City of Hamilton

# Strategic Transportation Network Review

December 15, 2023

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**Prepared By:**
Arcadis Canada Inc.
7th Floor 55 St. Clair Ave. West
Toronto, Ontario M4V 2Y7
Canada
Phone: 416 596 1930

**Prepared For:**
City of Hamilton

**Our Ref:**
139879

# Contents

# Acronyms and Abbreviations

| | |
|---|---|
| **2019 DC Study** | 2019 Development Charges Background Study |
| **2024 DC Study** | 2024 Development Charges Background Study |
| **AEGD** | Airport Employment Growth District |
| **AT** | Active Transportation |
| **BTE** | Benefit to Existing |
| **DCs** | Development Charges |
| **DCA** | Development Charges Act |
| **EA** | Municipal Class Environmental Assessment |
| **GRIDS 2** | City of Hamilton Growth Related Development Strategy |
| **HSR** | Hamilton Street Railway |
| **LRT** | Light Rail Transit |
| **LSP** | Local Service Policy |
| **MSF** | Transit Maintenance and Storage Facility |
| **MTO** | Ontario Ministry of Transportation |
| **PIC** | Public Information Centre |
| **PPB** | Post-Period Benefit |
| **ROW** | Right of Way |
| **STNR** | Strategic Transportation Network Review |
| **TMP** | City of Hamilton 2018 Transportation Master Plan |

# 1 Introduction

*Note: December 15, 2023. Draft report provided to City of Hamilton. All recommendations subject to revisions pending Public Information Centre #2 and stakeholder consultation in early 2024.*

The City of Hamilton's 2018 *Transportation Master Plan (TMP)* provides a foundation for short and long-term transportation planning in the City of Hamilton. Since 2018, the City's growth projections have been updated, new plans are in progress (such as the City's *Growth Related Integrated Development Strategy* (GRIDS 2)), and the City has established a new 2041 planning horizon with consideration to 2051. While the vision and goals of the 2018 TMP remain in effect, this new information warrants a review of the transportation network and Hamilton's future transportation needs. This review has been titled as the Strategic Transportation Network Review (STNR), and its purpose is to:

- Draw on the 2018 TMP and other City of Hamilton transportation plans to review the need for and update the timing of short, medium and long-term planned transportation projects (to 2041 with consideration to 2051) in the context of forecasted population and employment growth;
- Consider other supporting transportation assets and infrastructure such as buses and maintenance facilities needed to support growth;
- Consider transportation related programs needed to support growth;
- Update the costs of projects and programs; and
- Identify transportation projects to include in the 2024 Development Charges Background Study (2024 DC Study). These transportation projects will be partially funded through the 2024 Development Charges By-Law. While the STNR has a 2041 horizon (with consideration to 2051), the 2024 DC Study uses a service target (2032 for transit, 2031 for all other transportation projects including roads and active transportation). Only projects planned for implementation up to the service target years are included in the 2024 DC Study. This is further discussed in Appendix D.

Projects identified in this STNR report are intended to meet phases 1 and 2 of the Municipal Class Environmental Assessment (MCEA) process. Phases 1 and 2 develop a recommended alternative solution. Alternative designs would be developed in future class EAs, meeting phases 3 and 4 requirements.

The report is structured as follows:

- **Chapter 2** summarizes the review and evaluation of future transportation projects, including for roads, transit, and active transportation (AT), structures, and programs;

- **Chapter 3** presents the approach to costing future transportation projects;
- **Appendix A** lists the evaluation results for future road and transit projects;
- **Appendix B** lists the future active transportation projects;
- **Appendix C** lists the unit cost values that were used to cost road and AT projects;
- **Appendix D** is a report that outlines the transportation inputs to the 2024 DC Study, including apportioning benefit. It is noted that the City of Hamilton *Local Service Policy* and *Financial Policies* are outside of the scope of the transportation inputs; and,
- **Appendix E** outlines all the transportation capital projects for inclusion in the 2024 DC Study.

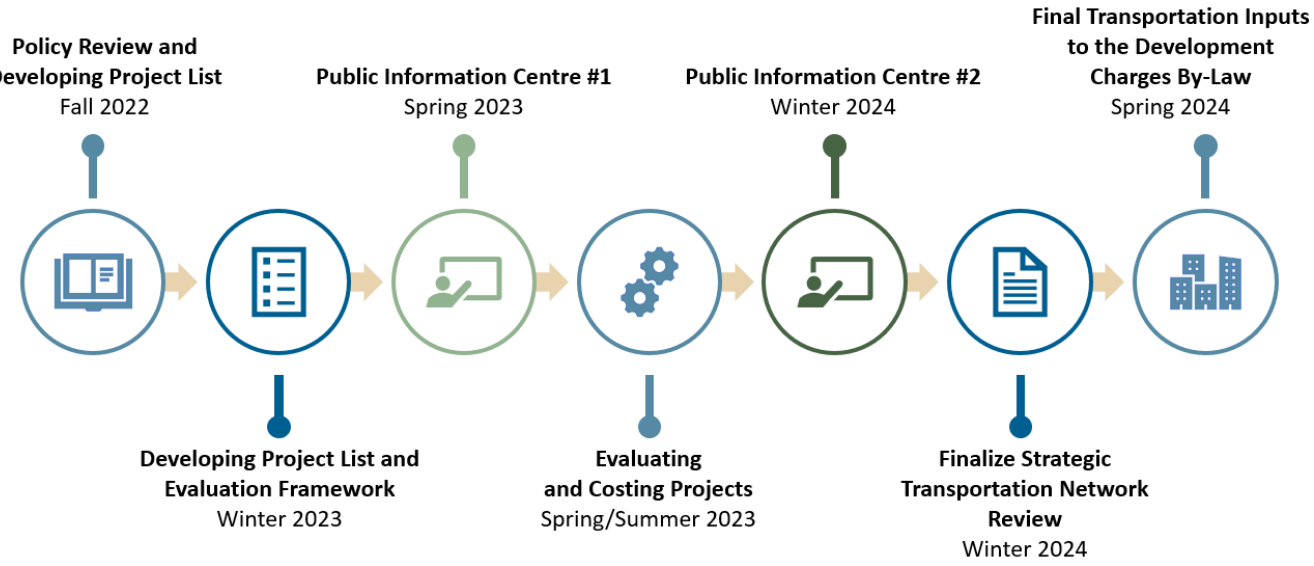
## 1.1 Study Process

The STNR follows phases 1 and 2 of the Municipal Class Environmental Assessment (EA) process for Master Plans, which develop and recommend alternative solutions. This study included five main steps:

- **Policy Review:** The *2019 Development Charges Background Study* (2019 DC Study) and other applicable City of Hamilton plans and strategies were reviewed to understand existing City policies as well as existing and planned future transportation projects. This step also considered broader legislative changes to development charges in Ontario (i.e. Bill 23).
- **Develop Project List and Evaluation Framework:** A long list of potential future transportation projects was consolidated from existing City of Hamilton plans and strategies. An evaluation framework was developed, grounded in the 2018 TMP that is still in effect.
- **Evaluate and Cost Projects:** The long list of projects was evaluated. Updated cost estimates were developed for projects, and the project costs were apportioned based on the project's benefit to different groups (discussed further in Appendix D).
- **Public and Stakeholder Consultation:** Public and stakeholder consultation meetings were conducted to obtain feedback on the evaluation framework and capital list of transportation projects.
- **Final Transportation Inputs to the Development Charges Background Study:** Feedback gained from public and stakeholder consultation efforts were used to confirm the future transportation projects. These future transportation projects will serve as inputs to the 2024 DC Study.

These steps are summarized below in Exhibit 1.1.

*Exhibit 1.1: Strategic Transportation Network Review Timeline*



# 2 Future Transportation Projects

Future transportation projects in the City of Hamilton fall within one of five main categories:

- Road projects,
- Transit projects,
- Active transportation projects,
- Structures and
- Programs.

This chapter describes the approach to confirm future needs, including the process for evaluating and phasing projects in line with the 2018 TMP vision and desired outcomes.

## 2.1 Developing the Long List of Future Transportation Projects

The first step in determining future transportation projects for all categories was to develop a "long list" of potential projects. The long list was developed by the City of Hamilton based on the following source documents:

- ***Growth Related Integrated Development Strategy (GRIDS 2) (ongoing)* –** Evaluates implications of anticipated growth to 2051 on land use, infrastructure, and other dimensions to identified needed transportation network improvements.
- ***Transportation Master Plan (2018)* –** Provides an overall vision for the transportation system, alongside policies, actions, and planned cycling, transit, and road networks. The vision of the plan is "To provide a comprehensive and attainable transportation blueprint for Hamilton as a whole that balances all modes of transportation to become a healthier city. The success of the plan will be based on specific, measurable, achievable, relevant and programmed results.". The desired outcomes of the plan include a sustainable and balanced transportation system, healthy and safe communities and economic prosperity and growth.
- ***Development Charges Background Study (2019)* –** Provides transportation projects that were previously funded through municipal development charges.
- ***Cycling Master Plan Update (2018)* –** Focuses on development and operation of Hamilton's cycling infrastructure, including a proposed network, classification of cycling facility types, maintenance, supporting programs, implementation, and assessment/monitoring components.

- ***Airport Employment Growth District (AEGD) Secondary Plan (2022) –*** Sets specific requirements for transportation system design in 1,204 hectares surrounding the John C. Munro Hamilton International Airport.
- ***Rapid Ready (2013) –*** Sets requirements to prepare for rapid transit, including funding needs and proposed implementation timelines for improvements to the rapid transit network.
- ***Ten Year Local Transit Strategy (2015) –*** Builds on Rapid Ready by identifying transit actions and projects to accommodate growth over a ten-year horizon.
- ***(Re)envision HSR (ongoing since 2019) –*** Proposes updates to the Hamilton Street Railway (HSR) network to improve transit service and provide better connections to light rail transit (LRT).
- ***City of Hamilton STNR Infrastructure Needs Assessment –*** The City of Hamilton has identified several projects for inclusion in the STNR that are not included in the documents noted above based on various City processes and studies, including development applications and traffic studies.

The following subsections describe the evaluation process and results for each of the five infrastructure project categories.

## 2.2 Road Projects

This section describes the evaluation of road projects, including new roads, road widenings, and road reconstructions and urbanizations. Road projects can also include highway projects where the costs of such projects are shared between the Ontario Ministry of Transportation (MTO) and the City of Hamilton.

### 2.2.1 Road Project Evaluation Framework

The evaluation process for road projects includes three steps:

1. **Develop a long list of projects** as described in Section 2.1;
2. **Evaluate projects** based on a set of evaluation criteria that are consistent with the 2018 TMP's evaluation criteria; and
3. **Phase projects** based on their scores from step 2.

These three steps are described in further detail below.

#### 2.2.1.1 Long List

The long list of road projects was drawn from the sources described in Section 2.1. In total, 151 road projects were identified. Nineteen road projects were screened out based on input

from the City of Hamilton (i.e. projects already constructed) and 132 projects were carried forward in the SNTR.

#### 2.2.1.2 Project Evaluation

The road project evaluation framework was developed to align with the evaluation categories from the 2018 TMP, which are:

- ***Transportation (Sustainable & Balanced)* –** Supports a range of mobility options for all, especially marginalized communities.
- ***Environment (Sustainable & Balanced)* –** Limits impacts on natural areas.
- ***Social (Healthy & Safe Communities)* –** Emphasizes active lifestyles, safe movements of people and reduced dependence on single-occupancy vehicles.
- ***Economic (Economic Prosperity & Growth)* –** Supports local industries and businesses and access to employment centers.
- ***Implementation (Sustainable & Balanced)* –** Considers priorities, implementation strategies and performance measurement.

Based on the TMP, one to three indicators were developed per evaluation category. These categories and criteria were developed with input from City staff and presented to the public for input. Though some categories have different numbers of indicators, each category was weighted equally, with six potential points each. Across all five categories, the maximum potential score for a project was 30 points.

#### 2.2.1.3 Project Phasing

Road and transit projects were phased based on the evaluation scores, with higher scoring projects recommended for earlier implementation. The phases and associated score thresholds are:

- **Short-term** to 2031, for projects scoring 15 or more;
- **Medium-term**, 2031 to 2041, for projects scoring less than 15 and above 10; and,
- **Long-term**, defer beyond 2041, for projects scoring 10 or less.

In addition to the project score, some project implementation recommendations were refined based on project-specific conditions as advised by City of Hamilton staff. Examples included the timing of adjacent developments, relationships to other transportation projects, road condition and other policy considerations. Timing should be reviewed annually to determine if associated development timing has changed.

### 2.2.2 Long List of Road Projects and Evaluation

A total of ten metrics across the five evaluation categories were identified to assess the 132 road projects to determine alignment with the TMP vision and desired outcomes. Individual metrics were scored from 0 to 2 (not all metrics used the full range of scores), with more positive impacts scoring higher. While the City of Hamilton transportation model results were used in the evaluation framework, the model itself was updated by another party and was not part of the STNR scope. These are presented below in Exhibit 2.1.

*Exhibit 2.1: Road Project Evaluation Framework*

| Category | Metrics | Data Source | Scoring | Decision Guidelines |
|---|---|---|---|---|
| Transportation (sustainable and balanced) | 2041 Volume/Capacity (VC) Ratio[1] | City of Hamilton Model | 2 – 2041 V/C ratio 0.7 or higher.<br>1 – 2041 V/C ratio between 0.7-0.5.<br>0 – 2041 V/C ratio less than 0.5. | |
| | Community Benefit | Public Health Ontario's Marginalization Index[2] by census dissemination area | 2 – Serves census dissemination areas with an average marginalization index score of greater than three.<br>1 – Serves dissemination areas with an average marginalization index score of three or less. | Any projects along or adjacent to areas that score greater than 3 on an average of the marginalization index's four dimensions. |
| | Indigenous Population | Indigenous population by ward from Hamilton Open Data | 2– Serves wards with above-median proportions of Indigenous peoples. | Any projects along or adjacent to areas with greater than 1.8% |

[1] V/C ratios were based on a modelling scenario that included the urban boundary expansion areas. This was the applicable land use scenario used by the City of Hamilton at the time of the road project evaluation.

