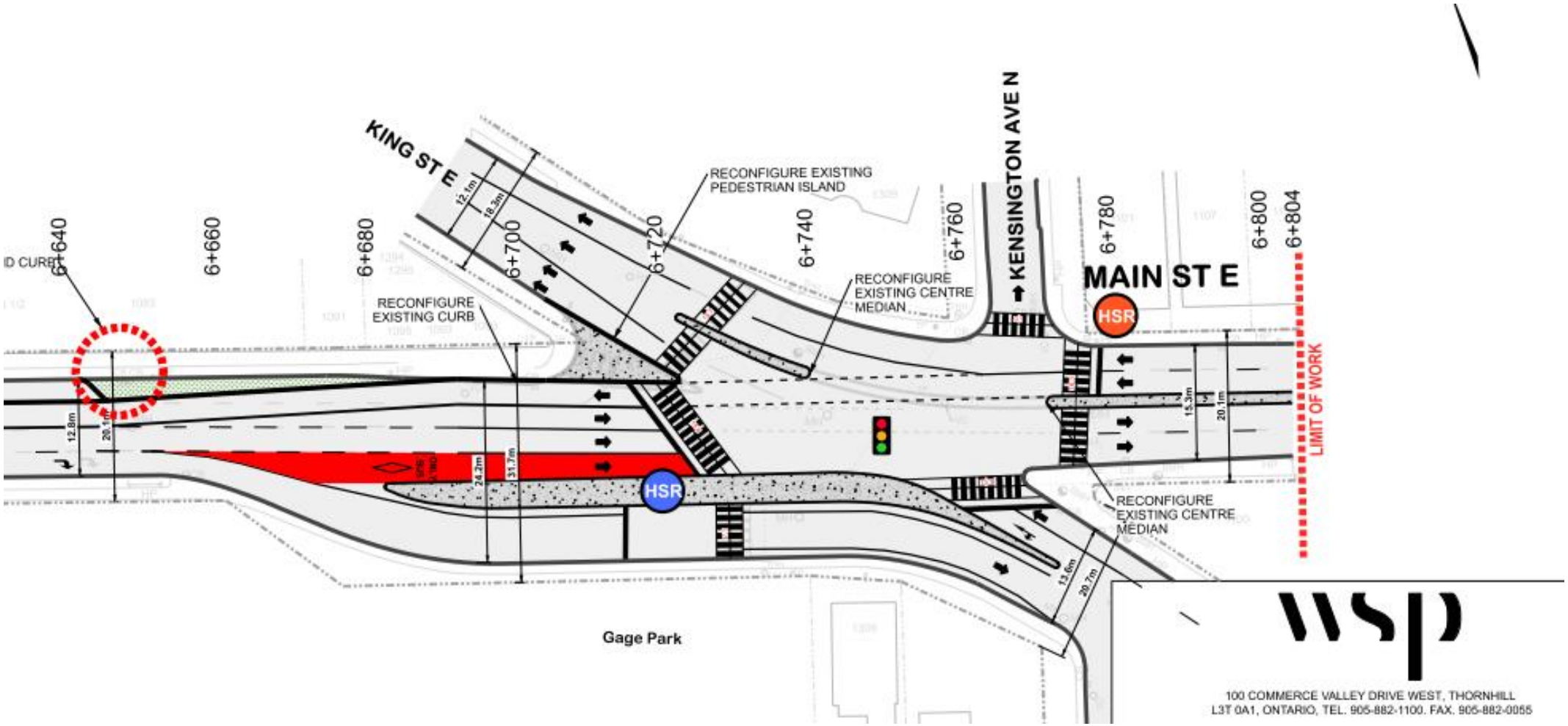
A Closer Look: Sherman to Delta

2 eastbound lanes, 1 westbound lane, and on-street parking

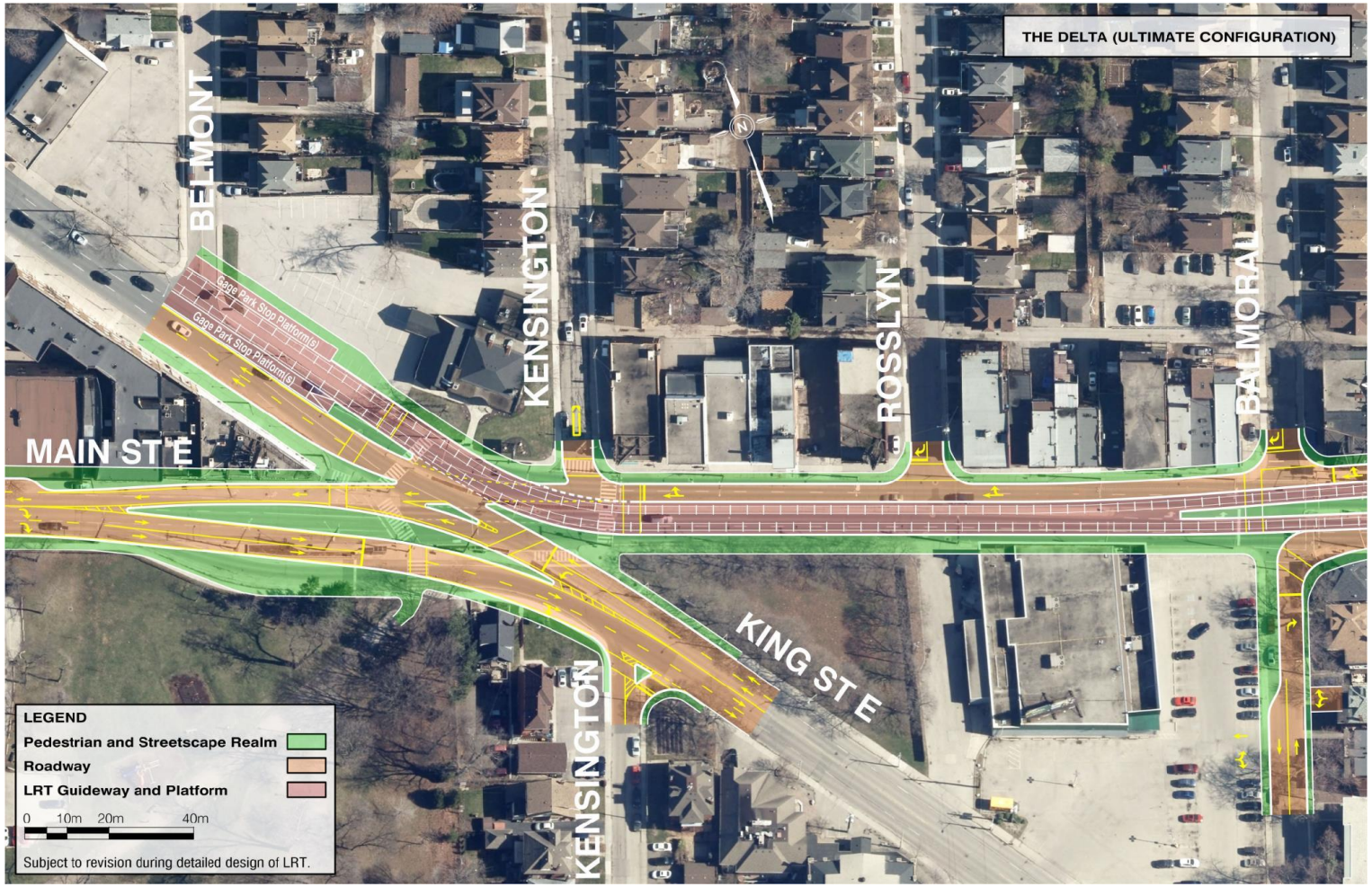




A Closer Look: Delta Intersection

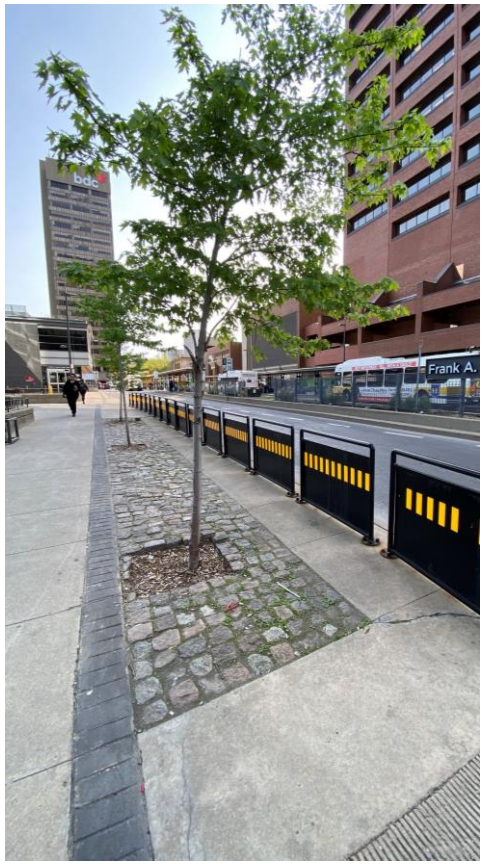


Ultimate Configuration: Post LRT Delta Intersection

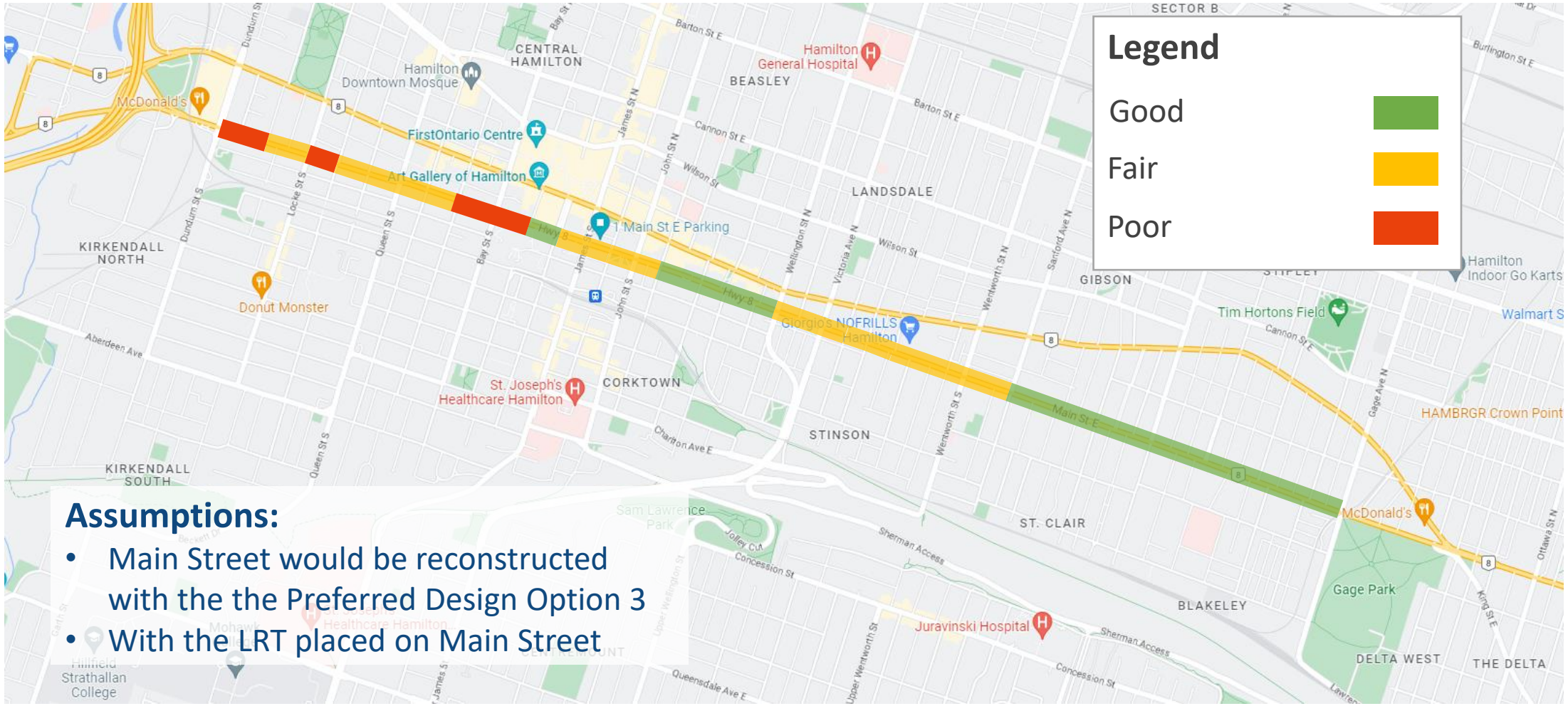


Imagining Main Street

- During LRT construction flexibility will be needed through the downtown to provide sufficient movement for transit and other vehicles
- Post LRT Construction, there is an opportunity to re-construct Main Street through the core as a signature Complete Street
- Concepts could include reduced lanes, a raised cycle track and greening opportunities



Projected Future Traffic Operations (2041)



Assumptions:

- Main Street would be reconstructed with the the Preferred Design Option 3
- With the LRT placed on Main Street

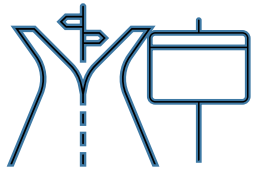
Summary

- Provide **Westbound flow** for public transit and vehicles
- Eastbound traffic will be **slowed**

Slower speeds **addresses the Problems and Opportunities** identified at the onset of the Study

Traffic calming and **improved safety** in this corridor results in a net gain for the community

Opportunities for **green and resilient infrastructure** (e.g. permeable surfaces, trees) and roadway beautification



Opportunities to **improve infrastructure conditions** along Main Street

4 | Next Steps

Next Steps

- Provide your input and comments!
  - Interactive map will be activated the week of May 22nd
  - Commenting period open until Monday June 5, 2023

- The ideas and comments gathered during this meeting will be summarized, assessed and applied (where possible) to refining the design alternatives.

- Confirmation of Preliminary Preferred Design
- Report to Council in July 2023

Future Work

Following the two-way conversion, the City will:

- Review and evaluate performance of the two-way conversion.
- Evaluate and implement further design enhancements.
- Coordinate with future infrastructure project e.g., underground services.
- Leverage opportunities post LRT completion.

Town Halls

Ward 1 & 2 Community Meeting
Hamilton City Hall, 71 Main Street West
Thursday May 25, 2023
7:00 p.m. – 9:00 p.m.

Ward 1 & 3 Community Meeting
Bernie Morelli Recreation Centre, 876 Cannon Street East
Monday May 29, 2023
6:30 p.m. – 8:00 p.m.

Contact Information

If you have any further questions or comments, please feel free to contact:

James Schofield

Project Manager, WSP

james.schofield@wsp.com

Dipankar Sharma

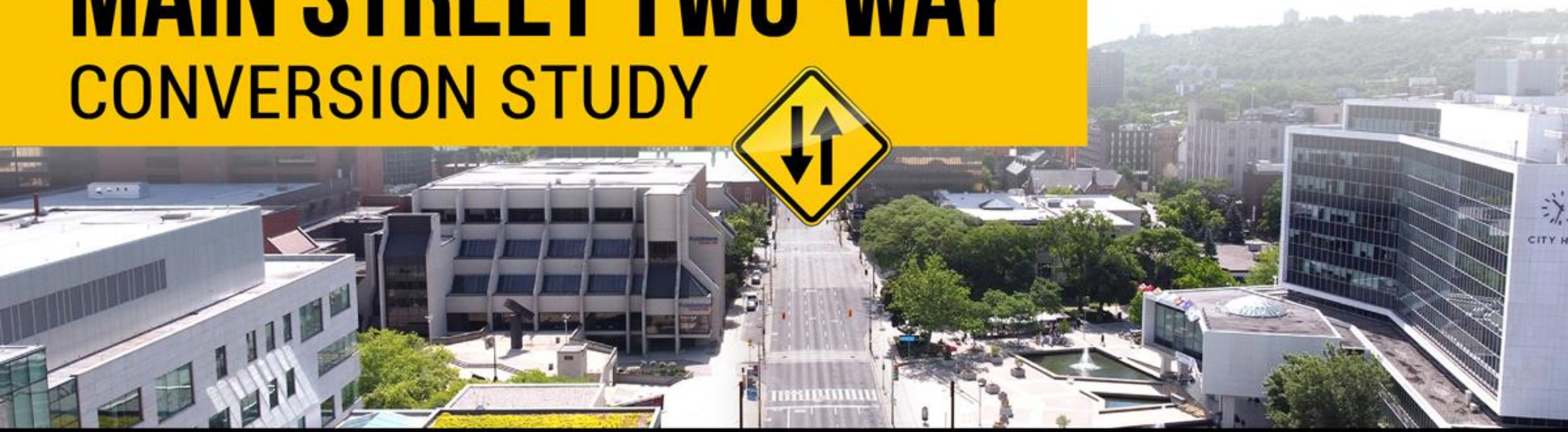
Project Manager, City of Hamilton

dipankar.sharma@hamilton.ca

5 | Q & A

WE WANT TO HEAR FROM YOU!

MAIN STREET TWO-WAY
CONVERSION STUDY



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Two-Way Conversion (Complete Streets Integration)

The following outlines the remaining two-way conversion have been assessed through the Complete Streets lens and applicable street typology to identify the best potential outcomes. In addition, consideration of the Hamilton Street Railway’s re-envision network and Light Rail Transit have been incorporated.

Birch Avenue (Burlington Street to Barton Street)

This two-way conversion was identified in the Citywide Transportation Plan. Additionally, a Schedule B Environmental Assessment was completed for Birch Avenue in 2020 to support the mobility options for the new bus storage and maintenance facility. The two-way conversion will include a multi-use path for cyclists and pedestrians on the west side of Birch Avenue, this is consistent with an Industrial Street Complete Streets typology. Construction will commence once discussions with Canadian National Railway addresses issues relating to the mainline rail bridge over Birch Avenue. The portion of Birch Avenue between Barton and Wilson Streets was converted to two-way in 2020.

Wilson Street (Victoria Avenue to Sherman Avenue)

The Citywide Transportation Plan identified opportunities to improve westbound routing options as a result of the B-Line Light Rail Transit project. Wilson Street from James Street to Victoria Avenue was converted to two-way in 2010. The conversion of the remaining section will also support the routing of transit in both directions along Wilson Street. Currently, this Light Rail Transit enabling project is in the design stage. A public information centre was held in June 2023. Input received through this process included opportunities to support the Connector Street Complete Street typology including wider pedestrian clear zones, tree plantings, and curb extensions to formalize on-street parking areas and reduce pedestrian crossing distances.

Sherman Avenue (Burlington Street to Wilson Street)

Similar to Wilson Street, Sherman Avenue was identified as part of the Light Rail Transit project and is being coordinated with those capital works projects. The segment between Barton Street and Wilson Street will be converted to two-way operation to support routing options and align with the Wilson Street conversion. The conversion would accommodate one-lane in each direction and on-street parking. Other design elements to improve the pedestrian realm are also being considered. This project is currently in the design process and is anticipated to be implemented in 2024. The remaining segment between Burlington Street and Barton Street will apply a consistent design approach and will be completed as a separate project due to coordination with the Canadian National Railway and the railway crossing requirements and approvals with a target implementation timeframe of 2025.