[2] Public Health Ontario (2016). Retrieved from https://www.publichealthontario.ca/en/Data-and-Analysis/Health-Equity/Ontario-Marginalization-Index

| Category | Metrics | Data Source | Scoring | Decision Guidelines |
|---|---|---|---|---|
| | | | 1 – Serves communities with median or less proportions of Indigenous Peoples. | Indigenous population (median). |
| Environment (sustainable and balanced) | Proximity to natural heritage areas | Natural heritage features designated in the City of Hamilton Urban and Rural Official Plans | 2 – Neither in nor directly adjacent to a natural heritage feature.<br>1 – Directly adjacent to a natural heritage feature.<br>0 – In a natural heritage feature. | |
| Social (healthy and safe communities) | Promotes transit | Map of rapid transit network based on the ongoing (Re)envision the HSR study. | 2 – Along rapid transit network.<br>1 – Not along rapid transit network. | Any road project on which the rapid transit network operates. |
| | Promotes active transportation | Map of future AT network provided by the City of Hamilton. | 2 – Along existing or future AT network.<br>1 – Not along existing or future AT network. | Any road project on which the existing or future AT network operates, excluding paved shoulders and standard sidewalks. |
| Economic (economic prosperity and growth) | Proximity to commercial/mixed-use/employment designations | *Urban Hamilton Official Plan* Schedule E-1, *Rural Hamilton Official Plan* Schedule D. | 2 – Adjacent to or in a commercial, mixed use, and/or employment area.<br>1 – Not adjacent to nor within a commercial, mixed use, and/or employment area. | Any project that is along the edge or within a designated area. |
| | Increase in Truck Volumes | City of Hamilton Model | 2 – 2019-2041 change in A.M. peak hour truck volumes is 20 or more. | |

| Category | Metrics | Data Source | Scoring | Decision Guidelines |
|---|---|---|---|---|
| | | | 1 – 2019-2041 change in A.M. peak hour truck volumes greater than zero and less than 20.<br>0 – 2019-2041 change in A.M. peak hour truck volumes zero or less. | |
| Implementation (sustainable and balanced) | EA status | City of Hamilton | 2 – No EA needed or complete EA.<br>1 – EA in progress.<br>0 – Requires an EA but EA not in progress. | |
| | Cost effectiveness | Technical points (weighted average) for other metrics and preliminary project cost estimates. | 2 – Cost per technical point in the lowest third of projects.<br>1 – Cost per technical point in middle third of projects.<br>0 – Cost per technical point in upper third of projects. | Minimal cost for most technical points is preferred. |

### 2.2.3 Road Project Evaluation Results

The road projects were grouped into one of three phases based on the evaluation results:

- **Short-term to 2031:** These projects received the highest scores in the evaluation (at least 15 points out of 30). These projects generally had in progress or approved EAs, were supportive of rapid transit and/or AT routes and were typically not in areas with natural heritage features.
- **Medium-term, 2031 to 2041:** These projects scored less than 15 but more than 10 technical points (out of 30). These projects generally scored high in some metrics and low in others.
- **Long-term, Post-2041:** These projects received the lowest scores in the evaluation (10 or fewer technical points out of 30). These projects generally were located in areas with

natural heritage features, lacked an EA, did not serve commercial, mixed-use, or employment areas, or did not experience high goods movement volumes.

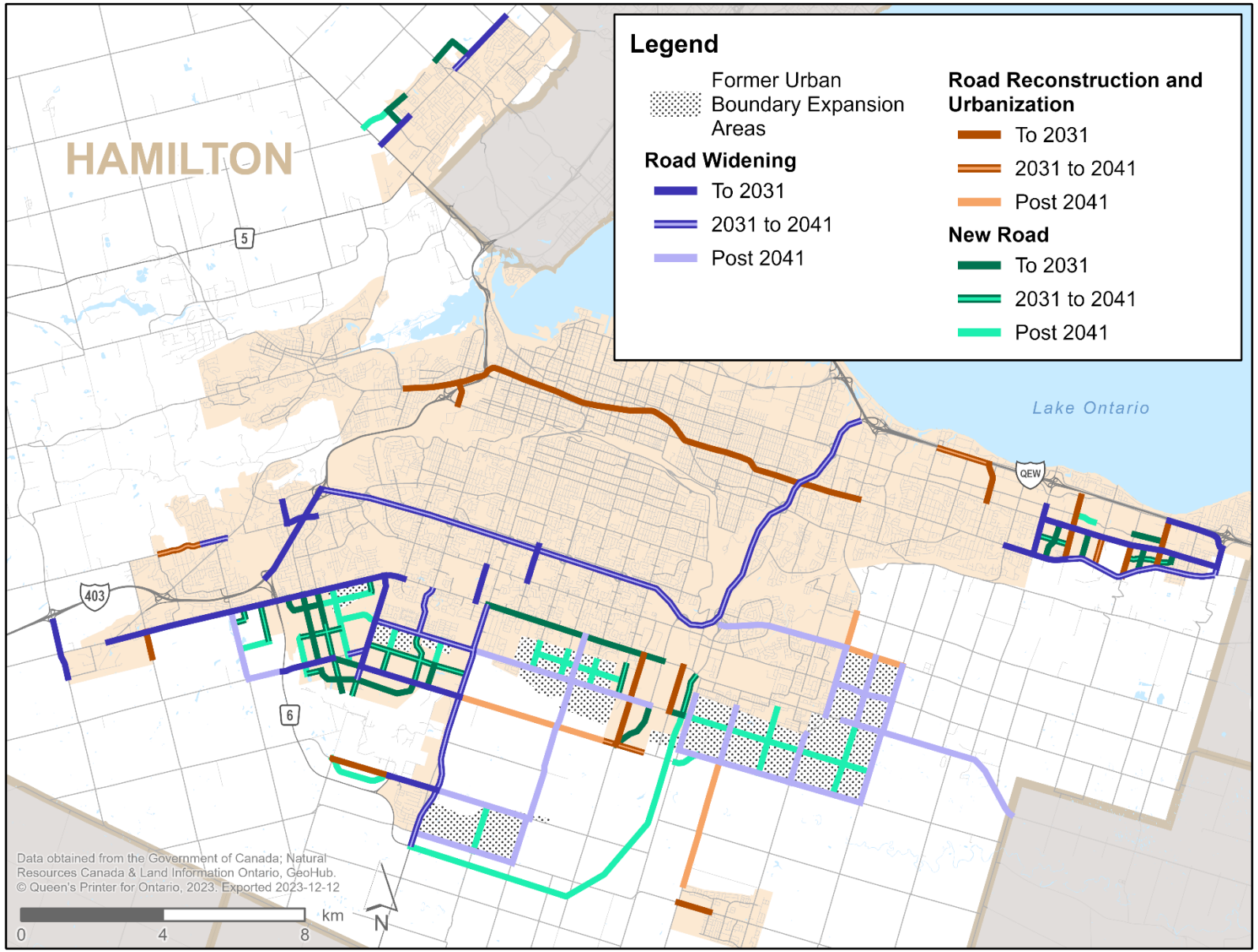
The long-term (Post-2041) group includes road projects located in the former urban boundary expansion areas. At the time of the road project evaluation, the City of Hamilton Official Plans and land use planning scenarios included urban boundary expansion areas as directed by the Province of Ontario. In Fall 2023, after the completion of the project evaluation process, the Province of Ontario reversed its previous decision, and the City of Hamilton determined that the expansion areas should not be included in the city's urban boundary. City of Hamilton staff are currently undertaking analysis to determine the implications of this urban boundary change. The road projects within these former urban boundary expansion areas that have been impacted by the change have been grouped separately in Appendix E. The potential need for these projects, like all projects in the medium and long-term time horizons, will be reviewed during subsequent transportation network reviews.

Of the 132 road projects evaluated, 89 road projects are recommended for implementation by 2041. The remaining projects are recommended for implementation after 2041. Projects recommended for implementation by 2041 include:

- 36 new roads;
- 36 road widenings; and,
- 17 road reconstructions and urbanizations.

These 132 road projects were carried forward in the STNR. Exhibit 2.2 below shows the locations and recommended timing for each of the 132 road projects.

*Exhibit 2.2: 2024 DC Study Road Project Evaluation Results*



## 2.3 Transit Projects

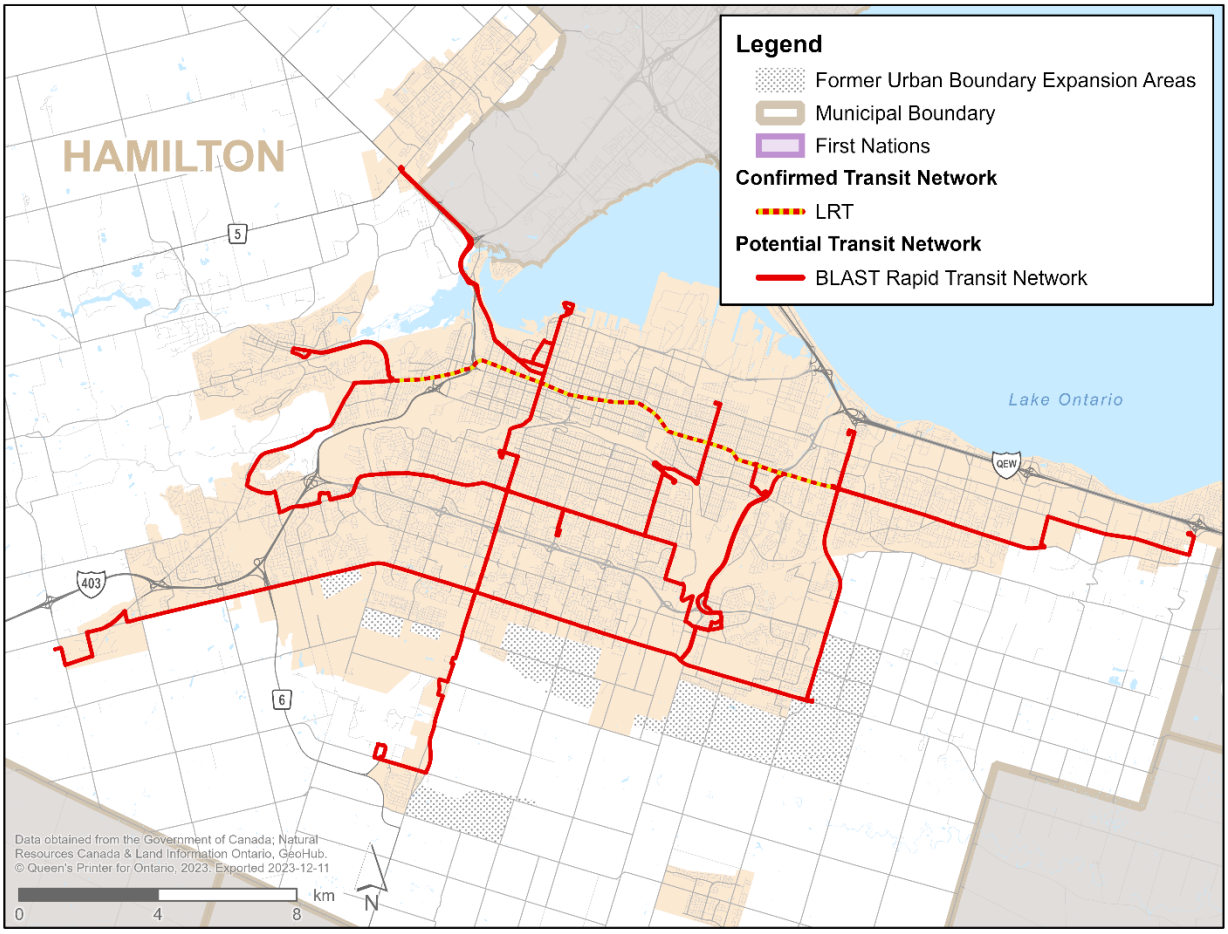
This section describes the evaluation of transit projects as part of the STNR.

### 2.3.1 Long List of Transit Projects

The long list of transit projects was derived from the same sources as the road projects outlined in Section 2.1. The STNR transit evaluation focused on the rapid transit projects as these are the main corridor-level transit projects in Hamilton. While the STNR evaluation focuses on the rapid transit projects, there is additional transit infrastructure that is required to support the rapid transit network (i.e. new buses, new operations vehicles, transit stop infrastructure). These supporting transit infrastructure projects were identified by the City of Hamiton.

The existing five rapid transit network routes (historically referred to as the “BLAST”) and the additional sixth E-line rapid transit route (identified as part of the (Re)envision the HSR study) were evaluated. These six rapid transit routes are shown below in Exhibit 2.3.

*Exhibit 2.3: Long List of Transit Projects*



### 2.3.2 Transit Evaluation Framework

The transit evaluation framework comprised of eight indicators across five evaluation categories to confirm alignment with the 2018 TMP vision and desired outcomes. This evaluation framework is presented below in Exhibit 2.4.