Queen Street (Barton Street to King Street)

Queen Street was examined as part of the holistic review within the Citywide Transportation Plan. Implementation of various segments have occurred over the past several years. The segment between Barton Street and York Boulevard fits a neighbourhood typology can accommodate one travel lane in each direction plus on-street parking to accommodate the single detached dwellings that do not have a driveway or rear alley access. The segment between York and King Street observes a higher demand in the southbound direction and will require two southbound travel lanes to be maintained. However, in the northbound direction, the conversion of the parking lane to accommodate the future transit route (Route 29 - Garth) identified as part of the transit network redesign will be required. Implementation of the conversion will need to be coordinated prior to introduction of service, which is subject to budget approval as part of the implementation of the transit network.

Caroline Street (York Boulevard to King Street)

Both the Downtown and Citywide Transportation Plans included the conversion of Caroline Street and much of the street has been implemented except for the segment between York Boulevard and King Street. Accommodations for the conversion along this short section has been included within the York Boulevard reconstruction project. The expected delivery of this project is anticipated to occur in 2024/2025.

Sanford Avenue (Barton Street to Main Street)

The function of Sanford Avenue will change as a result of the Light Rail Project and vehicles will no longer be able to travel north through King Street. However, pedestrians and cyclists will be able to cross safely. This presents an opportunity to implement complete streets through the Sanford corridor. Although identified as a two-way conversion project, there is currently a feasibility assessment being undertaken to accommodate cycling infrastructure and apply the complete streets approach. Currently, Sanford is identified as a 2029 project.

King Street (Dundurn Street to Delta)

The Hamilton Light Rail project identifies a conversion of King Street along much of the project corridor. To support the project, King Street will operate with one lane in each direction. Westbound trips through the corridor will be absorbed by both transit ridership and use of parallel corridors such as Cannon, Wilson, and Main Street.

Hunter Street (Queen Street to Wellington Street)

Hunter Street was evaluated as part of the Citywide Transportation Plan but was not carried forward for conversion. Hunter Street provides more value as mobility spine for active transportation by providing connectivity to the Hunter GO Station, the downtown and central Hamilton mountain via the Keddy Trail (Claremont access).

Cannon Street (Queen Street to Sherman Avenue)

Similar to Hunter Street, Cannon Street was evaluated as part of the Citywide Transportation Plan but was not carried forward for conversion. The conversion was not carried forward as Cannon Street provides a critical continuous east-west active transportation spine through the lower City. Cannon Street is also a westbound routing alternative needed as part of the Light Rail Transit project.

Catharine Street (Barton Street to Hunter Street)

Catharine Street was evaluated and identified holistically as a conversion opportunity as part of the Citywide Transportation Plan. In undertaking a context-sensitive approach to the corridor and applying complete streets principles Catharine Street has two distinct areas. North of Cannon Street, Catharine functions as a neighbourhood street. A conversion from one to two-way operation would provide opportunities to improve circulation and calm the street. South of Cannon Street, Catharine bisects the downtown and provides an opportunity to support a more refined and dense active transportation grid through the implementation of a bi-directional cycle track. This route would improve connectivity between the Hunter GO Station and other destinations with the increased mobility demand from dense developments in this area of downtown. Implementation of these improvement is expected to occur in 2027 and is subject to coordination with road resurfacing.

Hess Street (Barton Street to King Street)

The segment of Hess Street between York Boulevard and Barton Street has been incorporated into the design of the York Boulevard reconstruction project, which is expected to occur in 2024. Based on the approved Light Rail Transit project design, there is no through vehicular access across King Street or on King Street between Queen Street and Hess Street. As a result, there is routing benefits to convert this segment of Hess Street. However, there are complete street opportunities to improve the pedestrian realm along Hess Street and accommodate displaced on-street parking demand that may result of the Queen Street conversion.

Bay Street (Cannon Street to Herkimer Street)

Bay Street has long been established as an important north-south active transportation corridor. The initial evaluation occurred as part of the Downtown Transportation Plan but was not carried forward for conversion. This north-south spine connects the waterfront to the escarpment as well to the Hunter and Cannon Street higher order active transportation routes.

Victoria Avenue (Ferrie Street to Main Street)

The segment of Victoria Avenue from Burlington Street to Ferrie Street was converted from one-way to two-way in 2020 and included unidirectional bicycle lanes. The segment from Ferrie Street to Barton Street has not moved forward due to both the

approval process for the at-grade rail crossing of the Canadian National mainline rail corridor and the lack of support of the conversion by the Hamilton General Hospital, who is a major stakeholder. The remaining segments from Barton to Main provide a complete streets opportunity representative of an Urban Avenue typology. Consistent with this typology, a two-way cycle track has been implemented. Further refinements to the street design will occur as part of the Light Rail Transit enabling works, which will include more positive guidance to vehicles and the pedestrian realm between Main and King Streets.

Wellington Street (Burlington Street to Main Street)

Maintaining Wellington Street as a one-way street between Burlington Street and Barton Street is consistent with the North End Traffic Management Plan, which aims to divert vehicular trips around the North End and not through the neighbourhood. There are opportunities to improve this segment of Wellington Street to facilitate a better pedestrian, cycling and transit experience through a reducing the number of travel lanes. Curb extensions have been implemented on the southwest corner of the Wellington / Barton and the northwest corner of the Wellington / Cannon intersections. These interventions provide improved visibility and reduced crossing distances for pedestrians. It also provides a buffer for pedestrians through on-street parking and reduces aggressive driving behaviour as a result of speeding and weaving.

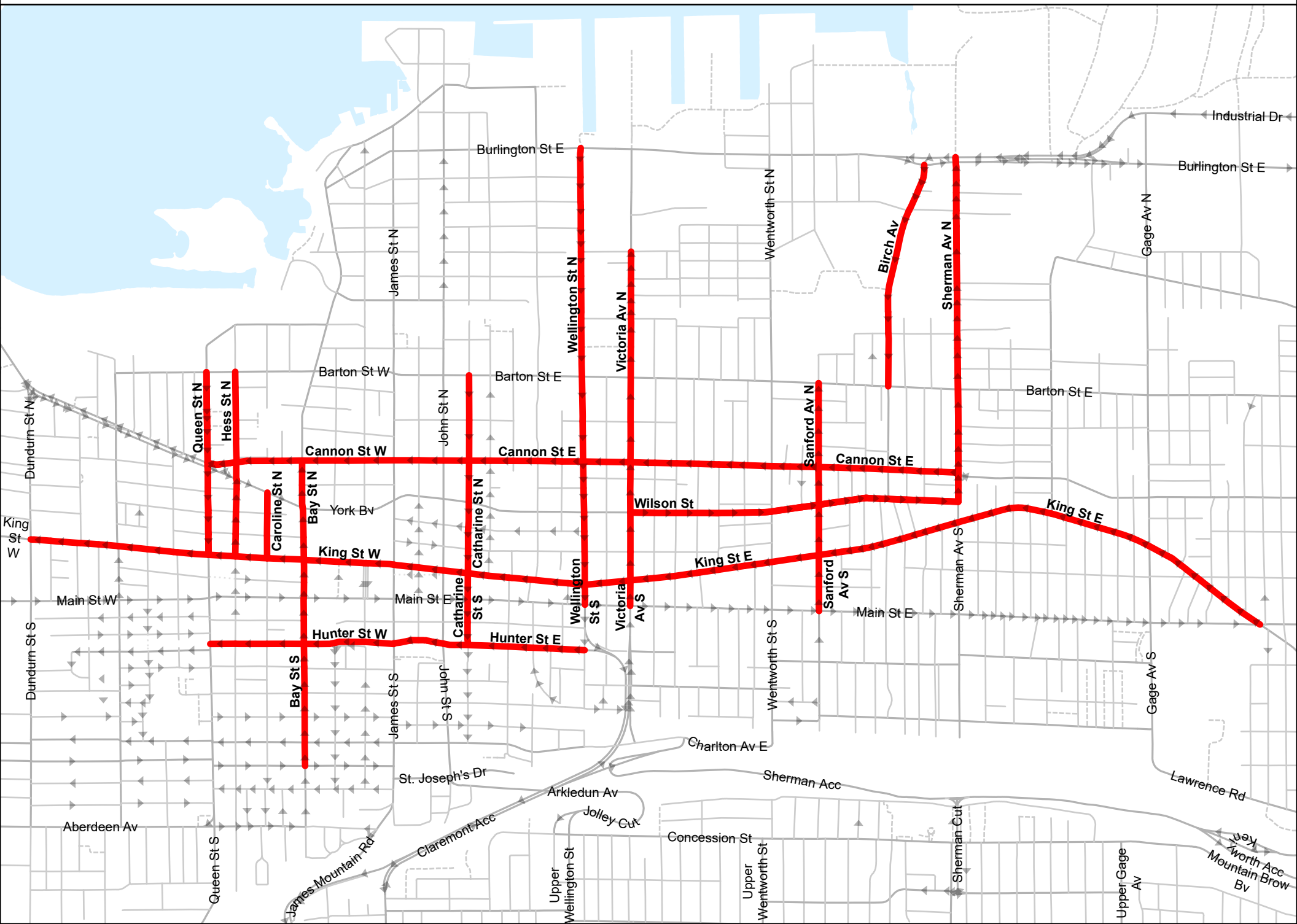
The segment of Wellington Street will require a redesign as a result of the Main Street conversion (if approved by Council). This segment is also impacted by the King Street design as part of the Light Rail Transit enabling works. A redesign will provide positive guidance to vehicles and improved the pedestrian realm between Main and King Streets.

In order to maintain design consistency as well as accommodate future transit service along Wellington Street south of Barton Street, maintaining a one-way street operation is recommended and is also consistent with Victoria Street. In terms of improving Wellington Street, opportunities to improve the pedestrian realm through the provision of sidewalk buffers and additional curb extensions to reduce pedestrian crossing distances should be further evaluated as opportunities arise through capital infrastructure planning. Buffers could include, on-street parking regulations, street trees, and landscape strips. These combined attributes are consistent with an Urban Avenue Complete Streets typology.

Street Conversion Summary Table

Street Name	From	To	Street Typology	Two-way Conversion	One-way with Enhancements	Anticipated Implementation
Birch	Burlington	Barton	Connector	Y		2024-2026
Wilson	Victoria	Sherman	Connector	Y		2023-2024
	Burlington	Barton	Neighbourhood	Y		2025-2026
Sherman	Barton	Wilson	Neighbourhood	Y		2024
	Barton	York	Neighbourhood	Y		Coordination required (HSR)
Queen	York	King	Urban Avenue	Y		Coordination required (HSR)
Caroline	York	King	Neighbourhood	Y		Coordinate with LRT project
	Barton	King	Connector		Y	2029
Sanford	King	Delaware	Neighbourhood		Y	2029
Main	Paradise	Delta	Urban Avenue	Y		2025-2026
King	Dundurn	Delta	Main Street / Urban Avenue	Y		2025-2029
Hunter	Queen	Wellington	Connector		Y	not applicable
Cannon	Sherman	Queen	Transitioning		Y	not applicable
	Barton	Wilson	Neighbourhood		Y	2026 or beyond
Catharine	Wilson	Hunter	Connector		Y	Coordinate with LRT Project
	Barton	York	Neighbourhood	Y		2024-2025
Hess	York	King	Connector		Y	not applicable
Bay	Cannon	King	Urban Avenue		Y	not applicable
	King	Hunter	Connector / Urban Avenue		Y	not applicable
	Ferrie	Barton	Urban Avenue	Y		not applicable
Victoria	Barton	Wilson	Urban Avenue		Y	2024-2026
	Wilson	Main	Urban Avenue		Y	2024-2026
	Burlington	Barton	Urban Avenue		Y	Timing not determined yet
	Barton	Wilson	Urban Avenue		Y	Timing not determined yet
Wellington	Wilson	Main	Urban Avenue		Y	Timing not determined yet

Two-Way Street Conversions and Alternative Complete Street Interventions



Main Street - Hamilton

PRELIMINARY (BALLPARK) COST ESTIMATE - Roadworks Items

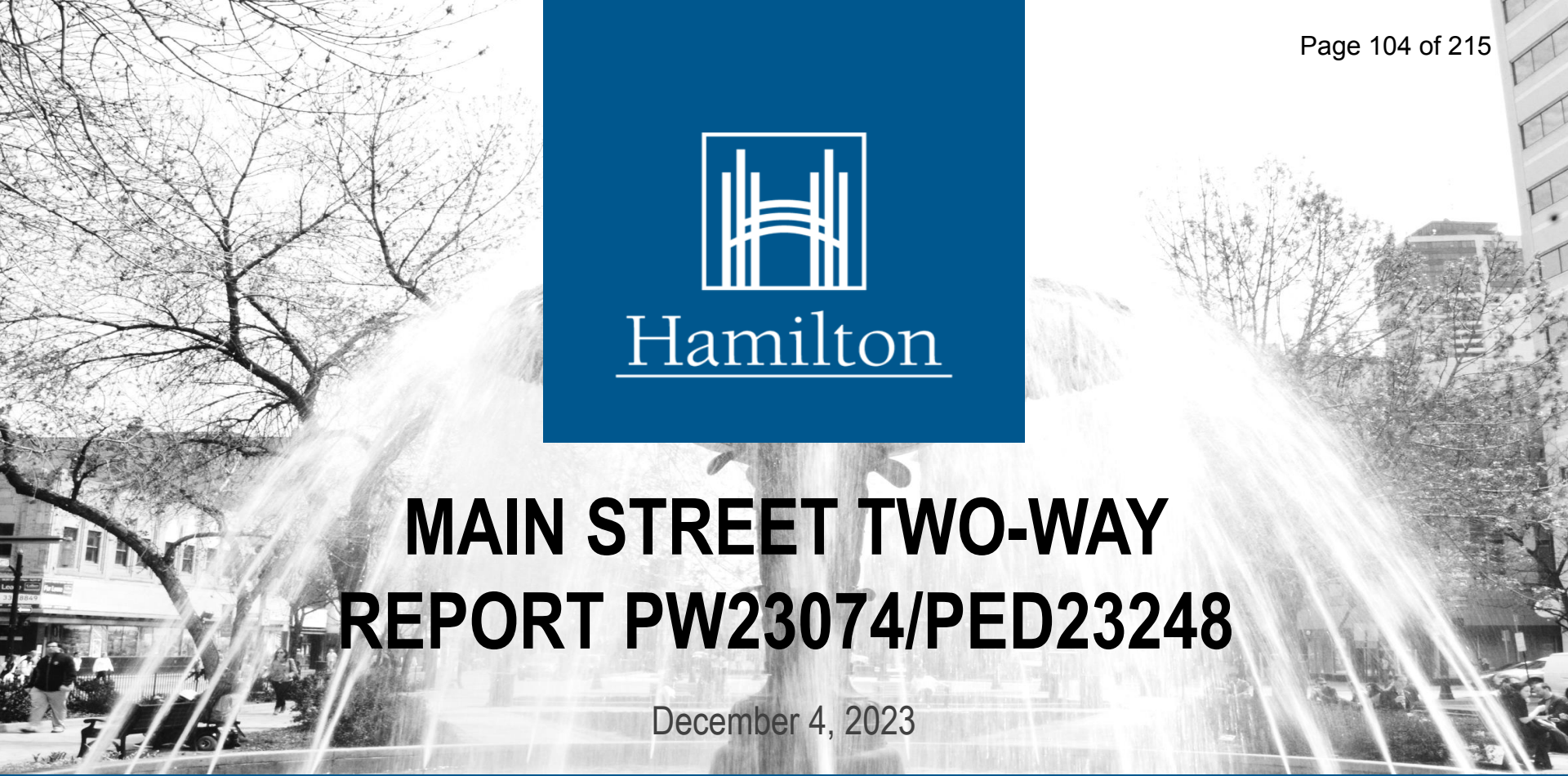
ITEM NO.	ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL
1	Curb Removal	m	2700	30.00	$81,000.00
2	Concrete Pad Removal	m^2	2300	30.00	$69,000.00
3	Asphalt Removal	m^2	700	25.00	$17,500.00
4	New Curb - All Types as per OPSD	m	3200	120.00	$384,000.00
5	New Concrete Pad	m^2	2400	120.00	$288,000.00
6	Concrete Area (Median/ Island)	m^2	1100	120.00	$132,000.00
7	10cm Broken white 1.5-1.5-1.5	m	430	10.00	$4,300.00
8	10cm Broken white 1-1-1	m	100	10.00	$1,000.00
9	10cm Broken white 3-3-3	m	620	10.00	$6,200.00
10	10cm Broken White 3-6-3	m	2600	10.00	$26,000.00
11	10cm Broken Yellow 3-3-3	m	45	10.00	$450.00
12	10cm Solid White	m	5800	10.00	$58,000.00
13	10cm Solid yellow	m	5000	10.00	$50,000.00
14	Double Solid Yellow (10cm+10cm two lines)	m	120	10.00	$1,200.00
15	60cm Stop Bar	m	1050	50.00	$52,500.00
16	60cm Pedestrian Zebra Crossing	m	6700	50.00	$335,000.00
17	Buffer Area Painting	m^2	8900	40.00	$356,000.00
18	Blue Colored Hatch at Start of Project	m^2	880	220.00	$193,600.00
19	Busbay Red Colored Hatch	m^2	860	220.00	$189,200.00
20	Colored Pedestrian Crossing At intersection	m^2	90	220.00	$19,800.00
21	Green Colored area near Curbs at intersections	m^2	450	220.00	$99,000.00
22	Tactile Plates / Surface	m^2	750	600.00	$450,000.00
23	Decorative Intersection Traetment (For 5 Intersections: James St., Wellington St S, Wentworth St S, Fairleigh Ave. S and Sherman Ave. S)	m^2	1150	480.00	$552,000.00
24	Pavement Symbols	no.	765	250.00	$191,250.00
				SUB TOTAL	**$3,557,000.00**

ITEM NO.	ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL
1	10% Contingencies				$356,000.00
2	1.76% Non-recoverable HST				$63,000.00
3	10% Traffic Safetty Improvements				$356,000.00
4	5% Traffic Control				$178,000.00
				SUB TOTAL A	**$4,510,000.00**

ITEM NO.	ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL
1	Main Street- Resurfacing (Hwy403 to James)				$3,500,000.00
2	Main Street- Resurfacing (James to Wentworth)				$3,000,000.00
3	Main Street- Resurfacing (Wentworth to the Delta)				$3,500,000.00
				SUB TOTAL B	**$10,000,000.00**
				TOTAL A+B	**$14,510,000.00**
				TOTAL (ROUNDED UP TO NEAREST $100k)	**$14,600,000.00**

HAMILTON MAIN STREET - ONE-WAY TO TWO-WAY CONVERSION

NO.	INTERSECTION	Construction Cost Estimate			
		Temporary Traffic Signals		Permanent Traffic Signals	
		3 - Legged	4 - Legged	3 - Legged	4 - Legged
1	Main Street and Dundurn Street	N/A	$ 50,000.00	N/A	$ 250,000.00
2	Main Street and Strathcona Street	N/A	N/A	$ 225,000.00	N/A
3	Main Street and Locke Street	N/A	$ 40,000.00	N/A	$ 240,000.00
4	Main Street and Pearl Street	N/A	$ 40,000.00	N/A	$ 240,000.00
5	Main Street and Queen Street	N/A	$ 50,000.00	N/A	$ 250,000.00
6	Main Street and Hess Street	N/A	$ 50,000.00	N/A	$ 250,000.00
7	Main Street and Caroline Street	N/A	$ 40,000.00	N/A	$ 240,000.00
8	Main Street and Bay Street	N/A	$ 40,000.00	N/A	$ 240,000.00
9	Main Street and Summers Lane	$ 30,000.00	N/A	$ 225,000.00	N/A
10	Main Street and MacNab Street	N/A	$ 60,000.00	N/A	$ 250,000.00
11	Main Street and James Street	N/A	$ 50,000.00	N/A	$ 250,000.00
12	Main Street and Hughson Street	N/A	$ 40,000.00	N/A	$ 230,000.00
13	Main Street and John Street	N/A	$ 55,000.00	N/A	$ 250,000.00
14	Main Street and Catharine Street	N/A	$ 50,000.00	N/A	$ 250,000.00
15	Main Street and Walnut Street	N/A	$ 40,000.00	N/A	$ 240,000.00
16	Main Street and Ferguson Avenue	$ 30,000.00	N/A	$ 225,000.00	N/A
17	Main Street and Wellington Street	N/A	$ 50,000.00	N/A	$ 250,000.00
18	Main Street and Victoria Avenue	N/A	$ 50,000.00	N/A	$ 250,000.00
19	Main Street and East Avenue	N/A	$ 40,000.00	N/A	$ 230,000.00
20	Main Street and Emerald Street	N/A	$ 40,000.00	N/A	$ 240,000.00
21	Main Street and Tisdale Street	$ 120,000.00	N/A	$ 310,000.00	N/A
22	Main Street and Wentworth Street	N/A	$ 50,000.00	N/A	$ 250,000.00
23	Main Street and Sanford Avenue	N/A	$ 50,000.00	N/A	$ 250,000.00
24	Main Street and Fairleigh Avenue	N/A	$ 40,000.00	N/A	$ 240,000.00
25	Main Street and Sherman Avenue	N/A	$ 50,000.00	N/A	$ 250,000.00
26	Main Street and Springer Avenue	$ 30,000.00	N/A	$ 225,000.00	N/A
27	Main Street and Albert Street	N/A	N/A	$ 225,000.00	N/A
28	Main Street and Gage Avenue	N/A	$ 50,000.00	N/A	$ 250,000.00
29	Main Street and Hilda Avenue	N/A	N/A	$ 225,000.00	N/A
30	Main Street and King Street	N/A	$ 60,000.00	N/A	$ 260,000.00
TOTAL		**$ 120,000.00**	**$ 1,080,000.00**	**$ 1,575,000.00**	**$ 5,650,000.00**
TOTAL ESTIMATE		**$8,425,000.00**			



Hamilton

MAIN STREET TWO-WAY
REPORT PW23074/PED23248

December 4, 2023

PUBLIC WORKS
OPERATIONS DIVISION

Council Direction: May 11, 2022

- Identify actions that can be taken immediately to improve safety for all users along Main Street and King Street;
- Convert Main Street to two-way operation integrating complete streets and climate resiliency to enable the safer use of road users including transit riders, pedestrians, motorists and cyclists;
- Undertake public engagement that leverages a Complete Streets, EDI and Climate Change approach;
- Consult with Metrolinx and MTO regarding two-way conversion considerations for LRT and the 403 interchanges;
- Report back with an implementation plan for two-way conversion that includes an assessment of costs, construction timing and resource requirements; and
- Update and reassess all remaining one-way streets in the city utilizing the street conversion framework identified in the Transportation Master Plan and report back.

Main Street Collision Review

2,065 collisions from on Main Street between 2017-2022

1,517 Intersection Collisions

- Make up 73% of the collisions (City-wide average is 57%)

548 Midblock Collisions

- Make up 27% of the collisions (City-wide average is 42%)

84 Pedestrian-involved Collisions

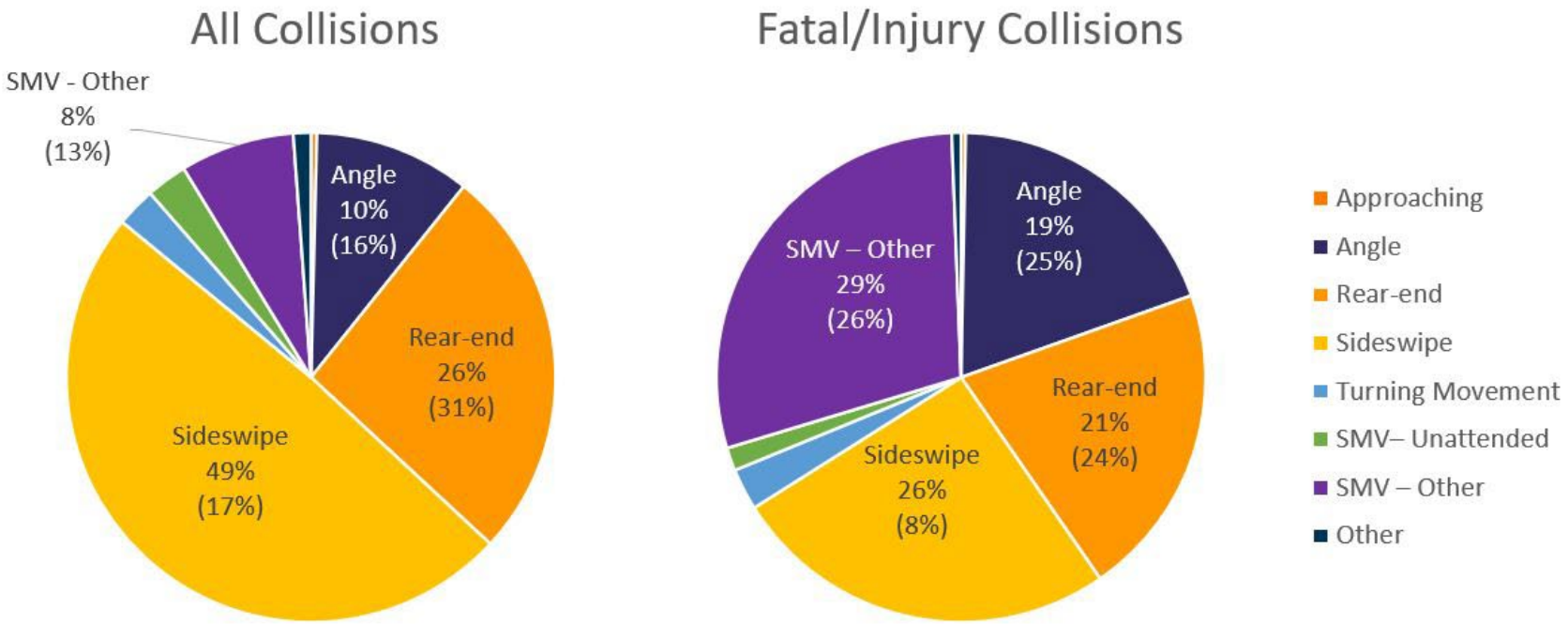
- 89.7% of pedestrians involved in a collision are injured

37 Cyclist-involved Collisions

- 77.4% of cyclists involved in a collision are injured

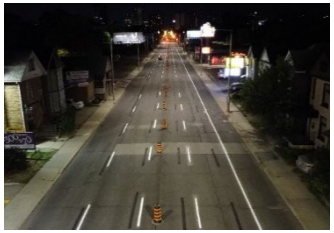
$$$ Societal Cost of Collisions

Types of Collisions on Main Street



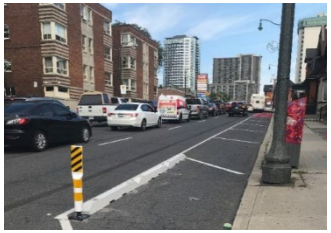
Note: City-wide Averages displayed in brackets

Safety Enhancements



Lane Reconfiguration

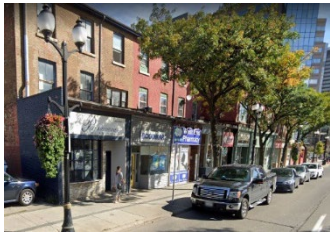
Ladder Crosswalks



Pedestrian Buffers

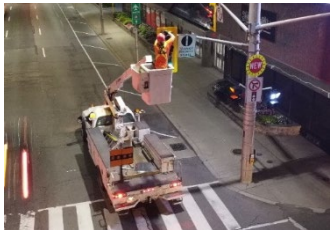
LPI & Countdown Timers

Lane Control Bump Outs



Expanded Street Parking

Transit Enhancement



Transit Signal Priority

No Right Turn on Red

Community Safety Zones

Automated Speed Enforcement

King Street Bus Only Lane

Conversion Opportunities

Safety

- Improved pedestrian and cycling safety at intersections
- Additional pedestrian crossing locations
- Reduced pedestrian crossing distances and slow turning motor vehicles

Accessibility

- Plans for accessible transit stops
- Wider pedestrian facilities to increase accessibility, comfort and safety
- Address other accessibility concerns along the corridor
- Additional on street parking

Connectivity

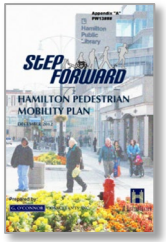
- Enhanced cycling network connectivity with new cycling facilities
- Improved connectivity to transit terminals for pedestrians and cyclists

Infrastructure Condition

- Improve the condition of infrastructure, including pavement, sidewalks, etc.
- AODA Compliance

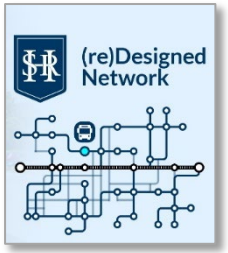
Policy Framework

Vision Zero Action Plan

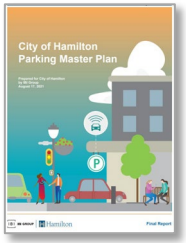


Pedestrian Mobility Plan

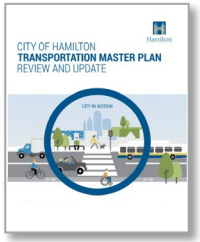
Cycling Master Plan



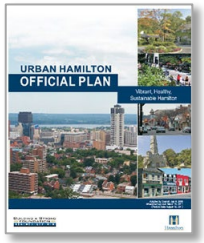
(re)Envision the HSR



Parking Master Plan



Transportation Master Plan



Urban Hamilton Official Plan

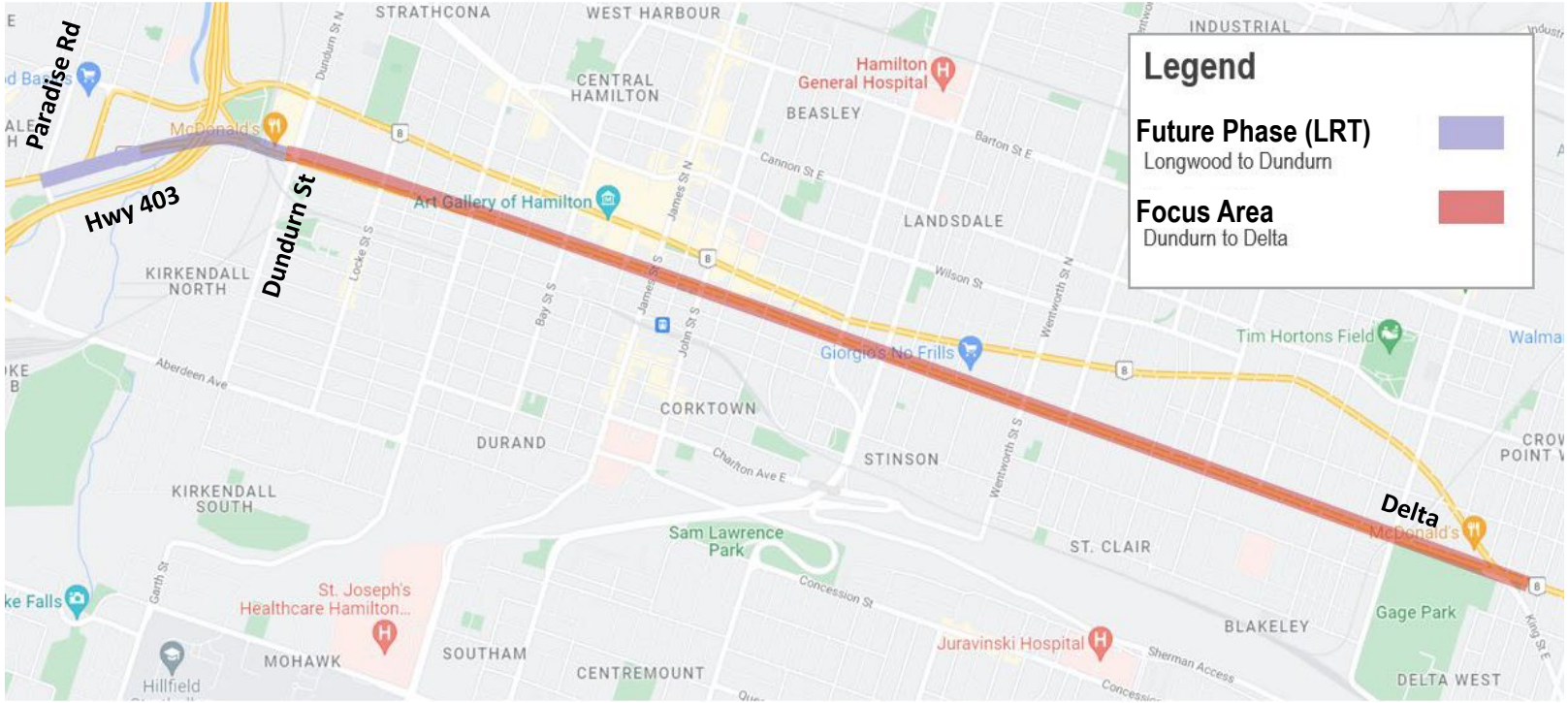
Complete Streets Design Manual

Main Street Two-way Study Objectives

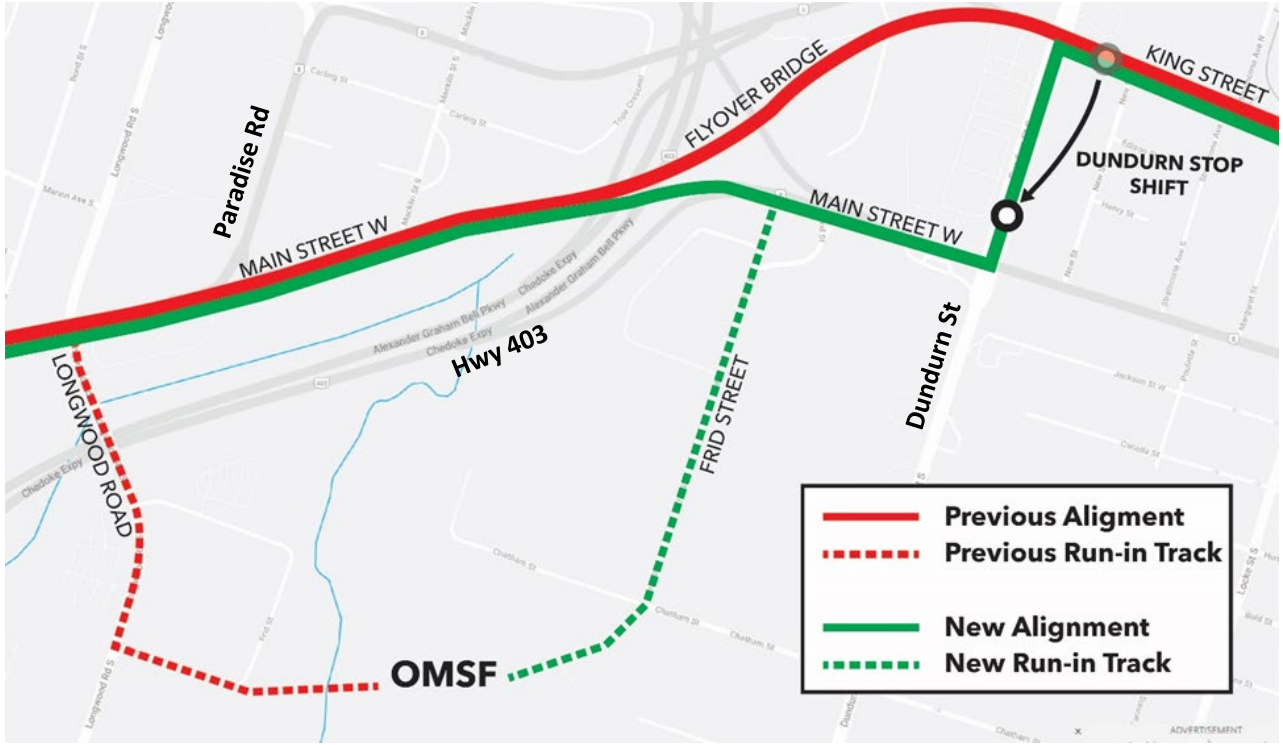
- Increase safety for all road users
- Pedestrian-friendly corridor
- Improved cycling connectivity
- Prioritize 2-way transit
- Enhance accessibility
- Consider parking and loading needs
- Add greenery and streetscaping elements

Conversion Study Scope

Focused Area: Main Street - Dundurn Street to King Street (Delta)



Main Street and LRT Realignment



Evaluation Criteria

Safety/Conflict Mitigation

Mitigate conflicts between motorist and cyclists

Two-Way Traffic Operations

Impact to two-way roadway capacity and intersection operations

Pedestrian Friendliness

Have access to safe, walkable and convenient pedestrian routes

Cyclist Network

Provide cycling facilities and connectivity to destinations

Transit Operations

Impact and compatibility with local transit

Social Health & Equity

Provides a fair and accessible environment for users

On-street Parking

Impact to on-street parking supply

Cost

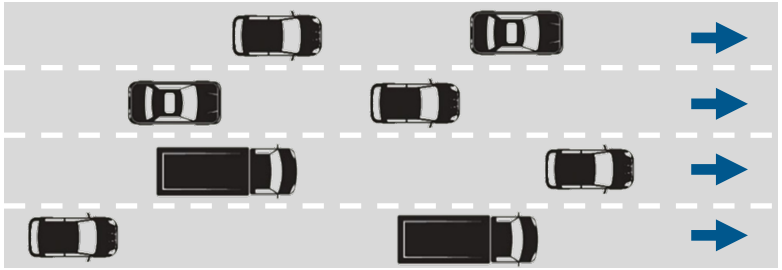
Anticipated cost to construct the conceptual design

Green and Resilient Infrastructure

Provide opportunities for greening, permeable surfaces and beautification

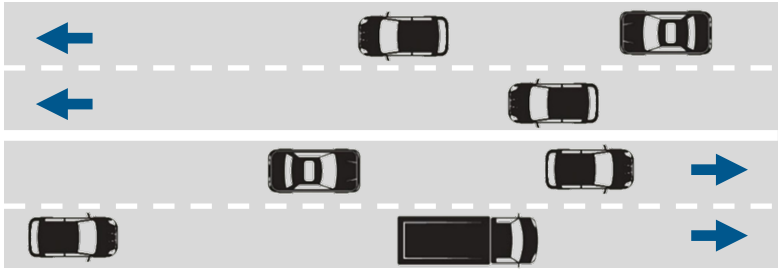
Configuration Alternatives

Option 1: Do Nothing – 4 Eastbound Lanes



- Does not provide two-way traffic flow as directed by Council
- Not pedestrian- and cyclist-friendly
- Poor safety outcomes
- Does not improve social health and equity