*Exhibit 2.4: Scoring Criteria for Transit Projects*

| Category | Metrics | Data Source | Scoring | Decision Criteria |
|---|---|---|---|---|
| Transportation (sustainable and balanced) | Projected ridership per km. | City of Hamilton Model. | 2 – Projected 2041 ridership greater than 100 per km.<br>1 – Projected 2041 ridership less than or equal to 100 per km. | |
| | Community benefit | Public Health Ontario's Marginalization Index[3] by census dissemination area | 2 – Serves census dissemination areas with an average marginalization index score of greater than three.<br>1 – Serves dissemination areas with an average marginalization index score of three or less. | Any projects along or adjacent to areas that score greater than 3 on an average of the marginalization index's four dimensions. |
| | Indigenous population | Indigenous population by ward from Hamilton Open Data | 2– Serves wards with above-median proportions of Indigenous peoples.<br>1 – Serves communities with median or less proportions of | Any projects along or adjacent to areas with greater than 1.8% Indigenous population (median). |

[3] Public Health Ontario (2016). Retrieved from https://www.publichealthontario.ca/en/Data-and-Analysis/Health-Equity/Ontario-Marginalization-Index

| Category | Metrics | Data Source | Scoring | Decision Criteria |
|---|---|---|---|---|
| | | | Indigenous Peoples. | |
| Environment (sustainable and balanced) | Proximity to natural heritage areas designated in official plan | Natural heritage features designated in the City of Hamilton Urban and Rural Official Plans | 2 – Neither in nor directly adjacent to a natural heritage feature.<br>1 – Directly adjacent to a natural heritage feature.<br>0 – In a natural heritage feature. | |
| Social (healthy and safe communities) | Proximity to institutions | *Urban Hamilton Official Plan* Schedule E-1 | 2 – In or adjacent to an institutional area.<br>1 – Not in nor adjacent to an institutional zone. | Institutional designation in the *Urban Hamilton Official Plan*. |
| | Promotes active transportation | Map of future AT network provided by the City of Hamilton. | 2 – Along existing or future AT network.<br>1 – Not along existing or future AT network. | Any road project on which the existing or future AT network operates, excluding paved shoulders and standard sidewalks. |
| Economic (economic prosperity and growth) | Proximity to commercial/mixed-use/employment | *Urban Hamilton Official Plan* Schedule E-1, *Rural Hamilton Official Plan* Schedule D. | 2 – Adjacent to or in a commercial, mixed use, and/or employment area.<br>1 – Not adjacent to nor within a commercial, mixed use, and/or | Any project that is along the edge or within a designated area. |

| Category | Metrics | Data Source | Scoring | Decision Criteria |
|---|---|---|---|---|
| | | | employment area. | |
| Implementation (sustainable and balanced) | Ease of service implementation | *(Re)envision the HSR* – the (re)Designed HSR Network[4] | 2 – No dedicated transit lane.<br>1 – Dedicated transit lane required. | Based on results of ongoing *(Re)envision the HSR* study, which will dictate transit priority measures (including dedicated transit lanes) for rapid transit projects. |

### 2.3.3 Transit Project Evaluation Results

The evaluation scores for the six rapid transit projects are described below in Exhibit 2.5. All projects scored 22.5 or higher and will be carried forward for short-term implementation to 2031. It is noted that this rapid transit evaluation framework is a high-level process – more detailed analysis of future transit needs is included in the ongoing *(Re)envision the HSR* study.

*Exhibit 2.5: Transit Project Scores*

| Route | Transportation | Environment | Social | Economic | Implementation | Overall |
|---|---|---|---|---|---|---|
| 10 B Line | 6 | 0 | 6 | 6 | 6 | **24** |
| 60 L Line | 6 | 0 | 6 | 6 | 6 | **24** |
| 20 A Line | 6 | 0 | 6 | 6 | 6 | **24** |
| 30 S Line | 6 | 0 | 6 | 6 | 6 | **24** |
| 50 T Line | 6 | 0 | 6 | 6 | 6 | **24** |
| 40 E Line | 6 | 0 | 4.5 | 6 | 6 | **22.5** |

The six rapid transit routes are included in the STNR. These rapid transit projects are not being funded through development chargers and will therefore not be included in the 2024 DC Study. However, additional transit projects to support the six rapid transit routes will be included in the 2024 DC Study. These include new vehicles spanning conventional and

[4] City of Hamilton Public Works Department Transit Division (2023). Retrieved from https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=357140

specialized services as well as transit operations and facilities. These additional transit projects are further described in Section 3.2 and Appendix D.

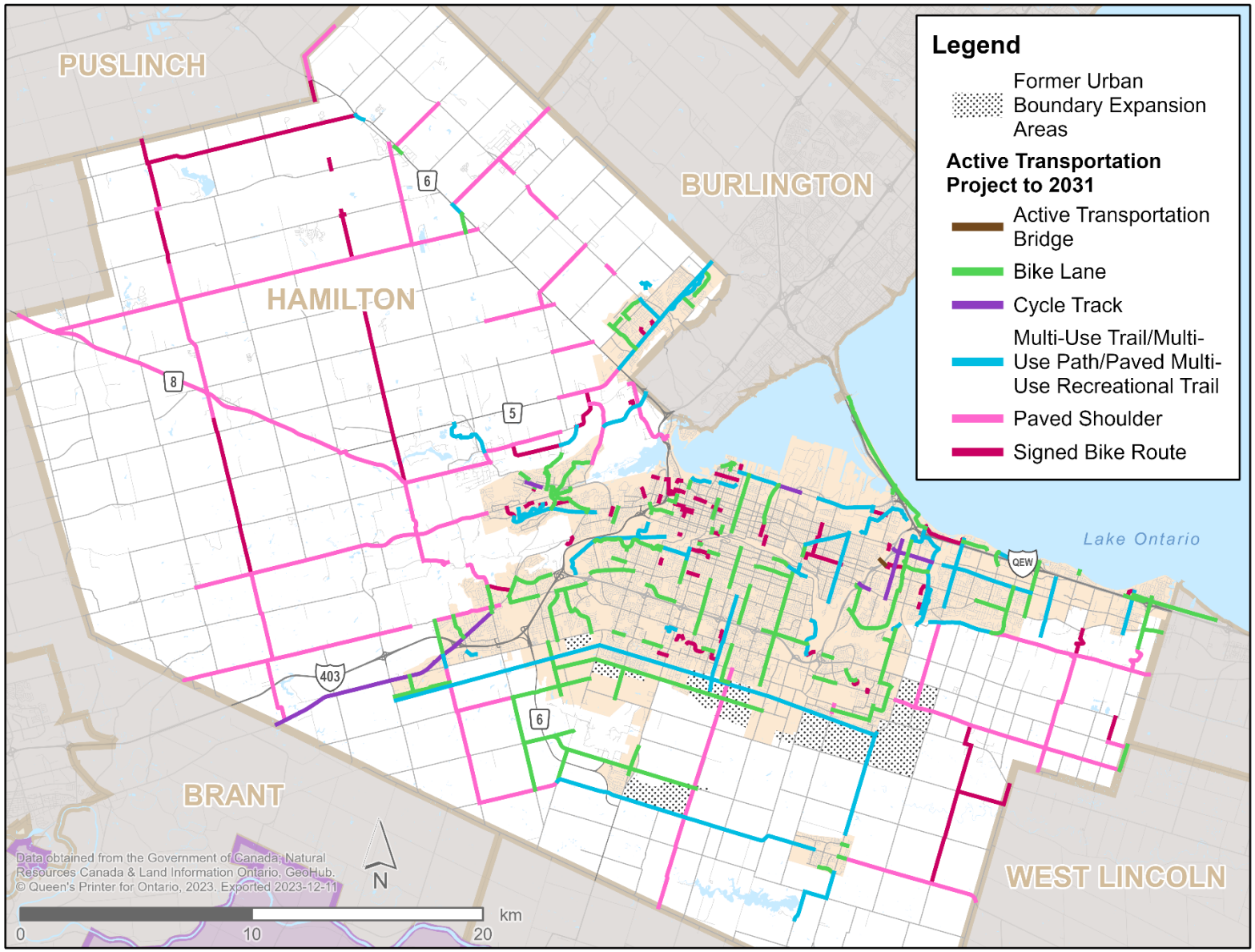
## 2.4 Active Transportation Projects

The active transportation (AT) projects included in the STNR, listed in Appendix B, were derived from the sources outlined in Section 2.1 including the 2018 TMP and GRIDS 2.

Beyond projects identified in Hamilton's planning documents, additional AT infrastructure will be included in individual road projects in all time horizons based on the City's *Engineering Standard Drawings Update* (in progress) and the *Complete Streets Design Guidelines*. These AT facilities are included in the evaluation and costing of individual road projects. In cases where there is geographic overlap between an individual AT project and a road project that includes AT facilities, the costs of the AT projects are reduced based on the length of the overlap. This ensures that costs for AT facilities are not being double counted.

Expanding the viability of AT as a mobility option in Hamilton is an essential component of the 2018 TMP vision and desired outcomes. Identified future AT projects are within the 2018 TMP horizon of 2031 and are necessary to support future growth. Accordingly, all AT projects listed in Appendix B are carried forward as part of the STNR process and recommended for implementation by the 2018 TMP's horizon year of 2031. This spans 337 AT projects outlined below in Exhibit 2.6.

*Exhibit 2.6: STNR Active Transportation Projects*



## 2.5 Structures

The STNR included three types of structures as part of the long list of future transportation projects:

- **Active Transportation Bridges** that connect existing AT facilities over physical barriers such as roads, rail tracks and water bodies.
- **Interchange Improvements** including new interchanges, interchange reconfigurations, signalization, and ramp improvements to accommodate increased travel demand.
- **Grade Separation** to improve traffic flow and safety at intersections between roads and rail tracks by providing physical separation.

These projects are necessary to support the overall road, transit and AT networks. Many of these projects were identified in the 2019 DC Study and other City of Hamilton plans (such as the *Recreational Trails Master Plan (2016)* and the *Cycling Master Plan (2018)*). Accordingly, these structures are carried forward as part of the STNR process. Structures are recommended for implementation in the short-term (To 2031) based on the timelines identified in the 2019 DC Study and input from the City of Hamilton, with the exception of the Strathcona Pedestrian Bridge (recommended for implementation in 2031 to 2041 due to extensive coordination required with rail authorities).

## 2.6 Programs

The City of Hamilton's mobility system includes city-wide programs designed to support the individual road, AT and transit projects described above. These supporting programs are aligned with the vision and desired outcomes of the 2018 TMP and were carried forward as part of the STNR. These programs are described below:

- **Intersection improvements**, including new traffic signals, and traffic signal upgrades and traffic controller cabinet replacements;
- **Pedestrian experience**, including crossovers, pedestrian signals, new sidewalks, pavement improvements and street lighting enhancements;
- **Bicycle parking** at rapid transit stops, conventional route bus stops, and elsewhere;
- **Transit stop improvements** such as bus stop shelter rehabilitation and transit shelter expansion; and,
- **Network management**, including road urbanization and Advanced Traffic Management Systems.

# 3 Project Costing

Project costing updates were undertaken for the recommended projects in the STNR (Section 2). This includes the following:

- 132 road projects;
- Transit-supportive infrastructure such as buses and operations vehicles (the rapid transit routes are not funded through DCs and are not included in project costing);
- 337 AT projects;
- 11 structures; and,
- 26 programs.

New costs estimates were developed for road and active transportation projects whereas costs for transit related infrastructure, programs, and structures were provided by the City of Hamilton. Costs provide order of magnitude estimates for planning purposes and do not reflect detailed design considerations unless otherwise noted. All costs are presented as 2023 dollars.

## 3.1 Road Projects

This section describes the costing approach and unit rates used for road projects. Broadly, the costing approach follows seven main steps:

- Consulting **recent tender documents** to develop an understanding of current construction costs;
- Developing **unit rates** for individual components of road projects;
- Aggregating component unit rates to develop **per-kilometre unit costs** for various road project types;
- Multiplying per kilometre unit costs by the **lengths** of individual projects;
- Adding additional costs for projects that include **bridges and/or culverts**;
- Adding additional costs for **property acquisition** requirements; and,
- Considering **Provincial funding** if applicable.

Each step is described below in greater detail.

### 3.1.1 Recent Tender Documents

The City of Hamilton provided the cost details for construction projects completed between 2016-2021 from the City's State of Good Repair Program and Growth Program. These included tender bids for specific projects as well as average construction costs for roadworks.

Both types of documents contained itemized costs for various components of roadwork projects. These were used as the foundation for developing cost estimates that reflect current construction costs.

### 3.1.2 Component Unit Rates and Inflation

The City of Hamilton provided unit rates (2022) for various components of road projects. The recent tender documents described above were used to reconcile and update these component unit rates to reflect current construction costs.

In some cases, it was determined that the component unit rates did not reasonably reflect the cost of construction. A construction inflation factor (39.39% from 2019 to 2023[5]) was applied where necessary.

The tender documents and historic unit costs contained a wide variety of roadwork components. There was a lack of historical data for some roadwork components. To cost these components in 2023 dollars, a combination of the last known cost of the component and the average increase of all component rates was applied.

The full list of component unit rates derived for use in capital project estimates is in Appendix C.

### 3.1.3 Road Per Kilometer Costs

Road projects were categorized into various improvement types based on the proposed changes to the road. These improvement types fall under two categories:

- **New Construction**, including new industrial, rural and urban roads; and,
- **Reconstruction and Urbanization**, including road improvements, rural to urban upgrades and road widenings.

For each improvement type, the *Hamilton Engineering Guidelines (update ongoing)* were used to identify the typical cross-section based on the road type. This document draws on the *Complete Streets Design Manual (2022)* to outline the components and design requirements for all road types in the City of Hamilton. The typical cross-sections were used to determine the required construction components for each road improvement type, such as concrete, excavation, catch basins, active transportation facilities and topsoil among others. The costs for each of the required components (Section 3.1.2) were combined to form a per kilometer cost for each road improvement type.

[5] Provided by Watson & Associates Economists based on Statistics Canada non-residential building construction price indexes.

The full list of road per kilometer costs by improvement type is in Appendix C.

### 3.1.4 Bridges and Culverts

To increase the accuracy of cost estimates, additional cost resolution was added to individual projects that included bridges and/or culverts[6]. The City of Hamilton's asset database and satellite imagery were used to determine the number of bridges and/or culverts, and their approximate size, for applicable projects. Unit costs for the bridges ($/m$^2$) and culverts ($/ln.m) were then developed based on the size and perceived project complexity.