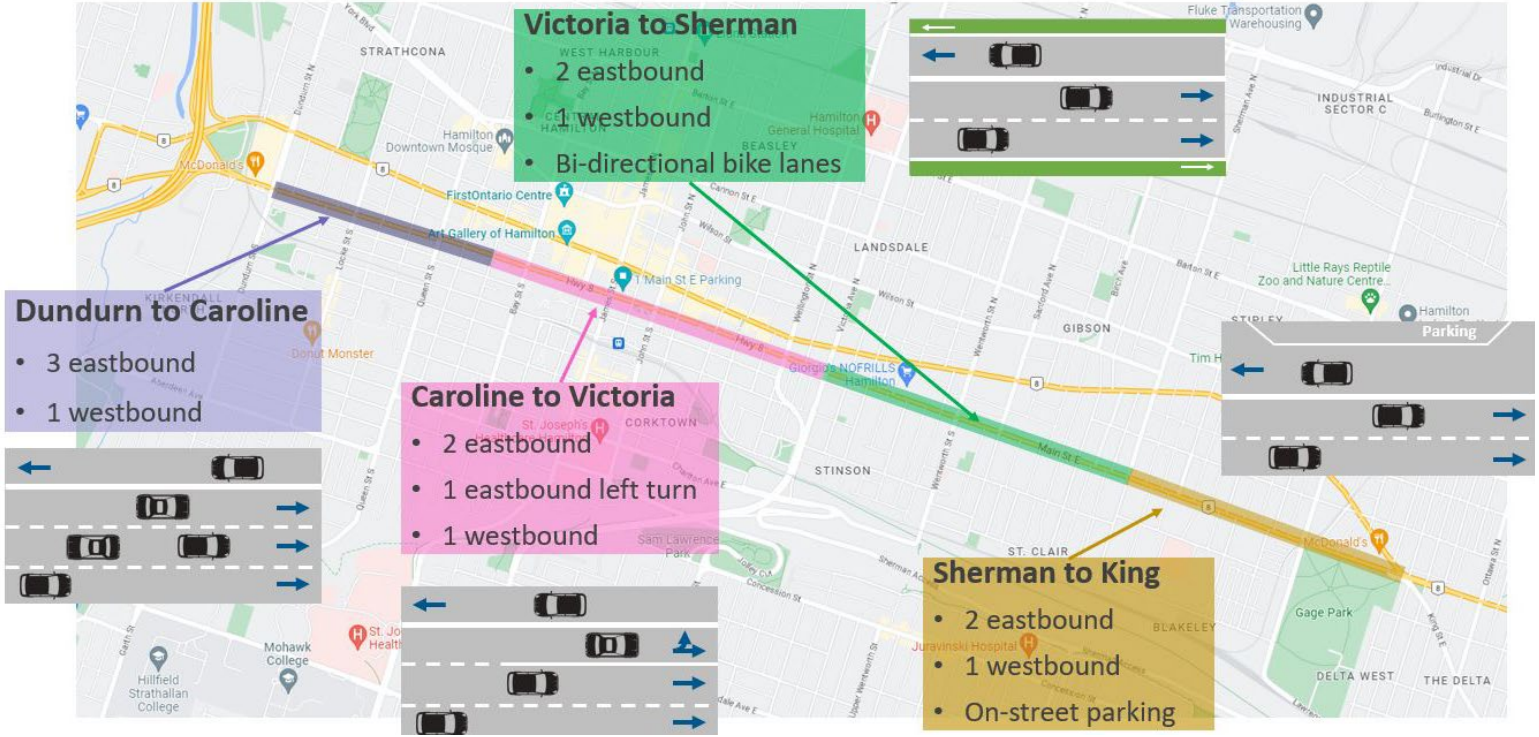
Option 2: Symmetrical Lane Capacity



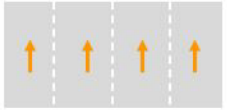
- Current four lanes reconfigured to two lanes eastbound and two lanes westbound
- Provides equal amounts of westbound and eastbound capacity on Main Street
- Most traffic congestion of three options

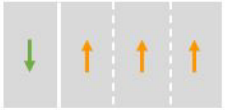
Preferred Configuration

Option 3: Asymmetric Lane Capacity



Configuration Ranking & Evaluation





Criteria	Option 1 Do Nothing	Option 2 Symmetric Lanes	Option 3 Asymmetric Lanes
Two-Way Traffic Operations			
Safety/Conflict Mitigation			
Pedestrian Friendliness			
Cyclist Network			
Transit Routing			
On-street Parking			
Cost			
Social Healthy & Equity			
Green and Resilient Infrastructure			
Carry Forward	**No**	**No**	**Yes**

Public Engagement

Engage Hamilton Platform: May 2, 2023 (launched)

Online Public Information Centre: May 18, 2023

Ward 1 and 2 Public In-person Townhall: May 25, 2023

Ward 2 and 3 Public In-person Townhall: May 29, 2023

Business Improvement Area Sub-Committee: June 13, 2023

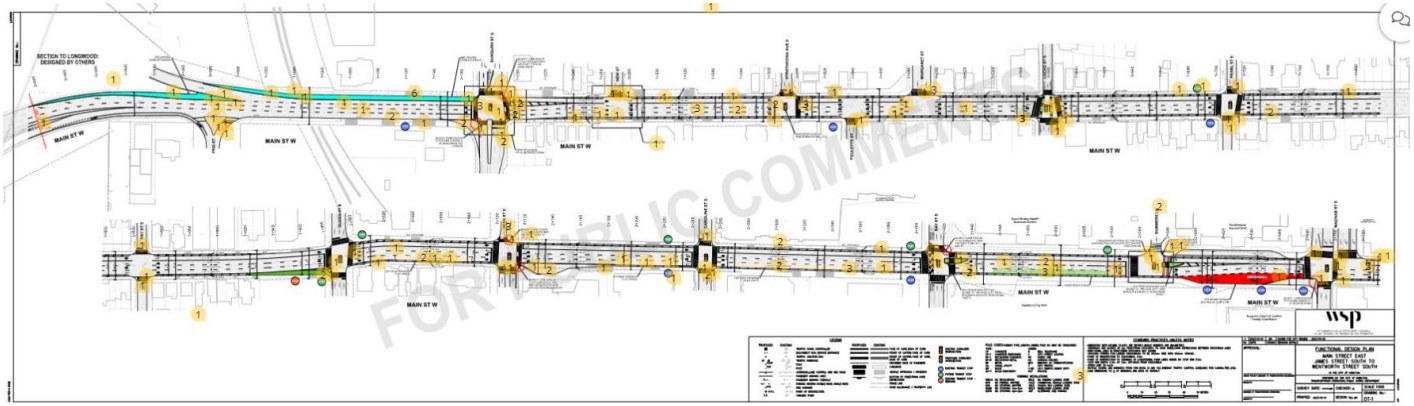
362
residents participated in the public engagement sessions

81
unique questions asked during the public engagement sessions

149
e-mails sent by the public to project general in-box

500
public comments made on the online design commenting tool

Interactive Online Commenting



Comments View all Hide

Commenting is closed for this document.

Mac May 26 2023 at 2:17PM Question

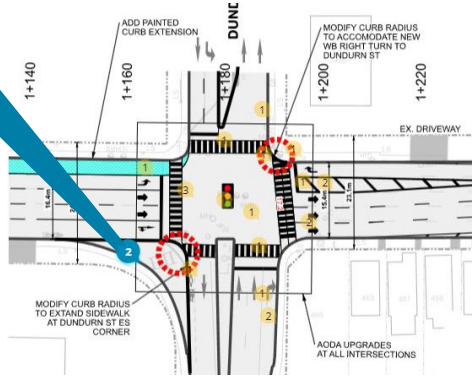
I'm glad to see the slip lane gone! Will all of the curbs be modified?

6 0

JC May 27 2023 at 10:04AM

agree! Slip lanes are never safe in cities and should be eliminated.

3 0



Influencing Outcomes

Public Engagement Key Themes:

- Prioritizing pedestrians, cyclists and transit users
- Allocating street space for cycling and green infrastructure
- Extending cycling options along Main Street with enhanced protection
- Expanding Hamilton's cycling network
- Reducing side street access to Main Street
- Minimizing driveways along Main Street
- Addressing traffic congestion concerns

Implementation Plan

Key Components of Main Street Two-Way Conversion:

- Reconstruction of 29 traffic signals
- Reconstruction of railway crossing at Gage Avenue
- 5 kilometers of roadway rehabilitation
- Various civil corridor improvements
- Installation of green infrastructure
- Placemaking

Approximate Two-Way Conversion Timeline:

Study & Engagement	RFP & Detailed Design	Tender & Construct
1 Year (Completed in 2023)	2 Years (2024-2025)	2-3 Years (2026-2028)

Project Cost and Resourcing Plan

Item:	Budget Estimate:
Traffic Signal Reconstruction	$ 8,420,000
Roadway Rehabilitation	$10,000,000
Corridor Improvements	$ 3,557,000
Contingency & Miscellaneous	$ 4,510,000*
Total:	**$26,492,000**

- Establish an internal multi-divisional project team including approximately 4 temporary staff*
- Leverage conversion study concept design, public comments and desires
- Utilize external consulting services, via a formal request for proposal, for detailed design
- Undertake additional public input on detailed design
- Coordinate with LRT design, scheduling and construction phasing

Main Street Two-way Value Proposition

Provide **Westbound flow** for public transit and vehicles

Eastbound traffic speeds will be **slowed**

Slower speeds **addresses the Problems and Opportunities** identified at the onset of the Study

Traffic calming and **improved safety** in this corridor results in a net gain for the community

Opportunities for **green and resilient infrastructure** (e.g. permeable surfaces, trees) and roadway beautification

Opportunities to **improve infrastructure conditions** along Main Street

Remaining One-Way Streets

- 2018 Transportation Master Plan included an evaluation framework to assess one-way street conversions with a focus on Complete Streets
- Framework was used to review fourteen remaining one-way collector and arterial streets
- Review also took into account recent experience in Hamilton and other municipalities on different approaches for one-way streets that can achieve Complete Streets and multimodal opportunities
- Recommendations on future conversions are provided in Appendix “E” and will be included into future annual capital budgets for Council consideration

PW23074/PED23248 Recommendations

a) That funding for the detailed engineering design of the two-way conversion of Main Street between Dundurn Street South and Main Street East/King Street East (Delta) in alignment with the principles established by the Main Street Two-Way conversion study, be submitted as Capital Project ID #4032411048 at a value of $1,000,000 through the 2024 annual capital budget process for consideration of Council;

b) Funding for the implementation of Main Street between Dundurn Street South and Main Street East/King Street East (Delta), following the completion of detailed engineering design, be earmarked in the 2026 capital budget at a value of $26,492,000 and considered for future approval by Council to enable construction targeted to begin in 2026 and completion in 2028; and

c) That the remaining unbudgeted candidate one-way to two-way street conversions and alternative complete street interventions as identified in Appendix “E” to Report PW23074/PED23248 be programmed, and that funding associated with the conversions be identified and brought forward as part of future annual capital budget submissions for consideration of Council.

Thank You

Hamilton

WINTER MAINTENANCE LEVELS OF SERVICE AND ENHANCEMENTS

December 4, 2023

PUBLIC WORKS
TRANSPORTATION DIVISION

Current Winter Services

- Roadway Patrol
- Anti-icing
- Snow plowing – Roadway & Cycling Facilities
- Sidewalk & Transit Stop Clearing
  - Along Priority 1 & 2A Roadways where Transit Operates
- Multiuse Pathway Clearing
  - Road-to-road Connections
- Snow Removal & Haulage

*combination of Minimum Maintenance Standards and Enhanced Levels of Service approved by Council

Winter Maintenance Statistics

- 24/7 Winter Response from November to Mid-April
- 500+ Total Pieces of Winter Equipment - City & Contracted
- Winter Maintenance Maintains the City's Approximate:
    - Lane km of Road: 6,478
    - Km of sidewalk: 882 of 2,445 (total sidewalks)
    - Cul-de-sacs: 1,100
    - Bus stops: 2,300
- Winter Events
    - Average 28-35 winter events each winter season
    - On average, Transportation receives over 24,000 calls throughout the year generating over 15,000 service requests requiring action

Minimum Maintenance Standards
Ontario Regulation 239/02

- Ontario Regulation 239/02
  - Minimum Maintenance Standards were implemented by the Province to assist Municipalities in managing the maintenance of different road classifications
  - The Regulation outlines minimum standards for Municipal highways in Ontario
- Compliance is voluntary
- In addition, the City operates an Enhanced Level-of-Service Higher than the Minimum Maintenance Standards
  - Approved in 2013 (PW13022)

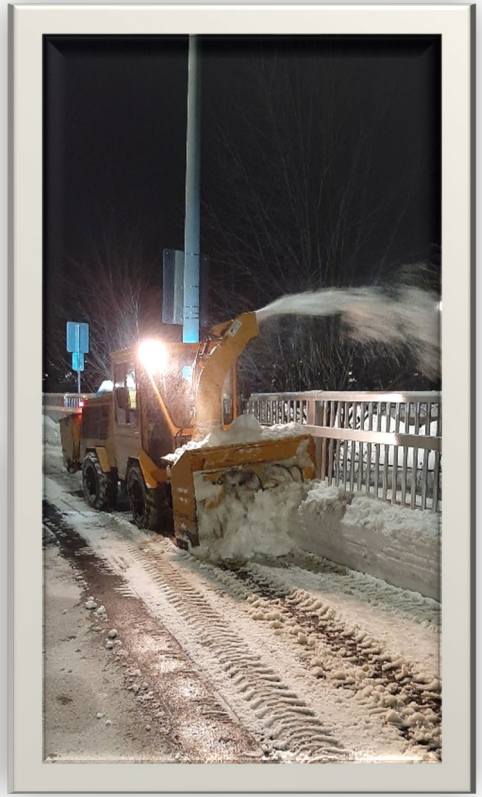
Roadways – City Enhanced Levels of Service versus Minimum Maintenance Standards

ROAD CLASSIFICATION HAMILTON/PROVINCIAL			CITY ENHANCED LEVEL OF SERVICE			PROVINCIAL MMS (O.Reg. 239/02)	
TYPE	PRIORITY RATING	PROVINCIAL CLASS	TARGET SURFACE CONDITION	REASONABLE RESPONSE TIME	TARGET COMPLETION TIME	TARGET SURFACE CONDITION	TARGET COMPLETION TIME
Linc/ Arterials	1	1	Bare	Immediate	4 hrs	2.5 cm	4 hrs
Escarpment Crossings	1	1 – 5	Bare	Immediate	4 hrs	5 cm	6 hrs
Collectors Primary	2A	2-3	Bare	4hrs (Or activate at 8cm, whichever comes first)	8 hrs	5-8 cm	6-12 hrs
Collectors Secondary	2B	2-3	Centre bare	4hrs (Or activate at 8cm, whichever comes first)	8 hrs	5-8 cm	6-12 hrs
Rural Roads Hard Surface	3	4-6	Centre bare	8hrs (Or activate at 10cm, whichever comes first)	24 hrs	8-10 cm	12-24 hrs
Residential	3	5	Bare	8hrs (Or, activate at 10cm, whichever comes first)	24 hrs	10 cm	24 hrs

*Target completion time is after the completion of the winter event which includes, but is not limited to, the cessation of snowing, drifting, blowing snow, freezing rain.

Cycling Lanes

- Unprotected
  - Completed with a Roadway Plow Simultaneously as the Roadway
- Protected
  - Equipment Activated Simultaneously with Roadway Plows
  - Completed following Roadways due to Slower Speed of the Equipment



Cycling Lanes – City Enhanced Levels of Service versus Minimum Maintenance Standards

ROAD CLASSIFICATION HAMILTON/PROVINCIAL			CITY ENHANCED LEVEL OF SERVICE			PROVINCIAL MMS (O.Reg. 239/02)	
TYPE	PRIORITY RATING	PROVINCIAL CLASS	TARGET SURFACE CONDITION	REASONABLE RESPONSE TIME	TARGET COMPLETION TIME	TARGET SURFACE CONDITION	TARGET COMPLETION TIME
Cycling Lanes Arterials	1	1	Bare	Immediate	4 hrs	2.5 cm	8 hrs
Cycling Lanes Collector Primary	2A	2-3	Bare	4hrs	8 hrs	5-8 cm	12-24 hrs
Cycling Lanes Secondary	2B	2-3	Centre Bare	4hrs	8 hrs	5-8 cm	12-24 hrs
Cycling Lanes Rural Hard Surface	3	4-6	Centre Bare	8hrs	24 hrs	8 cm	24 hrs
Cycling Lanes Residential	3	5	Bare	8hrs	24 hrs	10 cm	24 hrs

*Target completion time is after the completion of the winter event which includes, but is not limited to, the cessation of snowing, drifting, blowing snow, freezing rain.

Sidewalk Clearing

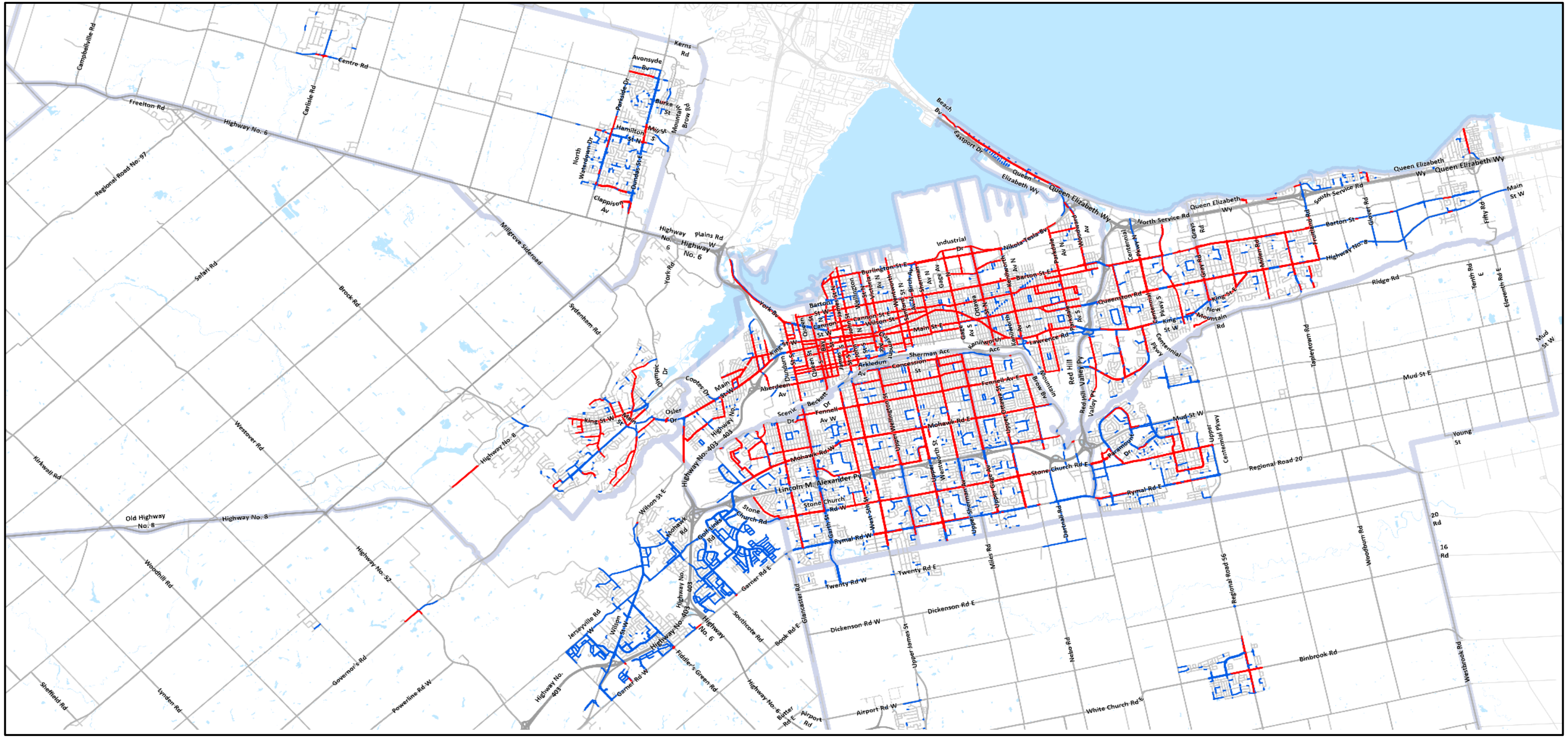
- The City provides Snow Clearing of 882km (36%) of the approximate 2,445 km of Sidewalks across Hamilton, including:
  - Municipal Property
  - Along Reverse Frontage Lots
  - Ward 12
  - Sidewalks Adjacent to School Property
  - Transit Stops
  - Multiuse Paths – Roadway-to-Roadway
- Snow and Ice By-law No. 03-296 – Property Owner Specific

Sidewalk Clearing – City Enhanced Levels of Service versus Minimum Maintenance Standards

ROAD CLASSIFICATION HAMILTON/PROVINCIAL			CITY ENHANCED LEVEL OF SERVICE			PROVINCIAL MMS (O.Reg. 239/02)	
TYPE	PRIORITY RATING	PROVINCIAL CLASS	TARGET SURFACE CONDITION	REASONABLE RESPONSE TIME	TARGET COMPLETION TIME	TARGET SURFACE CONDITION	TARGET COMPLETION TIME
Sidewalks	N/A	N/A	Snow packed	Activate at 5cm	24 hrs	8 cm	48 hrs

*Target completion time is after the completion of the winter event which includes, but is not limited to, the cessation of snowing, drifting, blowing snow, freezing rain.

Sidewalk Clearing – Location Map



Sidewalk Clearing - Schools

- Hamilton-Wentworth District School Boards (Public & Catholic)
- 155 Schools
- 48km of Sidewalk Cleared around Schools

*Westdale Secondary School, Ward 1

Windrows

- Definition
  - The snow accumulation left behind by a plow; typically at the end of driveways and intersections
- Natural Result of Routine Winter Maintenance
- To-date Removal has Not Been an Approved Level of Service

Significant Weather Event

- As per the Ontario Municipal Act, a municipality may declare a significant weather event when a weather hazard, either forecasted or occurring, has the potential to pose a significant danger to road users on roads maintained by the City of Hamilton.
- Completion times are suspended and restarted once the declaration is declared over

Council Direction: March 20, 2023

a) That staff undertake a review of the City of Hamilton's current level of service for winter control and provide options on how operations could be adapted to enhance accessibility and safety in alignment with the principles of Vision Zero, thereby protecting the interests of vulnerable road users;
b) That staff report back to the Public Works Committee with the results of the review of the City of Hamilton's current level of service for winter control in advance of August 31, 2023, with possible level of service revisions and best practices including any cost and resourcing implications; and
c) That staff ensure the following areas of focus are included in the review of the City of Hamilton's current level of service for winter control;
    i. HSR transit stops including boarding access;
    ii. Controlled crosswalks, crosswalks with stationed crossing guards, school crossings, sidewalks with sloped access, neighbourhood pedestrian and multimodal pathways; and
    iii. School zones
d) That staff consult with the Advisory Committee for Persons with Disabilities and the Seniors Advisory Committee when reviewing snow clearing needs of the community; and
e) That staff report back in full the comments and opinions of the disability and senior's communities including the Committee for Persons with Disabilities and the Seniors Advisory Committee.

Proposed Enhancement Options

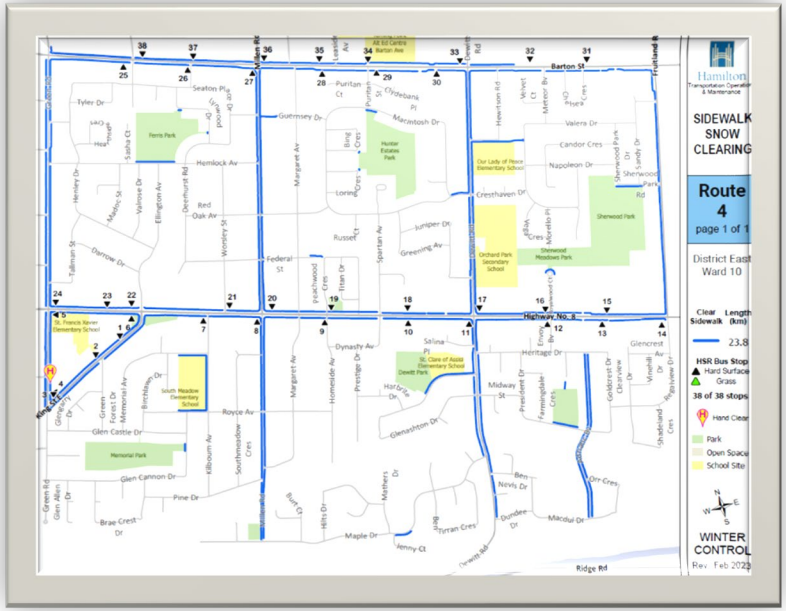
Option	Implementation Timing	Cost (Million)
Option 1 – Additional Sidewalk Clearing with Support Equipment	2024/2025	$5.46
Option 2 – School Zone Levels of Service Increase	2025/2026	$12-$13
Option 3 – Clearing All City Sidewalks (Additional 65%)	2027/2028	$11.7
Option 4 – Municipal Law Enforcement	2024 onwards	TBD
Option 5 – Residential Driveway Windrow Snow Clearing	2026/2027	$24-$27

Option 1 – Additional Sidewalk with Support Equipment

- Purpose
  - Additional Sidewalk and Transit Stop Support Equipment
  - Activate Earlier and More Frequently
- Cost
  - $5.46M
- Commencement
  - 2024/2025
- Sidewalk Clearing Equipment Requirements
  - Increase sidewalk plows from 34 to 42
  - Increase filler trucks from 21 to 29
  - Increase supporting equipment from 28 to 58
- Staffing Requirements
  - Four (4) Permanent Roadway Maintenance Supervisors

Option 1 – Additional Sidewalk with Support Equipment

- Benefits
  - Reduce Average Route Length from 22km to 17km
  - Enhance Operational Efficiencies
  - Activate Earlier and More Frequently During Winter Events
  - Increased Ability to Manage Heavier Winter Events
  - Support Equipment (skid steers) activated in coordination with sidewalk plows
  - Expediate clean-up of snow piles at intersections



Option 2 – School Zone Levels of Service Increase

- Purpose
  - Create priority snow clearing at 155 school zones
  - Clear roadways and sidewalks prior to/after school bell times
  - Remove and haul snow away from school zones
- Cost
  - $12M to $13M
- Commencement
  - 2025/2026
- Staffing Requirements
  - Eight (8) Permanent Roadway Maintenance Supervisors

Option 3 – Clearing All City Sidewalks (Additional 65%)

- Purpose
  - Clear all 2,445km of sidewalks across the City
- Cost
  - $11.7M
- Commencement
  - 2027/2028
- Sidewalk Clearing Equipment Requirements
  - Increase sidewalk plows from 34 to 122
  - Increase filler trucks from 21 to 60
  - Increase skid steers from 28 to 58
- Staffing Requirements
  - Twelve (12) Permanent Roadway Maintenance Supervisors
  - Two (2) Permanent Roadway Maintenance Investigators
  - One (1) Permanent Project Manager

Option 4 – Municipal Law Enforcement

- Purpose
  - Enhance enforcement under By-Law 03-296
  - MLE and Transportation to Develop Enforcement Strategy in 2024
- Cost
  - TBD
- Commencement
  - Initiate Discussion in 2024

Option 5 – Residential Driveway Windrow Clearing

- Purpose
  - Remove residential driveway windrows 12 hours after the roadway has been plowed
- Cost
  - $24M to $27M
- Commencement
  - 2026/2027
- Staffing Requirements
  - Four (4) Permanent Roadway Maintenance Supervisors
  - One (1) Permanent Project Manager
  - Four (4) Permanent Roadway Maintenance Inspectors
  - One (1) Permanent Roadway Maintenance Investigator
  - Two (2) Permanent Operational Support Coordinators
  - One (1) Permanent Supervisor Claims Administration

Option 5 – Residential Driveway Windrow Clearing

- Notes
  - Service approximately 165,000 residential homes
  - Provide 3m wide opening
  - Activate at 5cm or more snowfall
- Challenges
  - On-street parking will impact service
  - Limited snow storage around townhomes and cul-de-sacs
  - Property damage may occur with an increase in number of claims
  - Delay in service due to slow moving machines
  - Windrows will reoccur due to continuous plowing

THANK YOU

CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT
Environmental Services Division

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	December 4, 2023
SUBJECT/REPORT NO:	Crime Prevention Through Environmental Design (CPTED) Recommendation Report (PW23075) (City Wide) **(Outstanding Business List Item)**
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Shauna Hasselman (905) 546-2424 Ext. 7734
SUBMITTED BY: **SIGNATURE:**	Cynthia Graham Director, Environmental Services Public Works Department 

RECOMMENDATION

(a) That the recommended actions in Appendices “A”, “B”, “C”, “D”, and “E” to Report PW23075 be supported approved and that all capital or operational financial enhancements, $254,500 operational and $165,000 capital be referred to the 2024 budget process for consideration; and

(b) That the Crime Prevention Through Environmental Design study for the City owned escarpment stairs be identified as complete and removed from the Public Works Committee Outstanding Business List.

EXECUTIVE SUMMARY

On February 13, 2023 at the Public Works Committee meeting, staff were directed to conduct a Crime Prevention Through Environmental Design review of the five City-owned escarpment staircases and report back on recommendations to improve the safety of escarpment staircase use, specifically to prevent sexual violence, including any considerations to be referred to the 2024 budget process for consideration.

There are five sets of stairs along the Niagara Escarpment linking the lower city to the upper city. These staircases at Chedoke, Dundurn, James Street, Kenilworth/Margate,

and Wentworth streets are managed by the Parks and Cemeteries section of Public Works.

At the February 13, 2023 Public Works Committee meeting, council recognized the need to ensure resident safety in these spaces. Sexual assault cases are on the rise in the City of Hamilton. In 2022, Hamilton Police Services counted 605 sexual assault cases. This is up 4.1% from 2021's 580 cases. The City's Sexual Assault Centre has seen a dramatic increase in calls to their 24-hour support line over the past three years. Many residents of Hamilton who have experienced sexual violence on the escarpment stairs have asked the City of Hamilton to provide safer pathways for both commuting and exercise.

Public Works Parks and Cemeteries Section along with Hamilton Police Services completed a Crime Prevention Through Environmental Design review in June of 2023. The focus of the recommendations from the Crime Prevention Through Environmental Design report were on the ability to 'see and be seen'. The focus of the report speaks to ensuring the current lighting is adequate and in good working order, and that the vegetation in and around the stairs is maintained to allow sight lines. These recommendations will allow residents to see within their surroundings and to reduce criminal activity.

This Crime Prevention Through Environmental Design review and the recommendations will be used to create a safer environment for all residents, as outlined in Appendices "A", "B", "C", "D", and "E" to Report PW23075.

Alternatives for Consideration – Not Applicable

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: In order to implement the recommendations of the Crime Prevention Through Environmental Design review as outlined in the Appendices of Report PW23075, an estimated operating budget increase of $254,500, and an estimated capital budget increase of $165,000 are required and will be referred to the 2024 Budget process.

Staffing: N/A

Legal: N/A

HISTORICAL BACKGROUND

Originally, the City had seven stairs – Chedoke Park, Dundurn Street, Ferguson Avenue, James Street, John Street, Ottawa Street, and Wentworth Street. When the

Jolley Cut was rebuilt, the steps at John and Ferguson Streets were incorporated in the walkways at Sam Lawrence Park. Currently, the City has five sanctioned staircases that connect

the upper and lower city along the Niagara Escarpment. These stairs allow City residents to commute to work without driving and are popular exercise locations. The Wentworth Stairs built in 1903 were the first stairs in Hamilton. These wooden steps were located next to the Eastend Incline railway (closed in 1936). Following a rockslide, these steps were rebuilt using metal in 1983 and now follow the path of the Incline railway. They connect with the Rail Trail as well as the Bruce Trail. The Dundurn Stairs were wooden until the 1990's when they were replaced with metal. These stairs are within one kilometre of the Chedoke Stairs, and both are often used together for exercising.

The Chedoke Stairs were built to accommodate two pedestrian lanes and two bike troughs. These are widely known as the busiest stairs in the City. In 2022, Hamilton Pedestrian and Cyclists Counts reported more than 710,000 visitors, with a daily average of just under 2,000 visitors. The Kenilworth Stairs (also known as the Kimberly Drive Stairs) in combination with the Margate Stairs are the most popular stairs this year to date. Hamilton's Pedestrian and Cyclists Counts have calculated a running total of 631,256 visitors (as of October 11, 2023). The stairs were built to connect the East Mountain to the Escarpment Rail Trail. The James Street Stairs are located on the former site of Hamilton's first Incline Railway. The stairs were first built using wood but were replaced with metal stairs in 1987.

In December 2021, an unknown man approached a resident and attempted to sexually assault her during her morning daylight workout on the James Street escarpment stairs. Before and after this date there have been other sexual assaults while on the stairs in Hamilton. In 2022, the Sexual Assault Centre (SACHA) received more than 2,000 calls regarding sexual assaults from across the City. This is up by 22% from 2021. Hamilton Police Services received over 600 sexual assault calls from across the city. Due to a lack of specific addresses, it is not possible to aggregate the numbers of sexual assault cases on the stairs themselves.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

Below are policy implications for the subject report:

The City of Hamilton vision to be the best place to raise a child and age successfully. To meet that standard, it's important for the City to prioritize the health and safety of its residents.

United Nations Gender Policy and Plan: United Nations-Habitat Policy and Plan for Gender Equality and the Rights of Women in Urban Development and Human Settlements. This report urges cities to become safer by applying a gender-responsive approach to urban planning.

United Nations report Cities Alive: Designing Cities That Work for Women published in October 2022, it is stated that "without a gender-responsive approach to urban planning, cities often compound gender inequalities that restrict women's social and economic opportunities, health and wellbeing, sense of safety and security, and access to justice and equity"

RELEVANT CONSULTATION

Hamilton Police Services, Crime Prevention Unit completed a Crime Prevention though Environmental Design report for five escarpment stairs and provided input regarding all policing aspects.

Facilities Department, Corporate Security Management staff provided input on all security aspects.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

Many recommendations in the Crime Prevention Through Environmental Design reports (Appendices "A", "B", "C", "D", and "E") were similar, with vegetation overgrowth and lighting concerns being the main issues.

A recommendation not reflected in the table below refers to consideration for widening the stairs at Dundurn, James Street, and Wentworth to accommodate two pedestrian lanes and bike troughs. Specifically, the recommendation requests that this would be completed at the end of the respective stairs' life cycle.

Operating Budget		
Recommendations	Estimated Costs	Comments
Increase the number of times stairs get inspected	$3,000.00	Current operational budget is for one visit per year. One additional visit is reflected in this estimated cost.
Increase the number of times vegetation in and around the stairs are pruned/trimmed/removed	$25,000.00	Current operational budget is one vegetation trim and removal per year. One additional vegetation trim

		and removal is reflected in this estimated cost based on recommendations from one additional inspection.
Continue converting halogen lights to LEDs for better visibility	$0.00	The final light replacement was completed in August 2023 and this item is deemed complete.
Complete light audit for Dundurn, Kenilworth, and Wentworth Stairs	$7,500.00	$2,500 per staircase
Update addresses for stairs for easier emergency services response and police analytics	$0.00	The work for this is being completed and city records and website will be updated.
Hiring additional security staff (staff or contractor) to patrol the areas during after hours	$219,000	Security recommends a dedicated security presence is implemented. As an alternate, a random security patrol program could be considered but would require additional dedicated contract resources. Costing reflects this recommendation.
Increase community involvement by way of a neighbourhood watch program, community gardens, and fitness programs to increase use of stairs and access points to prevent criminal activity		A community garden is managed by the City through Neighbourhood Development. A neighbourhood watch program would be led by the Hamilton Police. Fitness programs could be led by both Hamilton Rec and outside organizations
Continue with a collaborative relationship between Hamilton Police Services, the City's Security departments, and Parks and Cemeteries departments to share information and statistics that affect the overall safety of the stairs	$0.00	Create a subcommittee to the Parks Security to discuss stair safety, to meet twice a year to share ideas and work with partners in the community to implement activations on/near the stairs.

Total Operating Budget	$254,500	

Capital Budget		
Recommendations	Estimated Cost	Comments
Installation of more lights in areas of low visibility, as per light audit	TBD	Costs will be confirmed when light audit is completed, and costs will be reflected in a future capital budget ask.
Installation of a section of James Street Stairs to mitigate a 'blind corner'	$90,000.00	Expand platforms to connect with newly proposed Pedestrian Pathway.
Installation of signage identifying the location's address for quicker response from emergency services – Green archway sign (Parks standard). One at each main access to the stairs	$70,000.00	New sign installation at the bottom and top of each stairway access. (14 signs x $5,000 each)
Install signage along the stairs that provide information on how to report deficiencies to the City of Hamilton to ensure safety related items are mitigated in between stair inspections	$5,000.00	Cost includes signs and installation ($1,000 per location)
Choose one stair location to pilot a one-year pilot initiative to install motion-activated, self-recording, unmonitored security cameras for the purpose of identifying suspects in the event of an assault. This pilot will include signage identifying the cameras and a statistical analysis to prove its effectiveness.	TBD	The required infrastructure to support this type of project will need to be determined through support by electrical cabling and networking contractors. The deployment of CCTV systems would require the frequency of 1 camera per staircase run section up to 50 feet in length. A rough estimate to support a resilient installation may exceed an estimate of $15,000 per camera, including the backend

		infrastructure. A typical for budget calculation used in a building environment is $3,000 per camera. The use of CCTV will provide a recording of the activities that are captured within its view abilities; however it is unlikely to provide identifiable features of suspects. Disguises and means of preventing identifiable features of an individual from being viewed are practiced frequently in criminal behaviour. The use of CCTV cameras may be supportive for investigative measures by law enforcement, but they do not appear to be a deterrent to criminal behaviour in general. The installation of a CCTV system can be supportive to an overall program, where it compliments other elements such as physical presence and other deterrent and good use behaviours that are identified in this report.
Total Capital Budget	$165,000	

ALTERNATIVES FOR CONSIDERATION

N/A

APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Report PW23075 – Chedoke Stairs

Appendix “B” to Report PW23075 – Dundurn Stairs

Appendix “C” to Report PW23075 – James Street Stairs

Appendix “D” to Report PW23075 – Kenilworth Stairs

HAMILTON POLICE SERVICE

CPTED PROPERTY AUDIT

Cst. Ryan Clarke #317
905-546-1577
rclarke@hamiltonpolice.on.ca

Statement of purpose:

Crime Prevention Through Environmental Design, or CPTED as it is more commonly known, is a proactive design technique that believes that the proper design and effective use of the built environment can lead to a reduction in the fear and incidence of crime, **as well as an improvement in the quality of life.**

The CPTED recommendations prepared for your site are not intended to make your site "vandal-proof", "assault-proof", "bomb-proof" etc. They **are intended to improve the function of the space** while addressing a number of safety and security issues by providing ways to improve your property's natural surveillance, natural access control and territoriality.