### 3.1.5 Property Acquisition Cost

Determining property acquisition requirements for road projects is a highly complex exercise that is generally undertaken at the environmental assessment and detailed design level. Property acquisition requirements, and associated costs, can vary significantly depending on a wide range of factors, including design, location, land use, developer dedication and cultural heritage among others. For the purposes of this study, high-level property acquisition cost estimates were developed – detailed property acquisition requirements are more appropriately determined at later stages of individual project design.

The formula to calculate property acquisition costs considered the right-of-way (ROW) width required (based on the City of Hamilton Official Plans, City of Hamilton *Road Classification and Right-of-Way Width Review* and City of Hamilton *Complete Streets Design Guidelines*), length of the project, developer dedication of land, and land cost per area.

Each variable is described in detail below.

#### 3.1.5.1 Right-of-Way (ROW) Width Required

The ROW width required can vary significantly between projects and even within a single project. Roadway design can be influenced by a desire to minimize property acquisition, particularly when considering cultural heritage impacts. Exact ROW widths for individual projects are generally determined at the environmental assessment and/or detailed design project stage.

For the purposes of this study, a high-level approach has been taken to estimate the required ROW width for the various road projects. First, the existing ROW width for each project was determined. For new roads, it was assumed that the City does not currently own any of required ROW. For road widening and reconstruction/urbanization projects, the existing ROW

[6] This does not include bridges and/or culverts that are included in other ongoing Master Plan studies.

width was assessed based on the road classification and nature of the existing road (i.e. number of lanes, rural versus urban).

Future ROW width requirements were derived from multiple sources including:

- The *Urban Hamilton Official Plan (2013)* and *Rural Hamilton Official Plan (2012)* identify future ROW dedications in schedules C-2 and C-1, respectively;
- Additional ROW widths required for projects in the airport employment growth district (AEGD), provided by the City of Hamilton;
- The *Road Classification and Right-of-Way Width Review (2023)* draws on the official plans and *Hamilton Complete Streets Design Guidelines (2022)* to identify typical ROW widths for various road classes; and,
- Consideration for the nature of the road project improvement (i.e. number of lanes, urban versus rural).

The additional ROW width required is calculated as the future ROW width required minus the existing ROW width.

#### 3.1.5.2 Length of Road

The length of each road project was determined during the development of the long list of road projects (Section 2.2). These lengths have been carried forward for property acquisition costing.

#### 3.1.5.3 Developer Dedication Percentage

Developers often dedicate land as part of a development application. This land is used to accommodate municipal infrastructure, including road projects. The percentage of land that developers will dedicate often varies on a project-by-project basis.

For the purposes of calculating high-level property acquisition requirements, the following dedication assumptions, based on professional judgement and input from City of Hamilton staff, were used:

- New Road Construction: 90% of the ROW is dedicated directly by developers.
- Road Widening/Reconstruction/Urbanization: 60% of the ROW is dedicated directly by developers.

#### 3.1.5.4 Land Cost

The unit cost for land was estimated at $250/m$^2$ based on information provided by the City of Hamilton, available environmental assessments, and professional judgement.

### 3.1.6 Road Project Capital Costs

The capital cost for road projects was calculated using the following formula:

***Road Project Capital Cost = (Road Length x Improvement Type Per Kilometer Cost) + (Area of All Bridges x Bridge Unit Cost) + (Area of All Culverts x Culvert Unit Cost) + Property Acquisition Cost***

The total capital cost of all road projects is approximately **$2,170,000,000** based on the following timing:

- **To 2031:** approximately **$735,000,000**
- **2031 to 2041:** approximately **$520,000,000**
- **Post-2041:** approximately **$915,000,000**

The full list of all road projects and their capital costs can be found in Appendix E, and a discussion of which costs are eligible for development charges can be found in Appendix D.

### 3.1.7 Provincial Highway Projects

There are multiple provincial highways that are within the City of Hamiton's boundary. While these highways are within the jurisdiction of the Ontario Ministry of Transportation (MTO), the costs of highway improvements can be shared between the MTO and the City of Hamilton. The project listed below is an MTO highway project that is partially funded by the City. The cost for this project was provided by the MTO and the City of Hamilton.

- Highway 403 Truck Climbing Lane (Mohawk/Lincoln M. Alexander Parkway to Highway 6 South Interchange).

## 3.2 Transit Projects, Transit Fleet, and Transit Supportive Infrastructure

Section 2.3 outlines the six rapid transit projects that were included in the STNR evaluation process. These rapid transit projects are not funded through municipal development charges and were not costed as a part of this study. However, the rapid transit network cannot operate alone and needs to be supported conventional and specialized transit networks. Components of the City's transit network including the transit fleet and any required maintenance and storage facilities.

This section describes the future transit vehicle requirements and vehicle costs for both conventional and specialized service over the ten-year transit horizon (2023-2032) and the transit post-period (2033-2035).

### 3.2.1 Existing HSR Transit Network (2023)

HSR currently operates 32 regular and three seasonal bus routes throughout the City of Hamilton. Exhibit 3.1 below shows the Fall 2023 HSR network based on the HSR *Ten Year (2015-2024) Local Transit Strategy*. HSR also operates additional services including school extras (unscheduled buses to accommodate school-related demand), on demand (TransCab shared taxi and myRide) and specialized transit service for persons with disabilities that are unable to access conventional transit services.

*Exhibit 3.1: HSR Fall 2023 Bus Network*


Source: HSR Fall 2023 Network Map (Remix)

Hamilton is also connected to the Greater Toronto Area through inter-municipal routes from Burlington Transit and Metrolinx (GO Bus and GO Rail).

### 3.2.2 Future HSR Transit Network

HSR is currently in the third to last year of the *Ten Year (2015-2024) Local Transit Strategy*[7]. In 2019, HSR launched the *(Re)envision the HSR* study with the aim of modernizing the transit network and improving customer experience. This ongoing study identifies six rapid transit routes, including five rapid bus routes and one Light Rail Transit (LRT) route, as well as a new maintenance and storage facility. The new transit growth plan (including phasing, and implementation as well as the financial strategy) is scheduled to be presented to City of Hamilton Council in 2024.

### 3.2.3 Ten-Year Capital Plan

This section describes the ten-year capital plan that was developed for the transit growth period (2023-2032). This capital plan includes the future vehicle requirements for conventional and specialized service as well as associated support vehicles.

#### 3.2.3.1 New Conventional Transit Vehicles

HSR uses the following vehicle types for conventional service:

- 30-foot community bus;
- 40-foot standard bus; and,
- 60-foot articulated bus.

The component and total costs for the various vehicle types are listed below in Exhibit 3.2. These costs were provided by HSR.

*Exhibit 3.2: Total Costs (2023$) by Bus Type*

| | 30’ Bus | 40’ Bus | 60’ Bus |
|---|---|---|---|
| Capital Cost of Bus | $600,400 | $890,900 | $1,168,600 |
| IT Package | $31,800 | $31,800 | $31,800 |
| Farebox | $18,000 | $18,000 | $18,000 |
| Presto | $14,552 | $14,552 | $14,552 |
| **Total Cost:** | **$664,752** | **$955,252** | **$1,232,952** |

[7] The *Ten Year (2015-2024) Local Transit Strategy* was paused in both 2017 and 2020.

HSR applies the following considerations and level of service metrics to forecast future conventional fleet requirements:

- **Service Levels:** The desired frequency of service is the primary determining factor for future conventional fleet requirements – more buses are required to achieve higher frequencies. Service frequencies are generally highest during weekday peak hours and buses are acquired to meet minimum serve levels for weekday peak hours. The existing minimum service standard is 30-minute frequency during peak hours. Service frequencies may also vary by route type.
- **Route Length and Travel Time:** Transit routes vary in length, resulting in varying travel times. Different numbers of buses can be required for different routes to meet the same service levels.
- **Scheduling:** This considers the number of buses required to operate a service reliably with consideration for the schedule and on-time performance.
- **Demand:** Bus sizes are largely determined by the demand on specific corridors. Increases in demand can be met either with a larger vehicle that operates at a normal frequency or multiple smaller vehicles that operate at a higher frequency.
- **Service Area Coverage:** HSR aims to ensure a standard of 90% of residents and businesses within the urban transit area are within 400m of transit service during peak hours. This standard informs route planning and fleet requirements.
- **Additional Vehicles:** HSR maintains a minimum number of spare vehicles to allow for buses to be serviced, inspected, maintained and fueled. The existing standard of peak service vehicles to spare vehicles is a ratio of approximately 80:20.

Exhibit 3.3 below outlines the total future conventional transit fleet needs, and their associated costs, for the growth period (2023-2032) within the 2024 DC Study horizon and the post-period (2033-2035) beyond the 2024 DC Study horizon. The total cost of the required additional conventional fleet vehicles is approximately **$99,000,000.**

*Exhibit 3.3: Total Growth Period and Post-Period Conventional Transit Bus Requirements (2023$)*

| | Unit Cost | Growth Period (2023-2032) | Post-Period (2033-2035) |
|---|---|---|---|
| New Peak Hour 30' Bus | $664,752 | 0 | 2 |
| New Peak Hour 40' Bus | $955,252 | 48 | 16 |

| | Unit Cost | Growth Period (2023-2032) | Post-Period (2033-2035) |
|---|---|---|---|
| New Peak Hour 60' Bus | $1,232,952 | 8 | 2 |
| New Spare 40' Bus | $955,252 | 12 | 3 |
| New 40' to 60' Upgrades | $277,700 | 37 | 0 |
| **Total Cost of Additional Vehicles** | | **$77,453,636** | **$21,945,196** |

#### 3.2.3.2 Specialized Transit

Specialized transit service is provided by DARTS for persons who are unable to access conventional transit service due to disabilities or health conditions. DARTS is a shared-ride service that operates under a contract with HSR.

Specialized transit fleet vehicles have not been included in this DC background study. HSR has identified the need for four new accessible supervisory vehicles to support growing specialized transit operations. Each of these four vehicles costs $153,000 (2023$), resulting in a total cost of **$612,000** for the accessible supervisory vehicles.

#### 3.2.3.3 Maintenance and Storage Facility and Related Vehicles

Transit is growing in Hamilton and a new Maintenance and Storage Facility (MSF) is needed to support this growth. The cost of this facility has been assessed as approximately $396,000,000 by HSR and the City of Hamilton.

This MSF will include the following facility vehicles:

- Service Truck;
- Stock Room Vehicle;
- Garage Equipment Repair Walk Behind Forklift;
- Garage Forklift;
- Garage Tow Mobile; and,
- Garage Equipment Repair Express Van Vehicles.

The number of new facility vehicles and cost per facility vehicle is outlined below in Exhibit 3.4. The total cost of the required additional facility vehicles is **$720,998**.

*Exhibit 3.4: Total Growth Period Facility Vehicle Requirements (2023$)*

| Facility Vehicle Type | Unit Cost (2023$) | Additional Vehicles Required (2023-2032) |
|---|---|---|
| Service Truck | $64,999 | 2 |
| Stock Room Vehicle | $65,000 | 1 |
| Garage Equipment Repair Walk Behind Forklift | $92,100 | 2 |
| Garage Forklift | $106,700 | 1 |
| Garage Tow Mobile | $62,100 | 1 |
| Garage Equipment Repair Express Van Vehicles | $86,500 | 2 |
| **Total Cost** | | **$720,998** |

### 3.2.4 Total Future Transit Needs

Exhibit 3.5 below summarizes the future transit requirements (spanning conventional fleet, specialized, facility vehicles and a storage and maintenance facility) and their associated costs. The total cost of all future transit requirements in the transit growth period (2023-2032) is approximately **$475,000,000** and the total cost of all future transit requirements in the transit post-period (2033-2035) is approximately **$22,000,000**. The full list of all transit projects and their capital costs can be found in Appendix E.

*Exhibit 3.5: Summary of Growth Period and Post-Period Future Transit Needs (2023$)*

| Vehicle Type | Quantity | Growth Period (2023-2032) | Post-Period (2033-2035) |
|---|---|---|---|
| New Peak Hour 30' Bus | 2 | | $1,329,504 |
| New Peak Hour 40' Bus | 48 | $45,852,096 | |
| New Peak Hour 40' Bus | 16 | | $15,284,032 |
| New Peak Hour 60' Bus | 8 | $9,863,616 | |

| Vehicle Type | Quantity | Growth Period (2023-2032) | Post-Period (2033-2035) |
|---|---|---|---|
| New Peak Hour 60' Bus | 2 | | $2,465,904 |
| New Spare 40' Bus | 12 | $11,463,024 | |
| New Spare 40' Bus | 3 | | $2,865,756 |
| New 40' to 60' Upgrades | 37 | $10,274,900 | |
| Accessible Supervisory Vehicles (Specialized Transit) | 4 | $612,000 | |
| Transit & Maintenance Storage Facility | 1 | $396,000,000 | |
| Facility: Service Truck | 2 | $129,998 | |
| Facility: Stock Room Vehicle | 1 | $65,000 | |
| Facility: Garage Equipment Repair Walk Behind Forklift | 2 | $184,200 | |
| Facility: Garage Forklift | 1 | $106,700 | |
| Facility: Garage Tow Mobile | 1 | $62,100 | |
| Facility: Garage Equipment Repair Express Van Vehicles | 2 | $173,000 | |
| **Approximate Total Cost** | | **$475,000,000** | **$22,000,000** |

## 3.3 Active Transportation Projects

This section describes the costing approach used to update the capital costs for active transportation projects. The AT costing methodology included updating costs identified in the *2019 DC Study* as well as developing unit rates to cost AT projects that were not previously identified in the *2019 DC Study* but are part of Hamilton's future AT network.

### 3.3.1 Active Transportation Projects from the 2019 DC Background Study

The *2019 DC Study* included approximately 160 AT projects, each with an identified length, facility type, timing and cost. All projects with a post-2023 implementation date were carried

forward for updated costing. A 39.39% inflation factor was applied to the costs of these projects to escalate the capital costs from 2019 to 2023.