Implementation of the enclosed recommendations should not be fragmented. Many times the incorporation of one phase depends upon the implementation of other security recommendations and failure to utilize the systems approach can breach all elements of the system.

Overview of CPTED:

CPTED's underlying objective is to help various disciplines do a better job of achieving their primary objectives, with the added by-product of improved security and loss prevention. This objective is based upon the belief that crime and loss is a by-product of human functions that are not working.

How does CPTED differ from traditional crime fighting techniques?

CPTED's emphasis is based on design and use. In this way, it deviates from the traditional target hardening approach to crime prevention.

The target-hardening approach traditionally focused on denying access to a crime target through physical or artificial barriers (such as locks, alarms, fences and gates). This approach often overlooked the opportunities for natural access control and surveillance while placing a constraint on the use, access and enjoyment of the hardened environment.

CPTED emphasizes and exploits these lost opportunities through the development of three overlapping CPTED strategies. These strategies are:

*Natural Surveillance
*Natural Access Control
*Territorial Reinforcement

Natural Surveillance is a design strategy that is directed primarily at keeping intruders under observation.

Natural Access Control is a design strategy that is directed at decreasing crime opportunity.

Territorial Reinforcement is a design strategy that realizes that physical design can create or extend a sphere of influence so that users develop a sense of proprietorship or territoriality.

Chedoke Stairs

Hamilton Ontario

Audit prepared by: Hamilton Police Service - Crime Prevention Branch

Cst. Ryan Clarke #317
905-546-1577
rclarke@hamiltonpolice.on.ca

Date of Audit: 2020-06-06 - Daylight Hours

This document has been created as a result of the Hamilton Police Service receiving a request for a CPTED Audit. CPTED is an acronym for Crime Prevention through Environmental Design and it is the philosophy of a multi-channeled approach to deterring criminal behaviour by utilizing the community (people), structural design and the natural environment. Essentially, CPTED is used promote the target hardening of any location by using its own environment in the process. Police were accompanied by Brian Hughes, Supervisor, Parks North Public Works Environmental Services, City of Hamilton.

There are 5 escarpment stairs that connect the lower City to the upper City. The Chedoke Stairs are located between Beddoe Dr and the corner of Upper Paradise Rd. and Scenic Dr.

The Chedoke Stairs were built to accommodate 2 lanes as well as 2 bike troughs. These are widely known as the busiest steps in the City. They are within 1 kilometer of the Dundurn Stairs, and both are often used together for exercising.

The stairs are mostly located in a forested area, allowing people to loiter and utilize the environment for illegal activities. There is a history of assaults on the stairs, both physical and sexual in nature. The stairs are used by commuters and exercise enthusiasts. There is a maintenance building located close to the stairs as well as a parking lot. The purpose of the audit is to find the best way to continue encouraging the positive use of the escarpment stairs in Hamilton and deter the illegal and criminal activities which occur in the park.

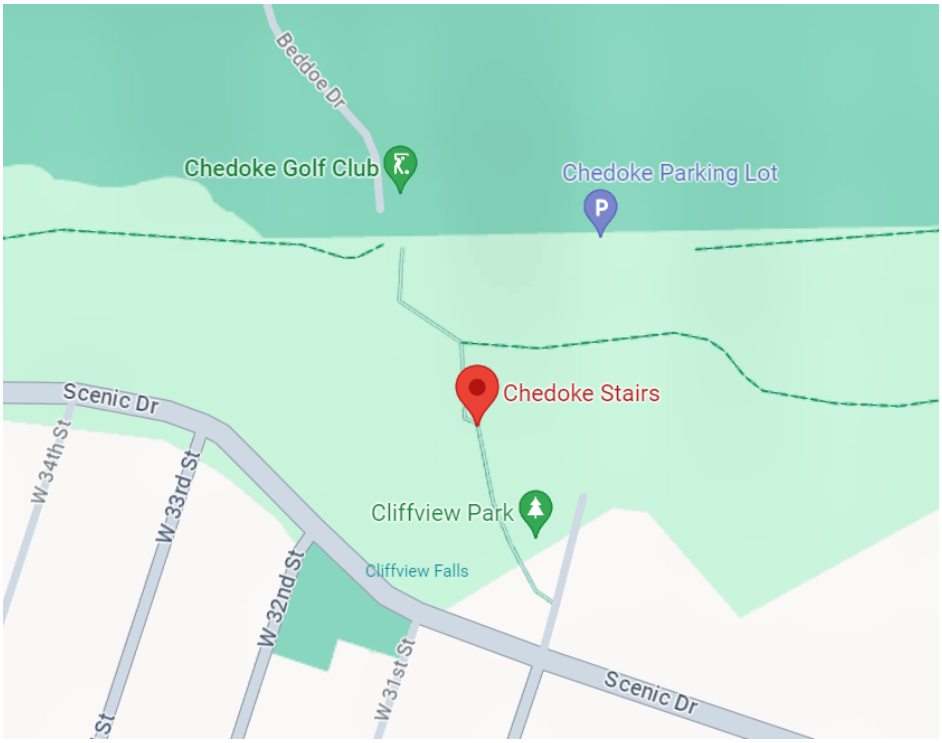


Image taken on June 6 at the bottom of the Chedoke Stairs.

During the audit the following observations were made:

Natural Surveillance:

All trees in the open space around the stairs should be trimmed up 7 feet from the ground to allow for clear sight lines. Any foliage overhanging the stairs and handrails should be pruned. Shrubbery adjacent to the stairs should be trimmed to a maximum of 3 feet high to prevent people from hiding behind them. When new trees and shrubs are added to increase the overall canopy across the City, plant material should be carefully selected as to not create more hidden hazards. Some examples of this include trees that grow tall and narrow with minimal low hanging branches and low growing shrubs that don't affect sight line issues.

Recommendation: all bushes or hedges that line a chain-linked fence at the upper entrance are removed, such as seen in the image below. As they are right now, they prohibit Police or any witnesses from having clear sight lines into that area of the property. Thus, they are creating an environment conducive for criminal activities and trespassers.

The approach to the lower entrance to the stairs is not visible from the parking lot due to overgrowth of trees and shrubs. These should be trimmed back. The area around the parking lot should be trimmed back into the slope at least 8' in order to improve sight lines and prevent foliage from covering parking signage. There is a Manitoba maple currently leaning over the parking lot. This should be removed.

Trees need to be trimmed that are growing over the stairs and handrails.

The approach to the upper entrance to the stairs has good sight lines. There is some vegetation growing through the chain-link fence. This can be pruned back. The garbage cans should be relocated further from the stairs. This will eliminate a potential concealment area.

Buildings: There is a lot of debris around the maintenance building. Dead wood and standing dead trees should be removed and disposed.

Buildings: There are areas of concealment around the maintenance building. Overgrown shrubs should be trimmed or removed to improve sight lines.

Signage: Signage can help establish territory and can clearly distinguish private from public property. With signs being properly displayed throughout the property, this helps to eliminate the “I did not know” excuse for trespassers and loiterers alike. The signs currently posted in the lower access parking lot are being covered by vegetation.

Recommendation to clear vegetation overgrowth.

Lighting: One of the most important components of CPTED is lighting. Effective lighting allows for natural surveillance by providing the ability for people to see. It can also generate witness potential by giving people a reason to look. There are many different types of lighting available and the goal is to select a light type that is appropriate for the area. The area should be well illuminated without creating a visual nuisance for onlookers. It should also be placed along the stairs so that all hidden areas are illuminated to reduce people gathering or hiding. All pathways should be illuminated as well to provide a secure environment for those walking near and through the park. The spacing of the lights should be that there are no blind spots or shaded areas along buildings and paths. To reduce cost motion activated lights can be installed in some areas that only come on when there is motion or people walking through the area. Maintenance is also a consideration with a good lighting plan to replace broken lights and burned out bulbs on a regular schedule. All lighting should be installed to light from the inside out and with protection to stop vandals and damage; deterring crime. When an area is well-lit, people who wish to engage in illegal activities will tend to move to darker more discrete areas. Studies have shown that graffiti and other activities happen more often in dark unlit areas. While climbing the stairs we found lights that were turned on and lights that were not operational.

Recommendation: Replace halogen lighting with LEDs. Ensure that lights are in proper working order.

Territoriality and the "Broken Window Theory":

Factors affecting territoriality are what creates a defensible or ambiguous space. The Broken Window Theory can be easily related to the lack of territoriality at a given location where crime has occurred.

The "Broken Window Theory" states that when a property or building appears to have lack of pride, no ownership or has property in need of desperate repair, it becomes an easy target to thieves, loitering, and other criminal activities.

Recommendation: Keep up with the maintenance of all areas of the stairs. Remove dead trees or broken equipment in an attempt to maintain the overall appearance of the park in an attempt to deter criminal activities. .

Graffiti – Graffiti is a common issue in many major cities. This is not only a cost to the city, it also takes away from the clean image which the City is attempting to portray in its parks. The light standards have become a target for graffiti. Regular maintenance and inspections should be completed to clean up graffiti.

Overall Recommendations:

- Regular maintenance including pruning of trees to restrict foliage over the stairs.
- Improve site lines from the street including the removal of undesirable shrubs and overhanging trees in order to increase visibility
- Removal of overhanging foliage over the stairs and along both handrails.
- Regular maintenance of stair lighting to ensure proper illumination and light distribution.
- Removal of graffiti on light standards.
- Ensure signage is current.
- Install signage to identify the site location to ensure a rapid response by emergency services.

Some images are actual unaltered photographs of the location. Other images and maps are from public open-sourced websites.

Please note that there are no guarantees in preventing crime. This report is comprised of suggestions based on CPTED Principles that may lead to the reduction in the fear and incidence of crime and disorder, leading to an improvement in the overall quality of life of the property.

If there are any questions, please feel free to contact the writers.
Report Completed by: Cst. Ryan Clarke # 317

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HAMILTON POLICE SERVICE

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Dundurn Stairs

Hamilton Ontario

Audit prepared by: Hamilton Police Service - Crime Prevention Branch

Cst. Ryan Clarke #317
905-546-1577
rclarke@hamiltonpolice.on.ca

Date of Audit: 2023-06-06 - Daylight Hours

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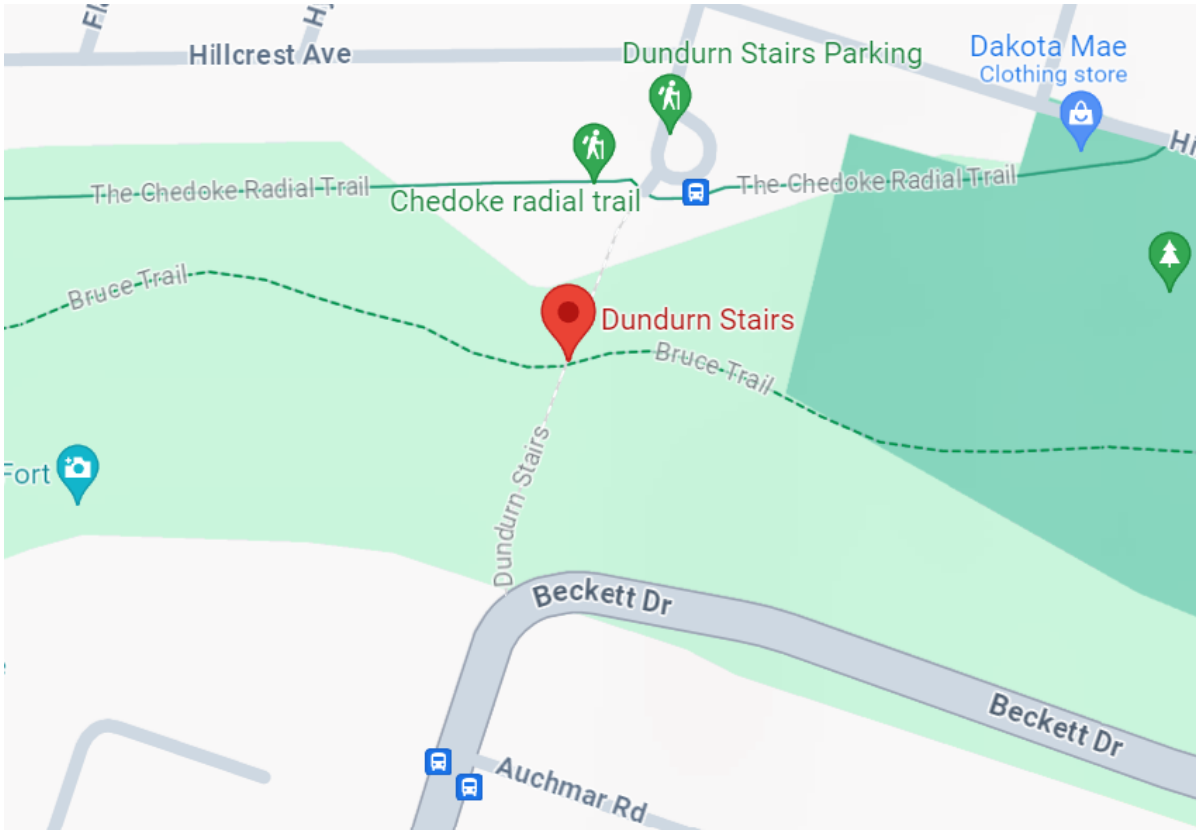
There are 5 Escarpment stairs that connect the lower City to the upper City. The Dundurn Stairs start at the corner of Dundurn St. S. and Hillcrest Ave. and ends at the corner of Garth St. and Beckett Dr. (Queen Street Hill).

The Dundurn Stairs were originally wooden stairs until the 1990's when they were replaced with metal stairs. These stairs are located within 1 kilometer of the Chedoke Stairs and both are often used together for commuting and exercise. The base of the stairs connects with the Chedoke Radial Trail. The Bruce Trail cuts across the stairs about halfway up creating an additional access point.

The stairs are mostly located in a forested area, allowing people to loiter and utilize the environment for illegal activities. There is a history of assaults on the stairs, both physical and sexual in nature. The stairs are used by commuters and exercise enthusiasts. The purpose of the audit is to find the best way to continue encouraging the positive use of the escarpment stairs in Hamilton and deterring the illegal and criminal activities which occur on the stairs.



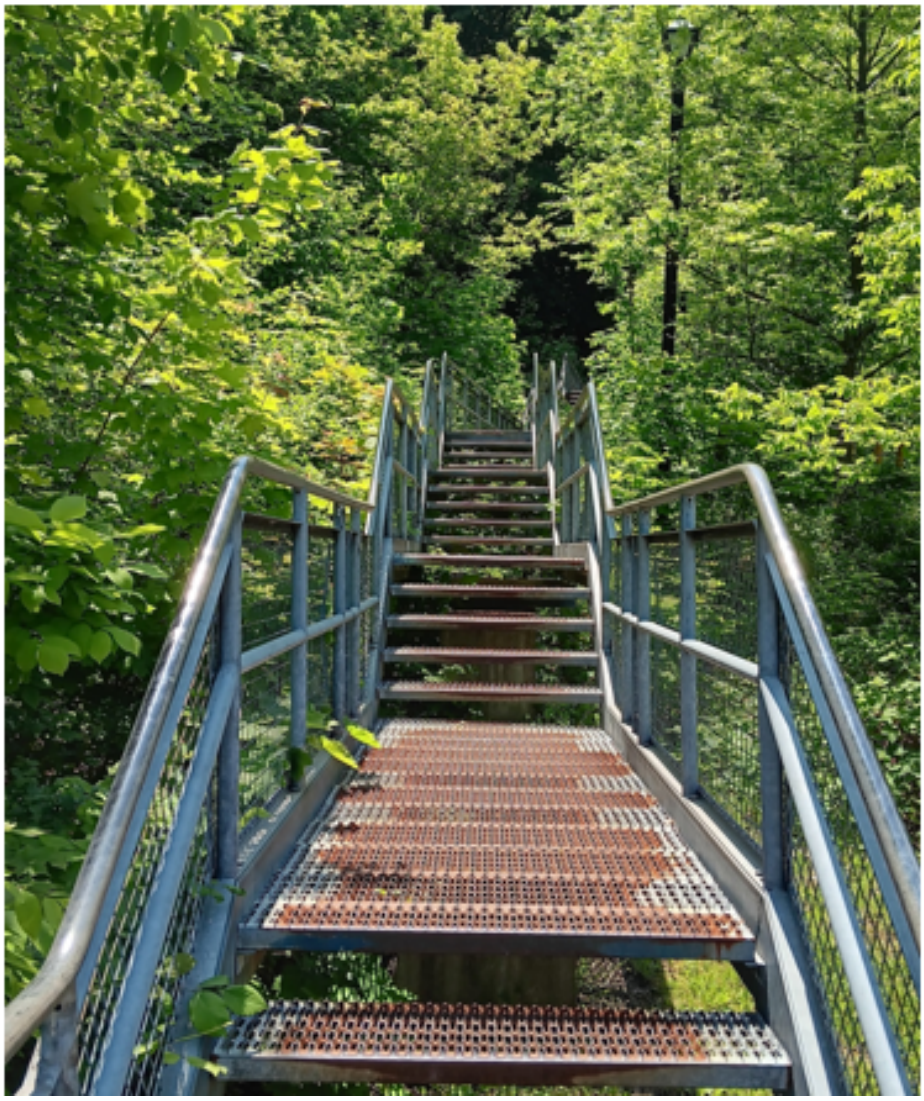
Google Street view at the bottom of the Dundurn Stairs.

During the audit, the following observations were made:

Natural Surveillance:

All trees in the open space around the stairs should be trimmed up 7 feet from the ground to allow for clear sight lines. Any foliage overhanging the stairs and handrails should be pruned. Shrubbery adjacent to the stairs should be trimmed to a maximum of 3 feet high to prevent people from hiding behind them. When new trees and shrubs are added to increase the overall canopy across the City, plant material should be carefully selected as to not create more hidden hazards. Some examples of this include trees that grow tall and narrow with minimal low hanging branches and low growing shrubs that don't affect sight line issues.

Recommendation: Vegetation could be thinned to improve visibility.



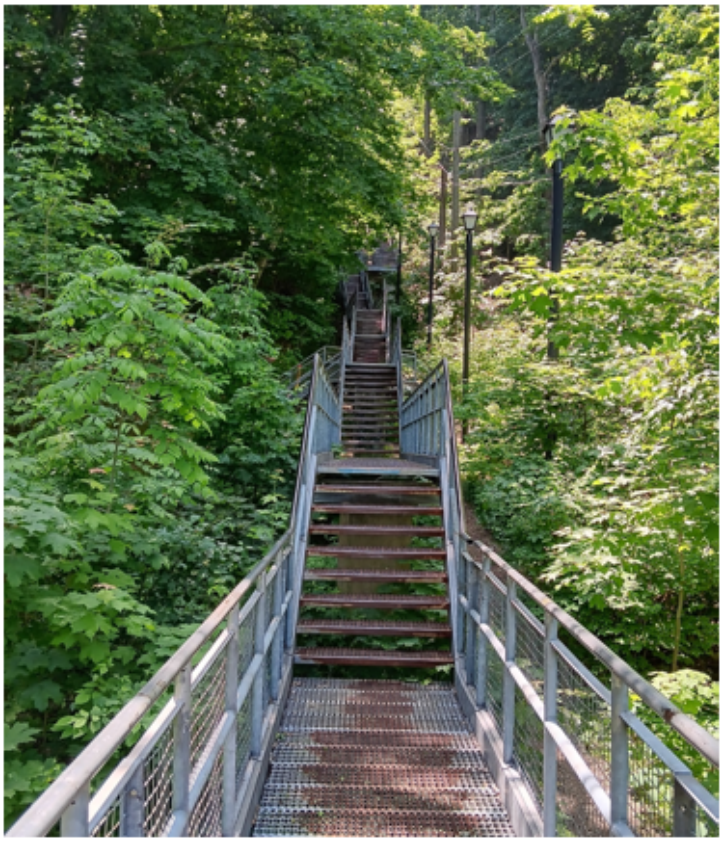
Regular maintenance should be completed at this site. There is a lot of vegetation along the side of the stairs that will need to be thinned, as seen above. Vegetation at the top of the stairs (below) is overhanging the wall. This can be a location for hiding. This should be pruned to allow for ample walking space.

Google Street view at the top of the Dundurn Stairs.

Alternate Access Point: About halfway up there is an access point for the Bruce Trail to cross the Dundurn Stairs. This access point is a concern as this can be a concealment area and it leads to a forest path.

Recommendation: Install additional lighting to allow for more illumination in hidden areas.

Graffiti – Graffiti is a common issue in many major cities. This is not only a cost to the city, it also takes away from the clean image which the City is attempting to portray in its parks. The light standards have become a target for graffiti. Regular maintenance and inspections should be completed to clean up graffiti.



Lighting: One of the most important components of CPTED is lighting. Effective lighting allows for natural surveillance by providing the ability for people to see. It can also generate witness potential by giving people a reason to look. There are many different types of lighting available and the goal is to select a light type that is appropriate for the area. The area should be well illuminated without creating a visual nuisance for onlookers. It should also be placed along the stairs so that all hidden areas are illuminated to reduce people hiding and to provide a secure environment for those climbing. The spacing of the lights should be that there are no blind spots or shaded areas along buildings and paths. To reduce cost motion activated lights can be installed in some areas that only come on when there is motion or people walking through the area. Maintenance is also a consideration with a good lighting plan to replace broken lights and burned out bulbs on a regular schedule. All lighting should be installed to light from the inside out and with protection to stop vandals and damage; deterring crime. When an area is well-lit, people who wish to engage in illegal activities will tend to move to darker more discrete areas. Studies have shown that graffiti and other activities happen more often in dark unlit areas.

Recommendation: Have an official lighting audit conducted for the Bruce Trail access to the stairs. Install LED lights to further illuminate the area if necessary and possibly put these lights on a sensor so they only operate while people are walking in the area to minimize the impact of lighting on the natural area. Ensure that foliage is pruned to allow for increased visibility (bottom of previous page).

Territoriality and the "Broken Window Theory":

Factors affecting territoriality are what creates a defensible or ambiguous space. The Broken Window Theory can be easily related to the lack of territoriality at a given location where crime has occurred.

The "Broken Window Theory" states that when a property or building appears to have lack of pride, no ownership or has property in need of desperate repair, it becomes an easy target to thieves, loitering, and other criminal activities.

Recommendation: Keep up with the maintenance of all areas of the stairs. Remove dead trees or broken assets in an attempt to maintain the overall appearance of the park in an attempt to deter criminal activities.

Overall Recommendations:

- Regular maintenance including pruning of trees to restrict foliage over the stairs.
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- Removal of graffiti on light standards.
- Ensure signage is current.
- At the end of the stairs life cycle (Capital replacement), consideration should be made for widening the stairs to allow pedestrians to safely pass each other and add improvements such as a bike trough and a railing to separate the two lanes.
- Install signage to identify the site location to ensure a rapid response by emergency services.

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Report Completed by: Cst. Ryan Clarke #317

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HAMILTON POLICE SERVICE

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James Street Stairs

Hamilton Ontario

Audit prepared by: Hamilton Police Service - Crime Prevention Branch

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There are 5 Escarpment stairs that connect the lower City to the upper City. The James Street Stairs starts near James St. S. and James Mountain Rd. and ends at the Claremont Access.

The James Street Stairs are built on the site of Hamilton's first incline railway. The railway was replaced with wooden stairs. The current metal stairs were built in 1987 and follows the path of the original railway.

The stairs are mostly located in a forested area, allowing people to loiter and utilize the environment for illegal activities. There is a history of assaults on the stairs, both physical and sexual in nature. The stairs are used by commuters and exercise enthusiasts. The purpose of the audit is to find the best way to continue encouraging the positive use of the escarpment stairs in Hamilton and deterring the illegal and criminal activities which occur on the stairs.

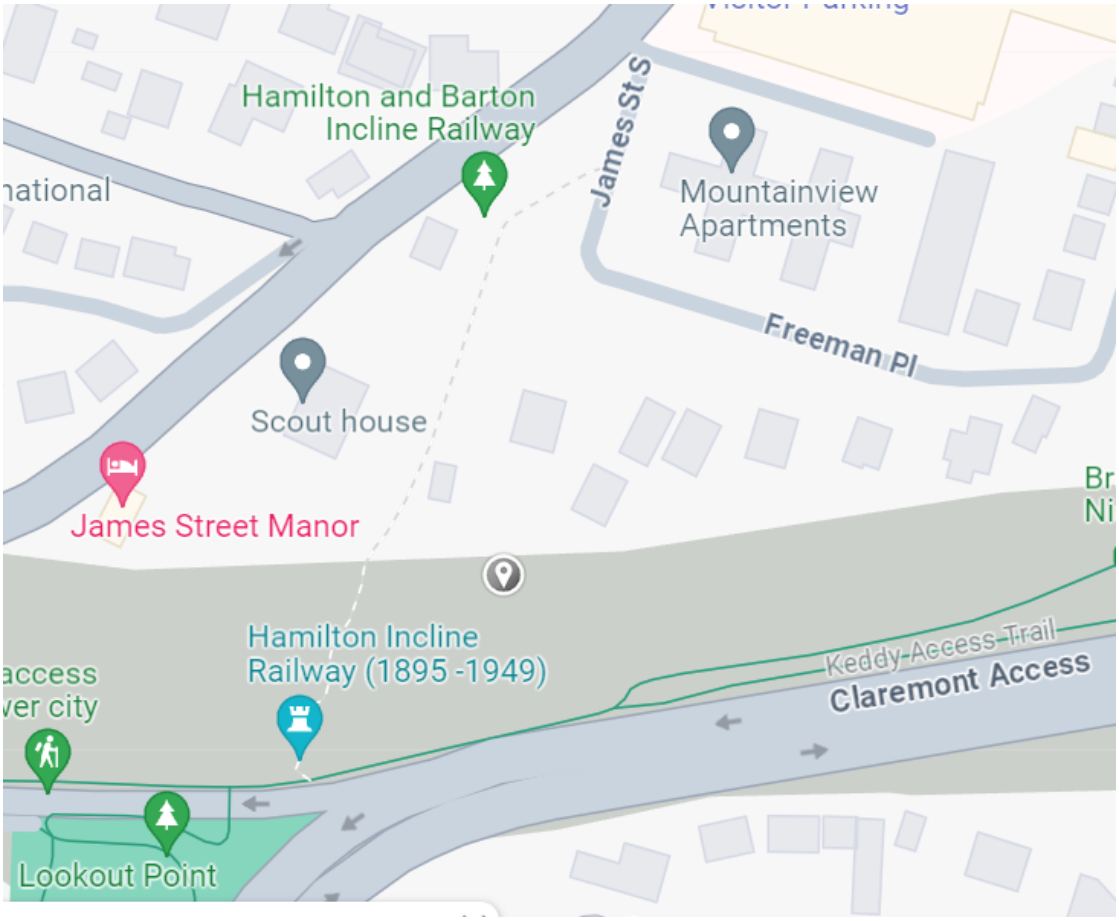


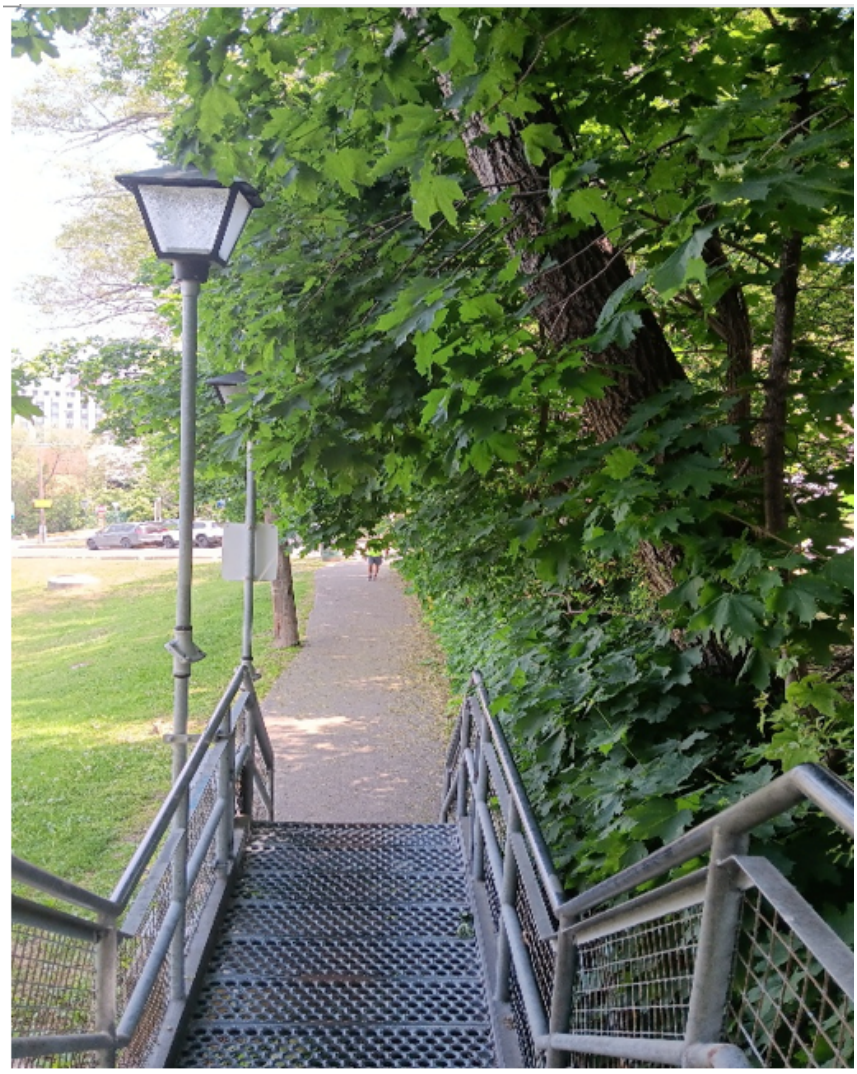
Photo taken at the bottom of the James Street Stairs.

During the audit the following observations were made:

Natural Surveillance:

All trees in the open space around the stairs should be trimmed up 7 feet from the ground to allow for clear sight lines. Any foliage overhanging the stairs and handrails should be pruned. Shrubbery adjacent to the stairs should be trimmed to a maximum of 3 feet high to prevent people from hiding behind them. When new trees and shrubs are added to increase the overall canopy across the City, plant material should be carefully selected as to not create more hidden hazards. Some examples of this include trees that grow tall and narrow with minimal low hanging branches and low growing shrubs that don't affect sight line issues.

Recommendation: Vegetation could be thinned to improve visibility. There is a lot of overhanging trees and foliage growing through the chain link fence. This should be removed or pruned.



Regular maintenance should be completed at this site. There is a lot of vegetation along the side of the stairs that will need to be thinned, as seen above and below.

Blind Corner: At the bottom of the stairs, there is a blind corner. This is a safety hazard due to low lighting and restricted visibility by way of a wooden fence.
Street Crossing: Access to the James Street Stairs requires users to jaywalk across James St. S.

Recommendation: Rebuild this section of the stairs to eliminate the corner. This will ensure good visibility straight up the stairs and users will cross the street at a proper intersection with a stop sign.

Photo from Google Street view.

Graffiti – Graffiti is a common issue in many major cities. This is not only a cost to the city, it also takes away from the clean image which the City is attempting to portray in its parks. The light standards have become a target for graffiti. Regular maintenance and inspections should be completed to clean up graffiti.

Photo by Smart Commute Hamilton. Top access of stairs shows vegetation covering lighting causing visibility issues.

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Recommendation: Ensure that foliage is pruned to allow for increased visibility (bottom of previous page).

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CPTED's emphasis is based on design and use. In this way, it deviates from the traditional target hardening approach to crime prevention.

The target-hardening approach traditionally focused on denying access to a crime target through physical or artificial barriers (such as locks, alarms, fences and gates). This approach often overlooked the opportunities for natural access control and surveillance while placing a constraint on the use, access and enjoyment of the hardened environment.

CPTED emphasizes and exploits these lost opportunities through the development of three overlapping CPTED strategies. These strategies are:

*Natural Surveillance
*Natural Access Control
*Territorial Reinforcement

Natural Surveillance is a design strategy that is directed primarily at keeping intruders under observation.

Natural Access Control is a design strategy that is directed at decreasing crime opportunity.

Territorial Reinforcement is a design strategy that realizes that physical design can create or extend a sphere of influence so that users develop a sense of proprietorship or territoriality.

Kenilworth Stairs (aka Kimberly Stairs)
and Mountain Brow-Margate Stairs
Hamilton Ontario
Audit prepared by: Hamilton Police Service - Crime Prevention Branch

Cst. Ryan Clarke #317
905-546-1577
rclarke@hamiltonpolice.on.ca

Date of Audit: 2023-06-06 - Daylight Hours

This document has been created as a result of the Hamilton Police Service receiving a request for a CPTED Audit. CPTED is an acronym for Crime Prevention through Environmental Design and it is the philosophy of a multi-channeled approach to deterring criminal behaviour by utilizing the community (people), structural design and the natural environment. Essentially, CPTED is used promote the target hardening of any location by using its own environment in the process. Police were accompanied by Brian Hughes, Supervisor, Parks North Public Works Environmental Services, City of Hamilton.

There are 5 Escarpment stairs that connect the lower City to the upper City. The Kenilworth Stairs are located between Kimberly Dr. leading to the Escarpment Rail Trail. The Mountain Brow-Margate Stairs continue scaling the escarpment from the Escarpment Rail Trail and exiting at the corner of Mountain Brow Blvd. and Margate Ave.

The stairs are mostly located in a forested area, allowing people to loiter and utilize the environment for illegal activities. There is a history of assaults on the stairs, both physical and sexual in nature. The stairs are used by commuters and exercise enthusiasts. This year these stairs are the most used across the City. The purpose of the audit is to find the best way to continue encouraging the positive use of the escarpment stairs in Hamilton and deter the illegal and criminal activities which occur on the stairs.

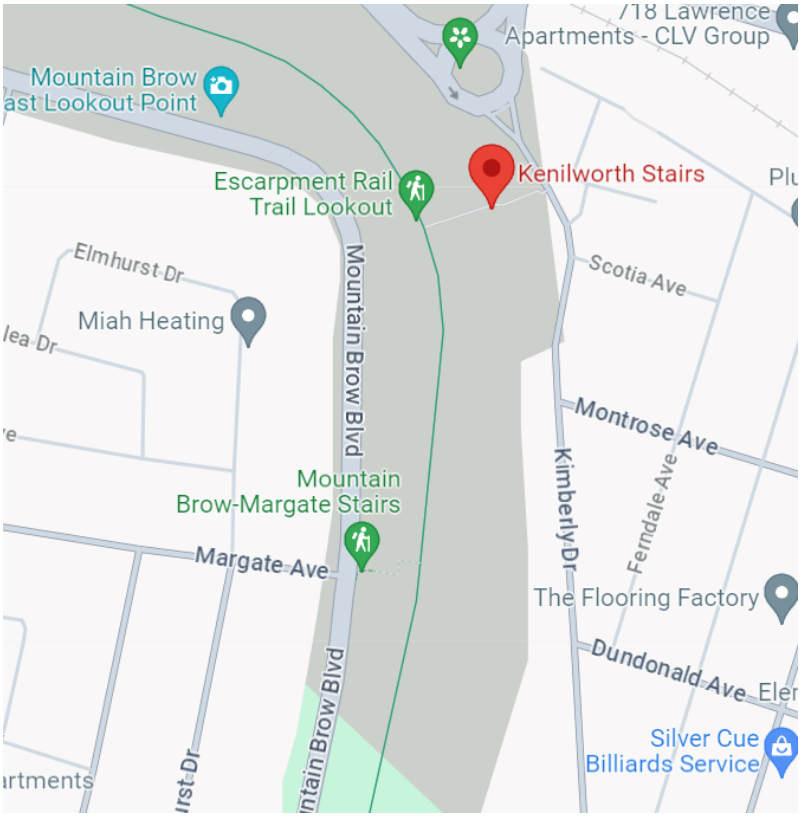


Image taken on June 6 at the top of the Mountain Brow-Margate Stairs.