### 3.3.2 New Active Transportation Projects

For the new AT projects that were not included in the *2019 DC Study*, a unit costing approach was used. The City of Hamilton provided typical costs for various active transportation components. These were reconciled with industry-standard costs to develop updated unit costs for various AT facility types. These unit costs, by facility type, were then multiplied by the length of each project to determine the cost of the AT project. The updated AT unit costs are in Appendix C.

### 3.3.3 Active Transportation Project Capital Costs

The total cost of all AT projects is approximately **$162,000,000**. The full list of all AT projects and their capital costs can be found in Appendix E and a discussion of which costs are eligible for development charges can be found in Appendix D.

## 3.4 Structures

Structures that are eligible for development charge funding include projects such as bridges, grade separations and interchange projects.

The costs for the bridges and grade separation projects were carried forward from the *2019 DC Study* and provided by the City of Hamilton. A 39.39% inflation factor was applied to the costs of the projects carried forward from the *2019 DC Study* to escalate the capital costs from 2019 to 2023.

Interchange projects connect to highways that are within the jurisdiction of the Ontario Ministry of Transportation (MTO). Interchange projects included in the STNR have costs that are shared between the MTO and the City of Hamilton. The costs for the following interchange projects were provided by the MTO and the City of Hamilton.

- Highway 5/6 Interchange;
- Mohawk Road – Highway 403 Interchange Ramp;
- Centennial Parkway at QEW Interchange Reconfiguration; and,
- QEW Off-Ramps at Fifty Road (Signalization and Reconfiguration).

The total capital cost of the major structure projects is approximately **$227,000,000**. The full list of all structures and their capital costs can be found in Appendix E.

## 3.5 Programs

The City of Hamilton's planned transportation improvements include growth-related programs. These are initiatives, often implemented city-wide, that aim to improve infrastructure associated with the road, active transportation and transit networks. Categories of programs included in the STNR are described in Section 2.6. The costs for the programs were carried forward from the *2019 DC Study* and provided by the City of Hamilton. A 39.39% inflation factor was applied to the costs of the projects carried forward from the *2019 DC Study* to escalate the capital costs from 2019 to 2023.

The total capital cost of the programs is approximately **$100,000,000**. The full list of all programs and their capital costs can be found in Appendix E.

## 3.6 Transportation Project Costing Summary

The costing process for the STNR provided updated capital cost estimates for future transportation projects in the City of Hamilton spanning road projects, active transportation projects, transit projects, structures and programs. The total capital cost of all future transportation projects within the STNR horizon (to 2051) is approximately **$3,160,000,000** as outlined below in Exhibit 3.6. A discussion of which costs are eligible for development charges funding can be found in Appendix D.

*Exhibit 3.6: Summary of STNR Project Capital Costs*

| Project Type | Approximate Capital Cost (To 2031) | Approximate Capital Cost (2031 to 2041) | Approximate Capital Cost (2041 to 2051) | Approximate Capital Cost (Total) |
|---|---|---|---|---|
| Road | $735,000,000 | $520,000,000 | $915,000,000 | **$2,170,000,000** |
| Transit (Vehicles and Facility) | $475,000,000 | $22,000,000 | - | **$497,000,000** |
| Active Transportation | $162,000,000 | - | - | **$162,000,000** |
| Structures | $196,000,000 | $31,000,000 | - | **$227,000,000** |
| Programs | $100,000,000 | - | - | **$100,000,000** |
| **Total** | | | | **$3,160,000,000** |

# 4 STNR Summary

This study reviewed the need for and the proposed timing of future transportation projects within the context of forecasted population and employment growth in the City of Hamilton to a 2041 planning horizon with consideration to 2051. This included transportation projects spanning roads, active transportation, transit, structures and programs. An evaluation framework was used to ensure that the future road and transit projects aligned with the 2018 TMP vision and desired outcomes. The results of the evaluation process informed the phasing of individual projects, with highest scoring projects being recommended for earlier implementation. The following projects are being recommended as part of the STNR:

- 132 road projects;
- 16 transit projects (transit fleet, and other transit supportive infrastructure);
- 337 active transportation projects;
- 12 structures; and,
- 26 programs.

These projects represent a total capital cost of approximately **$3,160,000,000**. Consideration for these projects in the 2024 DC Study is discussed in Appendix D.

The following appendices provide supporting documents to this STNR report:

- **Appendix A** lists the evaluation results for future road and transit projects;
- **Appendix B** lists the future active transportation projects;
- **Appendix C** lists the detailed unit cost tables to accompany road and AT project costing in Section 3;
- **Appendix D** is a report that outlines the transportation inputs to the 2024 DC Study, including apportioning benefit; and,
- **Appendix E** outlines all the transportation capital projects for inclusion in the 2024 DC Study.

# Appendix A

## Strategic Transportation Network Review Project Evaluation Results

| Project Description | | | Project Evaluation | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Location | Length (km) | Project Type | Transportation | Environment | Social | Economic | Implementation | Overall Project Score | Additional Considerations | Draft Proposed Implementation Date |
| **Road Projects** | | | | | | | | | | |
| Airport Road - Terminal Access Road to East Cargo Road | 0.32 | Road Widening | 2 | 3 | 6 | 3 | 3 | 17 | | **To 2031** |
| Arvin Avenue - Jones Road to 366m west of Glover Road | 0.55 | New Road | 2 | 6 | 3 | 3 | 3 | 17 | Due to land use constraints and presence of an active factory, the opportunity to connect Arvin Avenue in this block is not available. A longer implementation timeline would be realistic and allow the City to continue discussion with the land owner to dedicate land for road ROW. | **Post 2041** |
| Barton Street - Fruitland Road to Fifty Road | 5.11 | Road Widening | 4 | 0 | 6 | 6 | 1.5 | 17.5 | | **To 2031** |
| Arvin Avenue - McNeilly Road to Lewis Road | 0.85 | New Road | 2 | 0 | 3 | 3 | 1.5 | 9.5 | This project is prioritized to fill in missing links, support new developments, provide servicing, and serve as an alternative to Barton Street for commercial vehicles. | **To 2031** |
| Binbrook Road - Fletcher Road to Binhaven Road | 0.91 | Road Reconstruction and Urbanization | 2 | 0 | 4.5 | 1.5 | 6 | 14 | This road is scheduled for completion by developers before 2031. | **To 2031** |
| Book Road - Southcote Road to Highway 6 | 1.05 | Road Widening | 2 | 0 | 4.5 | 3 | 1.5 | 11 | Book Road implementation is prioritized to enable Airport Employment Growth District (AEGD) area growth. | **To 2031** |
| Book Road - Highway 6 to Fiddlers Green Road | 0.99 | Road Widening | 4 | 3 | 4.5 | 1.5 | 1.5 | 14.5 | This project is delayed as it is located outside of the Urban Boundary. | **Post 2041** |
| Collector 1E - Collector 6N to Dickenson Road | 0.67 | New Road | 2 | 0 | 3 | 3 | 1.5 | 9.5 | This project is in the existing urban boundary and subject to active development application | **2031 to 2041** |
| Arterial 1N - Collector 2N to Dickenson Road/Garth Street Extension | 2.97 | New Road | 2 | 0 | 4.5 | 3 | 0 | 9.5 | This project is prioritized to provide a critical east-west link in the Airport Employment Growth District (AEGD) | **To 2031** |
| Collector 2N - Collector 5W to Arterial 1N | 0.42 | New Road | 2 | 0 | 3 | 3 | 3 | 11 | | **2031 to 2041** |
| Collector 5W - Collector 7N to Collector 2N | 0.74 | New Road | 2 | 0 | 3 | 3 | 1.5 | 9.5 | | **Post 2041** |
| Collector 2W - Garner Road to Dickenson Road Extension | 2.16 | New Road | 2 | 0 | 4.5 | 3 | 0 | 9.5 | | **Post 2041** |
| Collector 6N - Upper James Street to Collector 6E | 0.95 | New Road | 2 | 0 | 3 | 3 | 0 | 8 | The Collector 6N is a strategic link in the AEGD. It is within the Upper Westside active development site and abuts the Panettoni Development. The Road will require an EA and could be constructed by 2031 or immediately after. | **2031 to 2041** |
| Collector 6N - Collector 6E to Garth Street | 0.41 | New Road | 2 | 0 | 3 | 3 | 3 | 11 | The Collector 6N is a strategic link in the AEGD. It is within the Upper Westside active development site and abuts the Panettoni Development. The Road will require an EA and could be constructed by 2031 or immediately after. | **2031 to 2041** |
| Collector 6N - Garth Street to Glancaster Road | 1.54 | New Road | 2 | 0 | 3 | 3 | 0 | 8 | This project is part of an active development application. | **2031 to 2041** |
| Collector 6E - Collector 6N to Dickenson Road | 0.64 | New Road | 2 | 0 | 3 | 3 | 1.5 | 9.5 | This project is within an active development site. | **To 2031** |
| Collector 7N - Collector 5W to Collector 2W | 1.19 | New Road | 2 | 0 | 4.5 | 3 | 1.5 | 11 | | **2031 to 2041** |
| Collector 5N - Collector 8W to Fiddler's Green | 0.83 | New Road | 2 | 0 | 3 | 1.5 | 1.5 | 8 | | **Post 2041** |
| Collector 8W - Garner Road to Collector 5N | 1.07 | New Road | 2 | 0 | 4.5 | 3 | 1.5 | 11 | | **2031 to 2041** |
| Dartnall Road - Twenty Road to Dickenson Road | 1.55 | New Road | 2 | 0 | 3 | 3 | 3 | 11 | This project is scheduled for 2026/2027 construction. | **To 2031** |
| Dickenson Road - Glancaster Road to Upper James Street | 2.90 | Road Widening | 3 | 0 | 4.5 | 3 | 1.5 | 12 | This project is scheduled for 2027 construction. | **To 2031** |
| Dickenson Road Extension - Glancaster Road to Smith Road | 0.83 | New Road | 2 | 0 | 4.5 | 3 | 3 | 12.5 | This project is scheduled for 2028 construction. | **To 2031** |
| Book Road - Smith Road to Southcote Road | 0.45 | Road Widening | 4 | 0 | 4.5 | 3 | 3 | 14.5 | Book Road implementation is prioritized to enable Airport Employment Growth District (AEGD) area growth. | **To 2031** |
| Fifty Road - Barton Street to South Service Road | 0.55 | Road Widening | 2 | 0 | 6 | 4.5 | 4.5 | 17 | | **To 2031** |
| Fifty Road - Barton Street to Highway 8 | 0.24 | Road Widening | 3 | 0 | 4.5 | 4.5 | 4.5 | 16.5 | Given that Barton Street will be widened to four lanes and function as the key east-west corridor, Fifty Road improvement south of Barton Street will not be prioritized before 2031 | **2031 to 2041** |
| Garth Street Extension - Twenty Road to Collector 6N | 0.81 | New Road | 2 | 0 | 4.5 | 3 | 1.5 | 11 | | **2031 to 2041** |
| Garth Street Extension - Collector 6N to Dickenson Road | 0.66 | New Road | 2 | 0 | 3 | 3 | 1.5 | 9.5 | This project is currently undergoing an EA and is part of an active development. It will be constructed by 2041 | **2031 to 2041** |
| Glancaster Road - Garner Road to Dickenson Road | 2.67 | Road Widening | 2 | 0 | 4.5 | 3 | 1.5 | 11 | | **To 2031** |
| Glancaster Road - Dickenson Road to Arterial 1N | 0.39 | Road Widening | 2 | 0 | 4.5 | 3 | 3 | 12.5 | | **2031 to 2041** |
| Gordon Dean Avenue - Barton Street to Highway 8 | 1.08 | New Road | 3 | 6 | 3 | 1.5 | 3 | 16.5 | | **To 2031** |
| North Waterdown Drive/Parkside Drive - Centre Road to Avonsyde Boulevard | 2.25 | New Road | 2 | 0 | 3 | 1.5 | 3 | 9.5 | Part of North Waterdown Drive is constructed, this project is prioritized to fill in missing sections. | **To 2031** |
| North Waterdown Drive/Parkside Drive - Centre Road to Avonsyde Boulevard | 2.25 | Road Widening | 2 | 0 | 4.5 | 3 | 3 | 12.5 | Part of North Waterdown Drive is constructed, this project is prioritized to fill in missing sections. | **To 2031** |
| North Waterdown Drive - Clappison Avenue Extension to Mosaic Drive | 0.59 | New Road | 2 | 0 | 3 | 1.5 | 6 | 12.5 | Part of North Waterdown Drive is constructed, this project is prioritized to fill in missing sections. | **To 2031** |
| North Waterdown Drive - Clappison Avenue Extension to Highway 6 North | 0.82 | New Road | 2 | 0 | 3 | 1.5 | 4.5 | 11 | This project is delayed since it is outside the urban boundary and the City does not own land to provide for the future right of way. This road is intended to direct traffic from North Waterdown Drive to Highway 6 (through Clappison Avenue and Parkside Drive) until the land can be acquired. | **Post 2041** |
| Rymal Road - Dartnall Road to Upper James Street | 5.17 | New Road | 5 | 3 | 4.5 | 6 | 1.5 | 20 | | **To 2031** |

| Project Description | | | Project Evaluation | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Location | Length (km) | Project Type | Transportation | Environment | Social | Economic | Implementation | Overall Project Score | Additional Considerations | Draft Proposed Implementation Date |
| Garner Road - Glancaster Road to Highway 6 South | 3.12 | Road Widening | 3 | 0 | 6 | 4.5 | 0 | 13.5 | Garner Road Construction is scheduled for 2028 to enable the development of lands south of Garner Road within the AEGD. The road widening is in response to capacity constraints and to improve Multimodal LOS along the corridor. | **To 2031** |
| Garner Road - Highway 6 South to Wilson Street | 4.86 | Road Widening | 3 | 0 | 6 | 6 | 1.5 | 16.5 | | **To 2031** |
| Smith Road - Garner Road to Hydro Corridor | 0.88 | New Road | 2 | 0 | 3 | 3 | 1.5 | 9.5 | The Section of Smith Road from Garner Road to the Hydro corridor is part of an active planning application. The southerly section is required by 2041 to support anticipated developments in the AEGD aligned with the phasing plan of the AEGD secondary plan. | **To 2031** |
| Southcote Road - Garner Road to Book Road | 1.95 | New Road | 3 | 0 | 4.5 | 3 | 0 | 10.5 | This project has been prioritized to support development in the AEGD and is a priority road. | **To 2031** |
| Trinity Road/Highway 52 - Highway 403 Interchange to Cormorant Road | 1.79 | Road Widening | 2 | 0 | 4.5 | 6 | 0 | 12.5 | This road improvement is required in short term to support the Ancaster Business Park development. | **To 2031** |
| Twenty Road East - Glover Road to Upper Redhill Valley Parkway | 0.35 | New Road | 4 | 6 | 4.5 | 3 | 4.5 | 22 | | **To 2031** |
| Twenty Road West Extension - Glancaster Road to Collector 2W | 1.06 | New Road | 2 | 0 | 4.5 | 3 | 1.5 | 11 | This road extension is fronting woodlot to the south and hydro corridor to the north. It provides network connectivity, capacity and redundancy and will not be required in the short term given the slow growth pattern in this part of the business park. | **Post 2041** |
| Smith Road - Hydro Corridor to Book Road | 1.01 | New Road | 2 | 0 | 3 | 3 | 1.5 | 9.5 | The Section of Smith Road from Garner Road to the Hydro corridor is part of an active planning application. The southerly section is required by 2041 to support anticipated developments in the AEGD aligned with the phasing plan of the AEGD secondary plan. | **2031 to 2041** |
| Smith Road - Book Road to Arterial 1N | 0.63 | New Road | 2 | 6 | 3 | 3 | 3 | 17 | The Section of Smith Road from Garner Road to the Hydro corridor is part of an active planning application. The southerly section is required by 2041 to support anticipated developments in the AEGD aligned with the phasing plan of the AEGD secondary plan. | **2031 to 2041** |
| Upper Red Hill Valley Parkway - Rymal Road to Twenty Road | 1.22 | New Road | 3 | 0 | 3 | 3 | 3 | 12 | | **2031 to 2041** |
| LRT corridor - Centennial Parkway/Main Street/King Street to McMaster University | 13.77 | Road Reconstruction and Urbanization | 6 | 0 | 6 | 3 | 6 | 21 | | **To 2031** |
| Highway 8 - Dewitt Road to Jones Road | 1.73 | Road Widening | 4 | 6 | 6 | 6 | 4.5 | 26.5 | This project has been prioritized to support Stoney Creek Block Servicing and developments | **To 2031** |
| Highway 8 - Jones Road to McNeilly Road | 1.73 | Road Widening | 3 | 3 | 4.5 | 4.5 | 3 | 18 | | **2031 to 2041** |
| Clappison Avenue Extension - Parkside Drive to North Waterdown Drive | 0.54 | New Road | 2 | 0 | 3 | 1.5 | 3 | 9.5 | This project has been prioritized as per the Waterdown/Aldershot Transportation Master Plan | **To 2031** |
| Highway 8 - McNeilly Road to Fifty Road | 2.67 | Road Widening | 2 | 0 | 4.5 | 1.5 | 1.5 | 9.5 | This project has been scheduled to support Block 3 of the SCUBE developments | **2031 to 2041** |
| Collector B (Block 1) - Fruitland Road to Jones Road | 0.89 | New Road | 3 | 0 | 3 | 1.5 | 3 | 10.5 | | **2031 to 2041** |
| Collector C (Block 2) - Barton Street to Highway 8 | 0.74 | New Road | 3 | 3 | 3 | 1.5 | 6 | 16.5 | | **To 2031** |
| Collector D (Block 3) - McNeilly Road to Collector F | 1.25 | New Road | 2 | 3 | 3 | 1.5 | 4.5 | 14 | | **2031 to 2041** |
| Collector E (Block 3) - Barton Street to Highway 8 | 0.66 | New Road | 2 | 3 | 4.5 | 1.5 | 6 | 17 | | **To 2031** |
| Collector F (Block 3) - Barton Street to Collector D | 0.22 | New Road | 2 | 6 | 3 | 1.5 | 6 | 18.5 | | **To 2031** |
| Longwood Road - Aberdeen Avenue to Main Street | 0.64 | Road Reconstruction and Urbanization | 5 | 3 | 4.5 | 3 | 6 | 21.5 | | **To 2031** |
| Upper Wellington Street - Limeridge Road to Stone Church Road | 1.04 | Road Widening | 6 | 3 | 4.5 | 1.5 | 3 | 18 | | **To 2031** |
| Regional Road 56 - Dalgliesh Trail to Golf Club Road | 1.44 | Road Widening | 2 | 0 | 3 | 4.5 | 1.5 | 11 | This project is related to the Elfrida developments which will not take place before 2041. | **Post 2041** |
| Garth Street - Rymal Road to Twenty Road West | 1.41 | Road Widening | 3 | 0 | 4.5 | 1.5 | 0 | 9 | This project supports the Airport Employment Growth District (AEGD) | **2031 to 2041** |
| South Service Road - Lewis Road to Fifty Road | 1.79 | Road Widening | 2 | 6 | 4.5 | 4.5 | 1.5 | 18.5 | | **To 2031** |
| Lincoln M. Alexander Parkway-Red Hill Valley Parkway - Highway 403 to Queen Elizabeth Way | 17.30 | Road Widening | 6 | 0 | 4.5 | 3 | 1.5 | 15 | The Road Widening to 6 lanes is not feasible by 2031. The EA needs to be completed for the two local expressways, which requires robust engagement with Indigenous Nations (Joint Stewardship Board of Haudenosaunee Development Institute). The work also requires coordination with MTO for Highway 403 and QEW interchange improvements. | **2031 to 2041** |
| Upper James Street - Rymal Road to Highway 6 South | 7.22 | Road Widening | 3 | 0 | 4.5 | 4.5 | 0 | 12 | | **2031 to 2041** |
| Upper Wentworth Street - End to Twenty Road | 0.74 | New Road | 4 | 0 | 3 | 1.5 | 1.5 | 10 | | **Post 2041** |
| Upper Sherman Avenue - End to Twenty Road | 0.75 | New Road | 4 | 0 | 3 | 1.5 | 1.5 | 10 | | **Post 2041** |
| Upper Gage Avenue - End to Twenty Road | 0.73 | New Road | 3 | 0 | 3 | 1.5 | 1.5 | 9 | | **Post 2041** |
| Upper Ottawa Street - End to Twenty Road | 0.95 | New Road | 3 | 0 | 3 | 3 | 1.5 | 10.5 | | **2031 to 2041** |
| Miles Road - Rymal Road to Dickenson Road | 2.66 | Road Widening | 4 | 0 | 4.5 | 1.5 | 0 | 10 | | **Post 2041** |
| East-West Collector - Upper Wentworth Street to Upper Ottawa Street | 2.52 | New Road | 2 | 0 | 3 | 3 | 0 | 8 | | **Post 2041** |
| Twenty Road East - Upper James Street to Dartnall Road | 5.76 | Road Widening | 2 | 0 | 4.5 | 3 | 0 | 9.5 | | **Post 2041** |
| Collector Road 6E - Collector 6N to Twenty Road West | 0.70 | New Road | 2 | 3 | 3 | 1.5 | 1.5 | 11 | This project has been delayed as it is outside of the urban boundary. | **Post 2041** |
| Collector Road 1E - Collector 6N to Twenty Road West | 0.73 | New Road | 2 | 0 | 3 | 3 | 1.5 | 9.5 | | **Post 2041** |
| First Road East - Highway 20 to Mud Street | 1.97 | Road Widening | 2 | 6 | 4.5 | 1.5 | 1.5 | 15.5 | This project is related to the Elfrida developments which will not take place before 2041. | **Post 2041** |
| First Road East - Highway 20 to Golf Club Road | 2.08 | New Road | 2 | 0 | 3 | 1.5 | 0 | 6.5 | | **Post 2041** |

| Project Description | | | Project Evaluation | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Location | Length (km) | Project Type | Transportation | Environment | Social | Economic | Implementation | Overall Project Score | Additional Considerations | Draft Proposed Implementation Date |
| Upper Centennial Parkway - Mud Street to Highway 20 | 2.00 | Road Widening | 5 | 3 | 4.5 | 6 | 1.5 | 20 | This project is related to the Elfrida developments which will not take place before 2041. | **Post 2041** |
| Arterial N-S - Bellagio Avenue to Golf Club Road | 1.88 | New Road | 2 | 0 | 3 | 1.5 | 0 | 6.5 | | **Post 2041** |
| Dickenson Extension - Trinity Church to Golf Club Road | 0.65 | New Road | 2 | 0 | 3 | 1.5 | 1.5 | 8 | | **Post 2041** |
| Mud Street - Red Hill Valley Parkway to Upper Centennial Parkway | 3.62 | Road Widening | 5 | 0 | 4.5 | 6 | 0 | 15.5 | This project has been delayed as the Mud Street widening is not justified without the Elfrida lands fully developed. | **Post 2041** |
| Twenty Road - Upper Red Hill Valley Parkway to Hendershot Road | 5.60 | New Road | 2 | 0 | 3 | 1.5 | 0 | 6.5 | | **Post 2041** |
| Highway 20 - 500m east of Upper Centennial to Hendershot Road | 1.17 | Road Widening | 2 | 3 | 3 | 3 | 1.5 | 12.5 | This project is related to the Elfrida developments which will not take place before 2041. | **Post 2041** |
| Highway 20 - Hendershot Road to Hamilton boundary | 4.57 | Road Widening | 3 | 0 | 4.5 | 3 | 0 | 10.5 | This project is related to the Elfrida developments which will not take place before 2041. | **Post 2041** |
| White Church Road - Upper James Street to Miles Road | 2.88 | Road Widening | 2 | 3 | 4.5 | 1.5 | 0 | 11 | This project is to support the development of White Church lands in the urban boundary expansion area. These lands are subject to the completion of the Secondary Planning process and the council's decision to freeze greenfield development until 2041. | **Post 2041** |
| Airport Road - Upper James Street to Miles Road | 2.75 | Road Widening | 4 | 0 | 4.5 | 1.5 | 0 | 10 | | **Post 2041** |
| Ferris Road Extension - White Church Road to Airport Road | 1.34 | New Road | 2 | 3 | 3 | 1.5 | 1.5 | 11 | This project is to support the development of White Church lands in the urban boundary expansion area. These lands are subject to the completion of the Secondary Planning process and the council's decision to freeze greenfield development until 2041. | **Post 2041** |
| Upper Centennial Parkway - Mud Street to Green Mountain Road | 1.00 | Road Reconstruction and Urbanization | 5 | 3 | 4.5 | 6 | 3 | 21.5 | This project is related to the Elfrida developments which will not take place before 2041. | **Post 2041** |
| Miles Road - Dickenson Road to White Church Road | 4.13 | Road Widening | 2 | 0 | 4.5 | 1.5 | 0 | 8 | | **Post 2041** |
| Fiddler's Green Road - Garner Road to Book Road | 1.97 | Road Widening | 2 | 0 | 4.5 | 3 | 0 | 9.5 | | **Post 2041** |
| Glancaster Road - Arterial 1N to Airport Boundary | 0.48 | New Road | 2 | 3 | 4.5 | 3 | 3 | 15.5 | This road urbanization project will be scheduled with the section of Glancaster From Dickenson Road to Arterial 1N which is planned for 2031 - 2041 implementation. | **2031 to 2041** |
| Collector 9W - Garner Road to Collector 11N | 0.33 | New Road | 2 | 6 | 3 | 3 | 3 | 17 | Collector 9W is a new road supporting a small enclave of institutional land in the western part of the AEGD. The institutional land is not subject to an active development application. Hence the road implementation could be postponed to post-2031. | **2031 to 2041** |
| Smith Road - Arterial 1N to Airport Boundary | 0.21 | New Road | 2 | 6 | 3 | 3 | 3 | 17 | | **To 2031** |
| Airport Road - East Cargo Road to Upper James Street | 1.08 | Road Widening | 2 | 3 | 6 | 3 | 3 | 17 | | **To 2031** |
| Airport Service Road - Glancaster Road to Airport Road | 1.78 | New Road | 2 | 0 | 3 | 1.5 | 0 | 6.5 | | **Post 2041** |
| Book Road East - Collector 2W to Glancaster Road | 0.85 | Road Widening | 2 | 3 | 4.5 | 3 | 3 | 15.5 | | **2031 to 2041** |
| Collector 10N - Garner Road to Smith Road | 1.17 | New Road | 4 | 6 | 3 | 3 | 3 | 19 | | **To 2031** |
| Collector 10N - Smith Road to Collector 1W | 1.47 | New Road | 2 | 6 | 3 | 1.5 | 1.5 | 14 | This project has been delayed as it is outside of the urban boundary. | **Post 2041** |
| Airport Access Route - Upper Red Hill Valley Parkway to Highway 6 South | 10.92 | New Road | 2 | 0 | 3 | 3 | 0 | 8 | | **Post 2041** |
| Rymal Road - Glancaster Road to Upper Paradise Street | 0.55 | Road Widening | 3 | 0 | 6 | 4.5 | 6 | 19.5 | | **To 2031** |
| Twenty Road - Glancaster Road to Upper James Street | 2.90 | Road Widening | 2 | 0 | 4.5 | 3 | 0 | 9.5 | This project is needed to support the Twenty Road West developments. | **2031 to 2041** |
| Airport Road - Glancaster Road to Terminal Access Road | 1.71 | Road Reconstruction and Urbanization | 2 | 6 | 6 | 1.5 | 1.5 | 17 | This project is required in the short term to support the Airside developments and the KF facility. | **To 2031** |
| West 5th Street - Rymal Road to Stone Church Road | 1.01 | Road Widening | 3 | 3 | 4.5 | 3 | 3 | 16.5 | | **To 2031** |
| Fruitland Road - Highway 8 to Barton Street | 1.05 | Road Widening | 3 | 3 | 4.5 | 3 | 3 | 16.5 | | **To 2031** |
| McNeilly Road - Highway 8 to Barton Street | 0.90 | Road Reconstruction and Urbanization | 3 | 3 | 3 | 1.5 | 3 | 13.5 | The road will be improved as part of Stoney Creek Block 1 and 2 development which is planned for pre 2031 implementation | **To 2031** |
| Lewis Road - Highway 8 to Barton Street | 0.49 | Road Reconstruction and Urbanization | 2 | 3 | 3 | 1.5 | 3 | 12.5 | The road will be improved as part of Stoney Creek Block 1 and 2 development which is planned for pre 2031 implementation | **To 2031** |
| Glover Road - Highway 8 to Barton Street | 0.81 | Road Reconstruction and Urbanization | 3 | 0 | 4.5 | 1.5 | 3 | 12 | | **2031 to 2041** |
| Jones Road - Highway 8 to Barton Street | 0.92 | Road Reconstruction and Urbanization | 3 | 3 | 4.5 | 3 | 3 | 16.5 | | **To 2031** |
| Golf Links Road - McNiven Road to Kitty Murray Lane | 0.84 | Road Widening | 3 | 6 | 6 | 3 | 3 | 21 | | **To 2031** |
| Jerseyville Road - Wilson Street to Lloyminn Avenue | 0.79 | Road Widening | 2 | 0 | 4.5 | 1.5 | 1.5 | 9.5 | This project has been prioritized to align with the timing of the other Jerseyville Road projects | **2031 to 2041** |
| Shaver Road - Trustwood to Garner Road | 0.74 | Road Reconstruction and Urbanization | 2 | 3 | 4.5 | 3 | 3 | 15.5 | | **To 2031** |
| McNiven Road - Rousseaux Street/Mohawk Road to Golf Links Road | 0.62 | Road Widening | 4 | 0 | 6 | 1.5 | 3 | 14.5 | This project has been prioritized based on road condition. | **To 2031** |
| Dickenson Road - 350 meters west of Nebo to 330m west of Glover Road | 1.20 | Road Reconstruction and Urbanization | 4 | 3 | 3 | 3 | 1.5 | 14.5 | | **2031 to 2041** |
| Dickenson Road East - Upper James Street to 350 meters west of Nebo Road | 4.24 | Road Reconstruction and Urbanization | 3 | 0 | 4.5 | 1.5 | 0 | 9 | | **Post 2041** |