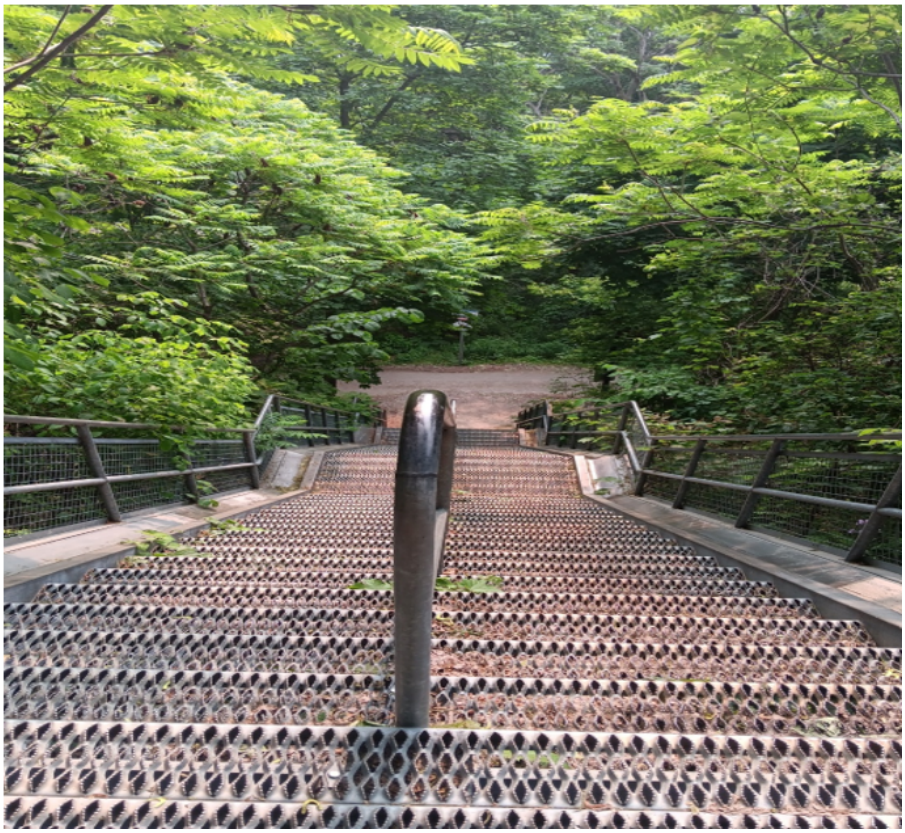
During the audit the following observations were made:

Natural Surveillance:

All trees in the open space around the stairs should be trimmed up 7 feet from the ground to allow for clear sight lines. Any foliage overhanging the stairs and handrails should be pruned. Shrubbery adjacent to the stairs should be trimmed to a maximum of 3 feet high to prevent people from hiding behind them. When new trees and shrubs are added to increase the overall canopy across the City, plant material should be carefully selected as to not create more hidden hazards. Some examples of this include trees that grow tall and narrow with minimal low hanging branches and low growing shrubs that don't affect sight line issues.

Recommendation: the vegetation at the bottom of the stairs will improve sight lines to the stairs while also improving the ability to view oncoming traffic.

Overhanging trees should be cleared as well as vegetation growing through the grates, through the sides, and over the handrails.



Tripping Harzards, such as the one seen below, should be repaired to ensure good footing while using the stairs.

Signage: Signage can help establish territory and can clearly distinguish private from public property. With signs being properly displayed throughout the property, this helps to eliminate the "I did not know" excuse for trespassers and loiterers alike.

Recommendation: Post clear, concise messaging for those who are using the stairs. Repair or replace broken or graffitied signage.

Graffiti: Graffiti is a common issue in many major cities. This is not only a cost to the city, it also takes away from the clean image which the City is attempting to portray in its parks. The light standards have become a target for graffiti. Regular maintenance and inspections should be completed to clean up graffiti.

Below is a good example of a light fixture that is clear from vegetation.

Many lights along these stairs are being impeded by vegetation (below), blocking the beam and darkening the area. Vegetation should be aggressively removed from light standards and fixtures.

Lighting: One of the most important components of CPTED is lighting. Effective lighting allows for natural surveillance by providing the ability for people to see. It can also generate witness potential by giving people a reason to look. There are many different types of lighting available and the goal is to select a light type that is appropriate for the area. The area should be well illuminated without creating a visual nuisance for onlookers. It should also be placed along the stairs so that all hidden areas are illuminated to reduce people hiding and to provide a secure environment for those climbing. The spacing of the lights should be that there are no blind spots or shaded areas along buildings and paths. To reduce cost motion activated lights can be installed in some areas that only come on when there is motion or people walking through the area. Maintenance is also a consideration with a good lighting plan to replace broken lights and burned out bulbs on a regular schedule. All lighting should be installed to light from the inside out and with protection to stop vandals and damage; deterring crime. When an area is well-lit, people who wish to engage in illegal activities will tend to move to darker more discrete areas. Studies have shown that graffiti and other activities happen more often in dark unlit areas.

Recommendation: Have an official lighting audit conducted for the Escarpment Rail Trail access to the stairs. Install additional LED lights to further illuminate the area if necessary and possibly put these lights on a sensor so they only operate while people are walking in the area to minimize the impact of lighting on the natural area. Ensure that foliage is pruned to allow for increased visibility (previous page).

Territoriality and the "Broken Window Theory":

Factors affecting territoriality are what creates a defensible or ambiguous space. The Broken Window Theory can be easily related to the lack of territoriality at a given location where crime has occurred.

The "Broken Window Theory" states that when a property or building appears to have lack of pride, no ownership or has property in need of desperate repair, it becomes an easy target to thieves, loitering, and other criminal activities.

Recommendation: Keep up with the maintenance of all areas of the park. Remove dead trees or broken assets in an attempt to maintain the overall appearance of the park in an attempt to deter criminal activities.

Overall Recommendations:

- Regular maintenance including pruning of trees to restrict foliage over the stairs.
- Improve site lines from the street including the removal of undesirable shrubs and overhanging trees in order to increase visibility.
- Removal of overhanging foliage over the stairs and along both handrails.
- Regular maintenance of stair lighting to ensure proper illumination and light distribution.
- Removal of graffiti on light standards.
- Ensure current signage.
- At the end of the stairs life cycle (Capital replacement), consideration should be made for widening the stairs to add bike troughs.
- Install signage to identify the site location to ensure a rapid response by emergency services.

Some images are actual unaltered photographs of the location. Other images and maps are from public open-sourced websites.

Please note that there are no guarantees in preventing crime. This report is comprised of suggestions based on CPTED Principles that may lead to the reduction in the fear and incidence of crime and disorder, leading to an improvement in the overall quality of life of the property.

If there are any questions, please feel free to contact the writers.
Report Completed by: Cst. Ryan Clarke #317

DISCLAIMER

CPTED audits are designed to make recommendations to reduce the likelihood of criminal activity in and around a physical structure such as a building. Compliance with the recommendations does not guarantee protection from crime. The persons conducting CPTED audits are trained in crime prevention techniques, not in the enforcement of property standards, fire regulations, or other such regulations or by-laws. Accordingly, since these are only recommendations, the Hamilton Police Service, the Hamilton Police Service's Board and the City of Hamilton disclaims any responsibility for any claims or actions arising from the effectiveness, completeness or the implementation of some or all of the recommendations contained within this audit.

HAMILTON POLICE SERVICE

CPTED PROPERTY AUDIT

Cst. Ryan Clarke #317
905-546-1577
rclarke@hamiltonpolice.on.ca

Statement of purpose:

Crime Prevention Through Environmental Design, or CPTED as it is more commonly known, is a proactive design technique that believes that the proper design and effective use of the built environment can lead to a reduction in the fear and incidence of crime, **as well as an improvement in the quality of life.**

The CPTED recommendations prepared for your site are not intended to make your site "vandal-proof", "assault-proof", "bomb-proof" etc. They **are intended to improve the function of the space** while addressing a number of safety and security issues by providing ways to improve your property's natural surveillance, natural access control and territoriality.

Implementation of the enclosed recommendations should not be fragmented. Many times the incorporation of one phase depends upon the implementation of other security recommendations and failure to utilize the systems approach can breach all elements of the system.

Overview of CPTED:

CPTED's underlying objective is to help various disciplines do a better job of achieving their primary objectives, with the added by-product of improved security and loss prevention. This objective is based upon the belief that crime and loss is a by-product of human functions that are not working.

How does CPTED differ from traditional crime fighting techniques?

CPTED's emphasis is based on design and use. In this way, it deviates from the traditional target hardening approach to crime prevention.

The target-hardening approach traditionally focused on denying access to a crime target through physical or artificial barriers (such as locks, alarms, fences and gates). This approach often overlooked the opportunities for natural access control and surveillance while placing a constraint on the use, access and enjoyment of the hardened environment.

CPTED emphasizes and exploits these lost opportunities through the development of three overlapping CPTED strategies. These strategies are:

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Wentworth Stairs

Hamilton Ontario

Audit prepared by: Hamilton Police Service - Crime Prevention Branch

Cst. Ryan Clarke #317
905-546-1577
rclarke@hamiltonpolice.on.ca

Date of Audit: 2023-06-06 - Daylight Hours

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There are 5 Escarpment stairs that connect the lower City to the upper City. The Wentworth Stairs are located between Wentworth St. S (at the corner of Charlton Ave. E.), transversing the Sherman Access and ending at the intersection of Mountain Park Ave and Upper Wentworth St.

The Wentworth Stairs were originally wooden stairs built in 1903. These burned down and were replaced by metal stairs in 1983. At the lower end, the stairs connect with the Escarpment Rail Trail. The Bruce Trail connects with the stairs on the lower half of the stairs, between Wentworth St. S. and the Sherman Access.

The stairs are mostly located in a forested area, allowing people to loiter and utilize the environment for illegal activities. There is a history of assaults on the stairs, both physical and sexual in nature. The stairs are used by commuters and exercise enthusiasts. The purpose of the audit is to find the best way to continue encouraging the positive use of the escarpment stairs in Hamilton and deter the illegal and criminal activities which occur on the stairs.

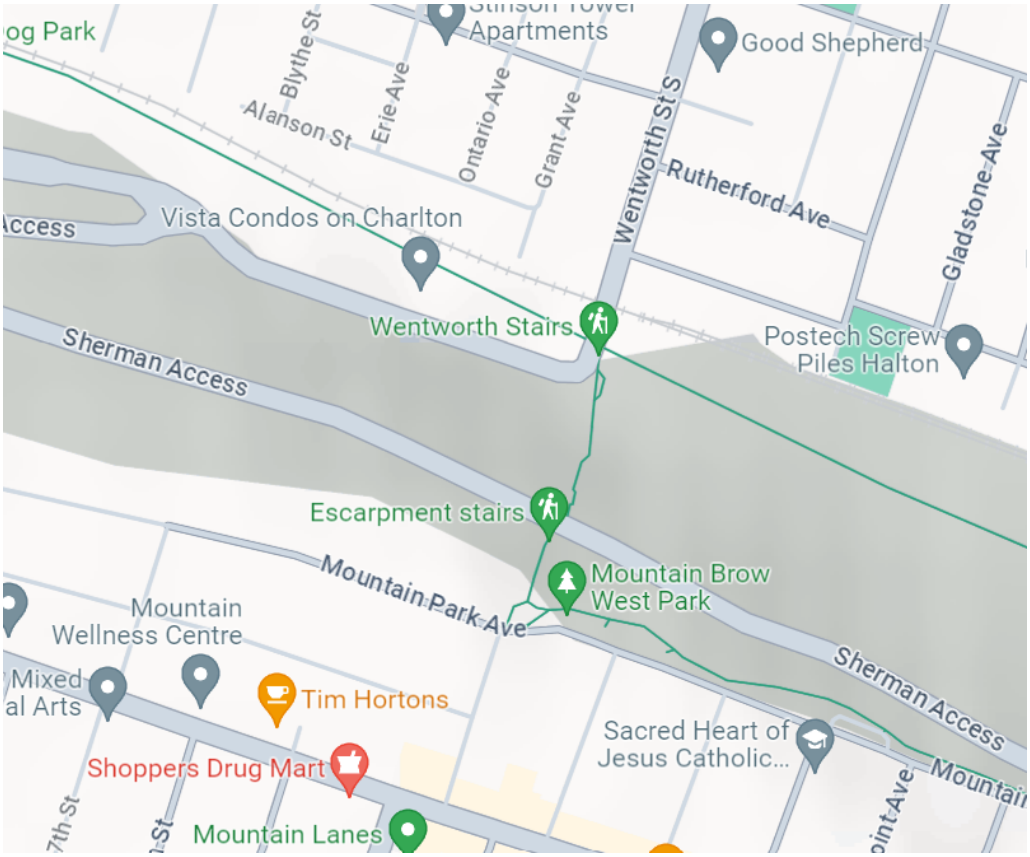


Image taken on June 6 at the bottom of the Wentworth Stairs.

During the audit the following observations were made:

Natural Surveillance:

All trees in the open space around the stairs should be trimmed up 7 feet from the ground to allow for clear sight lines. Any foliage overhanging the stairs and handrails should be pruned. Shrubbery adjacent to the stairs should be trimmed to a maximum of 3 feet high to prevent people from hiding behind them. When new trees and shrubs are added to increase the overall canopy across the City, plant material should be carefully selected as to not create more hidden hazards. Some examples of this include trees that grow tall and narrow with minimal low hanging branches and low growing shrubs that don't affect sight line issues.

Recommendation: the Manitoba Maple located at the base of the stairs is overhanging the approach area should be removed, such as seen in the image below. As it is right now, it prohibits Police or any witnesses from having clear sight lines into that area of the property. Thus, it is creating an environment conducive for criminal activities and trespassers.

Regular maintenance should be completed at this site. The base of the stairs present a shadowed area due to extreme tree cover (above). Thinning of the trees would allow natural light into the area. As seen below, the vegetation at the top of the stairs will need to be pruned to allow for a 180^{o} visibility at the top of the stairs.

Image from Google Street view.

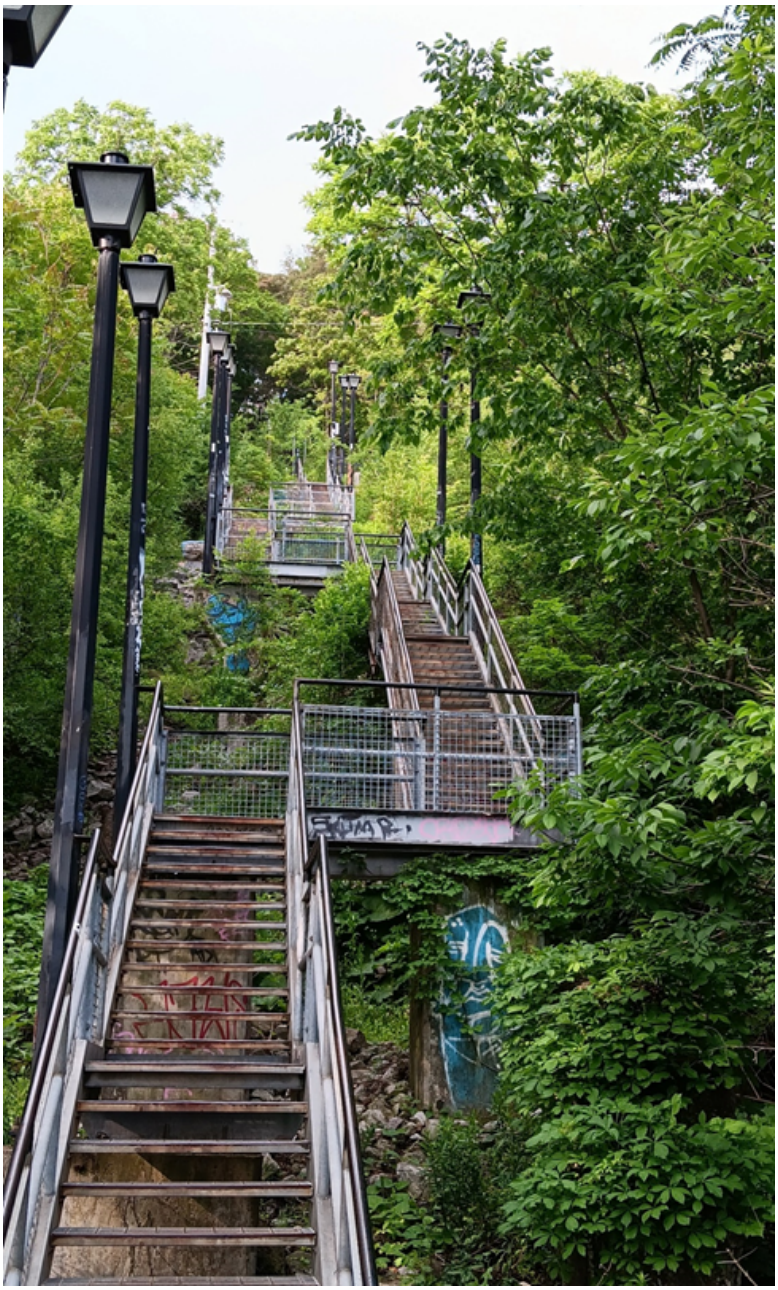
Alternate Access Points: About 3/4 of the way up the lower staircase is an access point for the Bruce Trail to connect with the Wentworth stairs. This access point is a concern as this can be a concealment area and it leads to a forest path.

Recommendation: Install additional lighting to allow for more illumination in hidden areas.

Signage: Signage can help establish territory and can clearly distinguish private from public property. With signs being properly displayed throughout the property, this helps to eliminate the "I did not know" excuse for trespassers and loiterers alike. The sign (above) was displaying incorrect information. As seen below, the stairs were open.

Recommendation: Post clear, concise messaging for those who are using the stairs. When repair work is completed, remove signage.

Graffiti – Graffiti is a common issue in many major cities. This is not only a cost to the city, it also takes away from the clean image which the City is attempting to portray in its parks. The light standards have become a target for graffiti. Regular maintenance and inspections should be completed to clean up graffiti.



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Recommendation: Have an official lighting audit conducted for the Bruce Trail access to the stairs. Install LED lights to further illuminate the area if necessary and possibly put these lights on a sensor so they only operate while people are walking in the area to minimize the impact of lighting on the natural area. Ensure that foliage is pruned to allow for increased visibility (previous page).

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- Ensure current signage.
- At the end of the stairs life cycle (Capital replacement), consideration should be made for widening the stairs to allow pedestrians to safely pass each other and add improvements such as a bike troughs and a railing to separate the two lanes.
- Install signage to identify the site location to ensure a rapid response by emergency services.

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13.2

CITY OF HAMILTON

NOTICE OF M O T I O N

Public Works Committee: December 4, 2023

MOVED BY COUNCILLOR N. NANN…….....……...……..……...

Ward 3 Neighbourhood Traffic Calming Enhancements

WHEREAS, Vision Zero and Complete Streets principles are used in the City of Hamilton to provide a safer environment for all road users;

WHEREAS, a Complete Streets study of neighbourhoods in Ward 3 has been undertaken to determine the options and methods to improve traffic calming and the application of Vision Zero principals; and

WHEREAS, Ward 3 residents routinely contact the Councillor's office regarding their desire to improve the safety of their neighbourhoods.

THEREFORE, BE IT RESOLVED:

(a) That the Transportation Division reviews and assess the following roadways to identify traffic calming opportunities, through leveraging the Ward 3 Complete Streets Project, to enhance neighbourhood safety, including but not limited to speed cushions:

- (i) Cumberland Avenue between Sanford Avenue South and Wentworth Street South;
- (ii) St. Matthew Street and Cheever Street between Barton Street and Birge Street;
- (iii) Balsam Avenue between Maplewood Avenue and Cumberland Avenue;
- (iv) East Avenue between King Street and Barton Street;
- (v) Kensington Street North between Cannon Street and Roxborough Avenue;
- (vi) Spadina Avenue between Dunsmure Road to King Street; and
- (vii) The intersection and adjacent roads on all sides of Bishop Park.

(b) That the Transportation Division completes the above noted review of roadways listed (i) through (vii) and determines implementation and scheduling details through consultation with the Ward 3 office and that work be funded from the existing remaining available funds from the Ward 3 Complete Streets Capital Project ID #4242009306 and topped off, as required, from the Ward 3 Minor Maintenance Fund Account #4031911603 to a combined upset limit of $350,000.

(d) That the Mayor and City Clerk be authorized and directed to execute any required agreement(s) and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.