| Project Description | | | Project Evaluation | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Location | Length (km) | Project Type | Transportation | Environment | Social | Economic | Implementation | Overall Project Score | Additional Considerations | Draft Proposed Implementation Date |
| Glover Road - Twenty Road to Rymal Road | 1.31 | Road Reconstruction and Urbanization | 3 | 0 | 3 | 3 | 1.5 | 10.5 | The road needs upgrade in coordination with servicing which is planned for implementation in the next five years. | **To 2031** |
| Parkside Drive - Hollybush Drive to Highway 6 | 1.07 | Road Widening | 3 | 0 | 4.5 | 3 | 1.5 | 12 | This project is planned for construction in 2026, associated with the Highway 5/6 interchange works. | **To 2031** |
| Parkside Drive - Main Street to North Waterdown Drive | 0.59 | Road Widening | 3 | 0 | 4.5 | 3 | 3 | 13.5 | | **2031 to 2041** |
| Fruitland Road - Arvin Avenue to Barton Street | 0.36 | Road Widening | 3 | 6 | 4.5 | 4.5 | 3 | 21 | | **To 2031** |
| Fletcher Road - 500m south of Rymal Road to Golf Club Road | 1.60 | Road Widening | 4 | 0 | 3 | 1.5 | 0 | 8.5 | | **Post 2041** |
| Golf Club Road - Trinity Church Road to Hendershot Road | 5.33 | Road Widening | 4 | 0 | 3 | 1.5 | 0 | 8.5 | This project is related to the Elfrida developments which will not take place before 2041. | **Post 2041** |
| Hendershot Road - Highway 20 to Golf Club Road | 2.09 | Road Widening | 3 | 0 | 3 | 1.5 | 0 | 7.5 | This project is related to the Elfrida developments which will not take place before 2041. | **Post 2041** |
| Highland Road - Upper Centennial Parkway to Second Road East | 1.67 | Road Widening | 3 | 3 | 4.5 | 1.5 | 1.5 | 13.5 | This project is delayed since the urban boundary expansion will occur post-2041 once the expansion freeze is lifted. | **Post 2041** |
| Mud Street - Upper Centennial Parkway to Second Road East | 1.67 | Road Reconstruction and Urbanization | 2 | 3 | 3 | 3 | 1.5 | 12.5 | This project is related to the Elfrida developments which will not take place before 2041. | **Post 2041** |
| Second Road East - Highway 20 to Mud Street | 1.94 | Road Widening | 2 | 3 | 3 | 1.5 | 0 | 9.5 | This project is related to the Elfrida developments which will not take place before 2041. | **Post 2041** |
| Trinity Church Road - Hydro Corridor (470m south of Rymal Road) to Golf Club Road | 1.60 | Road Widening | 4 | 0 | 4.5 | 3 | 1.5 | 13 | This project is related to the Elfrida developments which will not take place before 2041. | **Post 2041** |
| Jones Road - Barton Street to South Service Road | 0.92 | Road Reconstruction and Urbanization | 3 | 6 | 3 | 3 | 3 | 18 | | **To 2031** |
| Lewis Road - Barton Street to South Service Road | 0.87 | Road Reconstruction and Urbanization | 2 | 3 | 3 | 4.5 | 3 | 15.5 | | **To 2031** |
| Millen Road - Barton Street to South Service Road | 1.07 | Road Reconstruction and Urbanization | 3 | 6 | 4.5 | 3 | 3 | 19.5 | | **To 2031** |
| Fletcher Road - McWatters Street to Golf Club Road | 3.60 | Road Reconstruction and Urbanization | 2 | 0 | 3 | 1.5 | 0 | 6.5 | | **Post 2041** |
| South Service Road - Millen Road to Gray Road | 1.55 | Road Reconstruction and Urbanization | 4 | 3 | 3 | 3 | 1.5 | 14.5 | | **2031 to 2041** |
| Jerseyville Road - Lloyminn Avenue to Meadowbrook Drive | 1.25 | Road Reconstruction and Urbanization | 2 | 3 | 4.5 | 1.5 | 1.5 | 12.5 | | **2031 to 2041** |
| Nebo Road - Twenty Road to Dickenson Road/Dartnall Road | 0.74 | Road Reconstruction and Urbanization | 2 | 0 | 3 | 3 | 1.5 | 9.5 | This project has been prioritized as it is in conjunction with the Dartnall Road extension project | **To 2031** |
| Collector 11N - Fiddler's Green Road to Collector 9W | 0.35 | New Road | 2 | 6 | 3 | 3 | 3 | 17 | This road is adjacent to lands that are in phase 2 of the Airport Employment Growth District secondary plan. | **2031 to 2041** |
| Nebo Road - Rymal Road to Twenty Road East | 1.30 | Road Reconstruction and Urbanization | 3 | 0 | 4.5 | 3 | 1.5 | 12 | This project is scheduled for construction in 2024. | **To 2031** |
| Collector 1W - Collector 10N to Garner Road | 0.39 | New Road | 2 | 0 | 3 | 1.5 | 3 | 9.5 | Collector 1W connects Collector 10N to Garner Road. It provides network redundancy and accessibility to lands south of Garner Road. The implementation of Collector 1W should be the same as the Collector 10N. | **2031 to 2041** |
| Highway 403 - Mohawk Road/Lincoln M. Alexander Parkway to Highway 6 south interchange | - | Road Widening | 4 | 3 | 3 | 6 | 4.5 | 20.5 | This project is an MTO project | **To 2031** |
| **Rapid Transit Projects** | | | | | | | | | | |
| 10 B Line East | - | Rapid Transit Route | 6 | 0 | 6 | 6 | 6 | 24 | | **To 2031** |
| 60 L Line | - | Rapid Transit Route | 6 | 0 | 6 | 6 | 6 | 24 | | **To 2031** |
| 20 A Line | - | Rapid Transit Route | 6 | 0 | 6 | 6 | 6 | 24 | | **To 2031** |
| 30 S Line | - | Rapid Transit Route | 6 | 0 | 6 | 6 | 6 | 24 | | **To 2031** |
| 50 T Line | - | Rapid Transit Route | 6 | 0 | 6 | 6 | 6 | 24 | | **To 2031** |
| 40 E Line | - | Rapid Transit Route | 6 | 0 | 4.5 | 6 | 6 | 22.5 | | **To 2031** |

# Appendix B

## Strategic Transportation Network Review Active Transportation Projects

| Location | Timing (year) | Length (km) | Facility Type |
|---|---|---|---|
| Barton - Brockley to Fruitland | 2019-2031 | 3.95 | Multi-Use Trail |
| Barton - Red Hill Valley to Lake | 2019-2031 | 1.61 | Cycle track |
| Baseline/ Lockport - Winona Road to Niagara border | 2019-2031 | 1.15 | Bike Lane |
| Battlefield Park - Bruce Trail Link - Greenhill to Bruce Trail to Glover Mtn | 2019-2031 | 0.75 | Multi-Use Trail |
| Beach Bike Lane - under QEW | 2019-2031 | 0.24 | Bike Lane |
| Beach Boulevard - lift bridge to Woodward/Eastport | 2019-2031 | 4.52 | Bike Lane |
| Beddoe Drive Link | 2019-2031 | 0.91 | Multi-Use Trail |
| Binbrook Road - Regional Road 56 to Southbrook | 2019-2031 | 0.28 | Bike Lane |
| Binbrook Road - Trinity Church to Royal Winter/Binhaven | 2019-2031 | 2.16 | Multi-Use Trail |
| Birch/ Holton - Burlington St to Cannon/ King/ Delaware | 2019-2031 | 1.4 | Bike Lane |
| Burlington Street East Boulevard Trail - Ottawa to Parkdale to Glow | 2019-2031 | 2.3 | Multi-Use Trail |
| Burlington Street Link - Ferguson/ Dock Service Road to Sherman | 2019-2031 | 1.88 | Multi-Use Trail |
| Burlington/ Industrial - Sherman to Gage | 2019-2031 | 0.86 | Cycle track |
| Centennial Parkway - North Service to GO station/ Kenora | 2019-2031 | 1.2 | Multi-Use Trail |
| Centre - Concession 8 E to Concession 7 E | 2019-2031 | 1.8 | Paved Shoulder |
| Centre - Grindstone Creek to Concession 5 E | 2019-2031 | 0.45 | Paved Shoulder |
| Centre - Warren/ Carlisle Road to Progreston | 2019-2031 | 0.78 | Paved Shoulder |
| Charlton/ John - James to Ferguson & St Joseph's Dr | 2019-2031 | 0.8 | Bike Lane |
| Chedmac - Southridge to Rice | 2019-2031 | 0.53 | Bike Lane |
| Chedoke Rail Trail - Highway 403 to Dundurn | 2019-2031 | 4.68 | Multi-Use Trail |
| Cherry Beach Road Link - Millen to Dewitt | 2019-2031 | 0.91 | Multi-Use Trail |
| Christie-Tews - Christie C.A. to Harvest | 2019-2031 | 2.75 | Multi-Use Trail |
| Delawana - Kenora to Lake | 2019-2031 | 1.02 | Bike Lane |
| Devil's Punchbowl Link - Mountain Ave/ Lake Ave to Ridge Road/ Devil's | 2019-2031 | 0.42 | Multi-Use Trail |
| Dewitt - Barton to Dundee | 2019-2031 | 0.9 | Bike Lane |
| Dewitt - Dundee to Ridge | 2019-2031 | 0.5 | Bike Lane |
| Dundas St - Main to Cootes | 2019-2031 | 0.68 | Bike Lane |
| Dundas St in Waterdown - Highway 6 to Kearns (border) | 2019-2031 | 6.03 | Multi-Use Trail |
| East Townline - Mud to Highland | 2019-2031 | 1.1 | Bike Lane |
| Eastport Drive Lift Bridge Link | 2019-2031 | 0.6 | Multi-Use Trail |
| Edgewood - Safari to Highway 6 | 2019-2031 | 0.9 | Bike Lane |
| Emperor - Brigade to Acadia | 2019-2031 | 0.44 | Bike Lane |
| Existing Pipeline Trail - Main to Strathearne | 2019-2031 | 2.2 | Multi-Use Trail |
| Fallsview - Sydenham to Rock Chapel Road | 2019-2031 | 1.4 | Multi-Use Trail |
| Fennell Avenue Boulevard Trail - Garth/ West 18th to West 5th | 2019-2031 | 1.2 | Multi-Use Trail |
| Ferguson - Young to Charlton | 2019-2031 | 0.21 | Bike Lane |
| Fiddler's Green - Amberly to Carluke | 2019-2031 | 6.77 | Bike Lane |
| Fiddler's Green - Jerseyville to Wilson | 2019-2031 | 0.25 | Bike Lane |
| First Rd W/Whitedeer/Terryberry & Picardy/ Highbury - Glover Mtn Road/ Ridgeview Dr to Rymal/ Bellagio | 2019-2031 | 4.08 | Bike Lane |
| Frances - Grays to Southshore | 2019-2031 | 1.15 | Bike Lane |
| Frid/Chatham - Longwood to Dundurn | 2019-2031 | 1 | Bike Lane |
| Golf Links/ Halson - Wilson to Southcote | 2019-2031 | 1.19 | Bike Lane |
| Governor's - Wainwright to Lynden | 2019-2031 | 13.06 | Paved Shoulder |
| Governor's - Ogilvie to Main | 2019-2031 | 0.24 | Bike Lane |
| Grays/ Gray - Confederation Park gate to King | 2019-2031 | 3 | Multi-Use Trail |
| Greenhill - Harrisford to Summercrest | 2019-2031 | 1.94 | Bike Lane |
| Greenhill - Summercrest to King | 2019-2031 | 1.2 | Bike Lane |
| Hamilton Drive Link | 2019-2031 | - | Multi-Use Trail |
| Hamilton in Waterdown - Centre/Main to Highway 5/Dundas | 2019-2031 | 1 | Multi-Use Trail |
| Hamilton-Brantford Rail Ttrail - Bridlewood Dr to Ewen | 2019-2031 | 4 | Multi-Use Trail |
| Hatt - Peel to John | 2019-2031 | 0.65 | Cycle track |
| Hollybush - Parkside to Dundas St | 2019-2031 | 1.1 | Bike Lane |
| Hydro Corridor - Barton to Lawrence | 2019-2031 | 1.9 | Multi-Use Trail |
| Hydro Corridor - Lawrence Avenue to Greenhill Avenue | 2019-2031 | 1.15 | Multi-Use Trail |
| Hydro Corridor - Wilson/Highway 52 to Regional Road 56 | 2019-2031 | 12.7 | Multi-Use Trail |
| Iroquois Heights to Old Mohawk - Chedoke Rail Trail to Old Mohawk Road | 2019-2031 | 0.85 | Multi-Use Trail |
| Jones Road Link | 2019-2031 | 2.67 | Multi-Use Trail |
| Karst Escarpment Loop - Pritchard to Mount Albion/Winterberry | 2019-2031 | 0.7 | Multi-use Trail |
| Kenora/ Greenford/ Owen - Bancroft to King | 2019-2031 | 2.6 | Bike Lane |
| Kentley - Eugene to Kenora | 2019-2031 | 0.4 | Signed Bike Route |
| Kerns Road,Waterdown South Link | 2019-2031 | - | Multi-Use Trail |
| King in Dundas - Bond to Peel | 2019-2031 | 0.8 | Bike Lane |
| King over Red Hill Valley Parkway - Lawrence to Pottruff | 2019-2031 | 0.6 | Cycle track |
| Kitty Murray - Garner to Golf Links | 2019-2031 | 2.26 | Bike Lane |
| Limeridge - Birchview to Mtn Brow | 2019-2031 | 1.98 | Bike Lane |
| Limeridge - Garth/ Bonaventure to West 5th/ Hawkridge | 2019-2031 | 1.37 | Bike Lane |
| Limeridge Mall Hydro Corridor Trail - Mohawk Road to South of Rymal | 2019-2031 | 3.8 | Multi-Use Trail |
| Lovers Lane - Sulpher Springs to Jerseyville | 2019-2031 | 0.9 | Bike Lane |
| Marston - Paramount to Gordon Drummond | 2019-2031 | 0.4 | Bike Lane |
| Meadowbrook | 2019-2031 | 1 | Bike Lane |
| Meadowlands/ Raymond - Golf Links to Garner | 2019-2031 | 2.1 | Bike Lane |

| Location | Timing (year) | Length (km) | Facility Type |
|---|---|---|---|
| Millen - Shoreview to Millen/ Seaman | 2019-2031 | 0.5 | Bike Lane |
| Mohawk - Old Mohawk to Upper Paradise | 2019-2031 | 1.83 | Bike Lane |
| Montclair/ Central/ Graham/ Frederick | 2019-2031 | 3.8 | Signed Bike Route |
| Mountain Brow Boulevard Trail - Mohawk to Arbour | 2019-2031 | 1.81 | Multi-Use Trail |
| Mountain Brow East Path - Rendell to Oakcrest | 2019-2031 | 0.81 | Multi-Use Trail |
| Mountain Brow in Waterdown - Mill to Burke to King Road | 2019-2031 | 1.2 | Multi-Use Trail |
| Museum of Steam and Tech Link - Woodward to Red Hill Valley Trail | 2019-2031 | 0.75 | Multi-Use Trail |
| Nash - Bancroft to King | 2019-2031 | 2.58 | Cycle track |
| North Service Road - Bellavista to Baseline | 2019-2031 | 0.98 | Bike Lane |
| North Service Road - Dewitt to Lakeview | 2019-2031 | 0.73 | Bike Lane |
| Northlawn Avenue Link | 2019-2031 | 1.1 | Multi-Use Trail |
| Ogilvie/ Old Ancaster - Hatt/ King to Hamilton-Brantford Rail Trail | 2019-2031 | 0.8 | Bike Lane |
| Old Guelph Road - Paterson to York Bike Lane | 2019-2031 | 3.53 | Paved Shoulder |
| Old Mud - Mt Albion  to Winterberry | 2019-2031 | 0.4 | Bike Lane |
| Osler/ Main - Hatt/ King to Main + 125m of Main | 2019-2031 | 2 | Bike Lane |
| Ottawa Street South - Bruce Trail Link | 2019-2031 | 0.39 | Multi-Use Trail |
| Proposed Pipeline Trail - Museum of Steam and Technology to Mahoney | 2019-2031 | 2.4 | Multi-Use Trail |
| Queensdale - Upper Sherman to Upper Ottawa | 2019-2031 | 1.56 | Bike Lane |
| Queensdale - Upper Wellington to Skyland | 2019-2031 | 0.39 | Bike Lane |
| Queenston/ Highway 8 - King to Dewitt | 2019-2031 | 1.37 | Bike Lane |
| Red Hill Pedestrian Crossing - Eugene Street to Glengrove Avenue | 2019-2031 | - | Active Transportation Bridge |
| Regional Road 56 - Swayze Road to Cemetery | 2019-2031 | 4.6 | Multi-Use Trail |
| Regional Road 56 south of Kirk - Windwood to Kirk | 2019-2031 | 1.14 | Multi-Use Trail |
| Ridge Road - Devil Punch Bowl to Dewitt | 2019-2031 | 2.91 | Multi-Use Trail |
| Rousseaux/ Mohawk - Wilson to Filman | 2019-2031 | 1.6 | Bike Lane |
| Scenic - Chedoke Rail Ttrail to Upper Paradise | 2019-2031 | 2.27 | Bike Lane |
| Scenic/ Denlow - Upper Paradise to Garth | 2019-2031 | 0.95 | Bike Lane |
| Shaver - Wilson to Garner | 2019-2031 | 0.52 | Multi-Use Trail |
| Strachan Street Trail - James to Ferguson | 2019-2031 | 0.66 | Multi-Use Trail |
| Stuart Street Rail Link | 2019-2031 | 0.94 | Multi-Use Trail |
| Upper James - William Connell Park | 2019-2031 | 0.38 | Multi-Use Trail |
| Upper Sherman - Stone Church to Rymal to Miles | 2019-2031 | 1 | Bike Lane |
| Upper Wentworth - Concession to Fennell | 2019-2031 | 1.03 | Bike Lane |
| Upper Wentworth - Fennell to East 24th | 2019-2031 | 1.03 | Bike Lane |
| Valley Road - Rock Chapel to York Road | 2019-2031 | 1.4 | Paved Shoulder |
| Van Wagner's - Beach Bike Lane to Centennial Parkway | 2019-2031 | 2.5 | Bike Lane |
| Victoria - Young to Burlington | 2019-2031 | 2.53 | Bike Lane |
| Walnut Grove & Sanctuary Park - Walnut Grove/ Ogilvie to Highland Park Dr | 2019-2031 | 0.4 | Multi-Use Trail |
| Warrington/ South Service/ Lake - Centennial Parkway to Maple | 2019-2031 | 3.86 | Multi-Use Trail |
| White Church Road West Airport Link | 2019-2031 | - | Multi-Use Trail |
| White Church Road West Link | 2019-2031 | 6.55 | Multi-Use Trail |
| Wilson in Ancaster - Rousseaux to Halson | 2019-2031 | 0.85 | Bike Lane |
| Winona - Lido/ shore to Peachtree (Helena) | 2019-2031 | 1.97 | Multi-Use Trail |
| York Road - Olympic to Valley Road | 2019-2031 | 1.7 | Paved Shoulder |
| York Road & York Road at Old Guelph - Valley Road to Highway 6 | 2019-2031 | 2.5 | Multi-Use Trail |
| Acadia - Emperor to End | 2023-2031 | 0.54 | Signed Bike Route |
| Airport Road - Butter to Miles | 2023-2031 | 6.66 | Bike Lane |
| Alma - Sydenham to Queen | 2023-2031 | 0.09 | Bike Lane |
| Aquasanta - Dicenzo to Ascoli | 2023-2031 | 0.09 | Signed Bike Route |
| Baker - Breadalbane to Dundurn | 2023-2031 | 0.14 | Signed Bike Route |
| Baseline - Lockport to North Service Road | 2023-2031 | 2.66 | Bike Lane |
| Bedrock - First Rd W to 300m West of First Rd W | 2023-2031 | 0.33 | Bike Lane |
| Bellagio - Fletcher to Terryberry | 2023-2031 | 1.64 | Bike Lane |
| Binbrook Road - Fletcher to Binhaven | 2023-2031 | 0.94 | Multi-Use Trail |
| Binbrook Road - Southbrook to Boundary | 2023-2031 | 6.02 | Paved Shoulder |
| Book Road - Shaver to Fiddler's Green | 2023-2031 | 2.5 | Paved Shoulder |
| Book Road - Fiddler's Green to Glancaster | 2023-2031 | 3.42 | Bike Lane |
| Brantdale - West Fifth Street to Upper James | 2023-2031 | 0.42 | Signed Bike Route |
| Bridlewood - Governor's to Highland Park Drive | 2023-2031 | 0.59 | Signed Bike Route |
| Brigade - Upper Wellington to Emperor | 2023-2031 | 0.82 | Signed Bike Route |
| Brock - Harvest Road to Highway 8 | 2023-2031 | 0.55 | Paved Shoulder |
| Brock - Safari to Freelton | 2023-2031 | 4.5 | Paved Shoulder |
| Burke - Great Falls Blvd to McKnight Ave E | 2023-2031 | 0.51 | Bike Lane |
| Butter - Glancaster to Fiddler's Green | 2023-2031 | 2.21 | Bike Lane |
| Canada - Locke to Queen | 2023-2031 | 0.41 | Signed Bike Route |
| Carlisle - Highway 6 to Wildberry Way | 2023-2031 | 2.35 | Paved Shoulder |
| Carlisle Trail Loop - Centre Road to Border | 2023-2031 | 3.35 | Paved Shoulder |
| Carlson Street - Highland Road to End | 2023-2031 | 0.11 | Signed Bike Route |
| Carluke - Glancaster to Shaver | 2023-2031 | 3.53 | Paved Shoulder |
| Central - Edgemont to Cochrane | 2023-2031 | 1.54 | Signed Bike Route |
| Chatham Street - Dundurn to Frid | 2023-2031 | 0.27 | Bike Lane |
| Concession 10 West - Foreman to Freelton | 2023-2031 | 9.28 | Signed Bike Route |

| Location | Timing (year) | Length (km) | Facility Type |
|---|---|---|---|
| Concession 11 E - Centre Road to Freelton | 2023-2031 | 2.65 | Paved Shoulder |
| Concession 4 West - Millgrove Sideroad to Highway 6 | 2023-2031 | 1.78 | Paved Shoulder |
| Concession 6 East - Highway 6 to Centre Road | 2023-2031 | 2.79 | Paved Shoulder |
| Concession 7 West - Boundary to Edgewood Road | 2023-2031 | 18.8 | Paved Shoulder |
| Concession 8 West - Middletown to Middletown | 2023-2031 | 0.14 | Signed Bike Route |
| Concession Street - Mountain Park Ave to Mountain Brow Boulevard | 2023-2031 | 0.51 | Bike Lane |
| Confederation Beach Park - Centennial Parkway to West of Gray | 2023-2031 | 1.98 | Signed Bike Route |
| Cormorant - Trinity to Shaver | 2023-2031 | 2.46 | Bike Lane |
| Culotta - Perrelli to Chudleigh | 2023-2031 | 0.14 | Signed Bike Route |
| Dicenzo Dr - Aquasanta Crescent to South Turn on Dicenzo Drive | 2023-2031 | 0.36 | Signed Bike Route |
| Dicenzo Dr - Upper Wellington to Trieste | 2023-2031 | 0.2 | Signed Bike Route |
| Dundas St E (Highway 5) - Highway 6 to Boundary | 2023-2031 | 10.21 | Bike Lane |
| Dundurn - Main to King | 2023-2031 | 0.28 | Bike Lane |
| Edgemont - Montclair to Central | 2023-2031 | 0.18 | Signed Bike Route |
| Eighth Road Link - Ridge to Boundary | 2023-2031 | 5.51 | Paved Shoulder |
| Eleventh - Mud to Green Mountain Road | 2023-2031 | 1.11 | Signed Bike Route |
| Emerson - Whitney to Main | 2023-2031 | 0.65 | Bike Lane |
| Empress - Upper James to East Sixth Street | 2023-2031 | 0.71 | Signed Bike Route |
| Eugene - Pottruff to Nugent | 2023-2031 | 0.18 | Signed Bike Route |
| Fallsview - Harvest Road to Sydenham | 2023-2031 | 2.47 | Signed Bike Route |
| Ferguson - Dock Service Road to Burlington | 2023-2031 | 0.28 | Signed Bike Route |
| Ferguson - Charlton to North of Young | 2023-2031 | 0.26 | Bike Lane |
| Field - Jerseyville Rd W to Governor's Rd | 2023-2031 | 3.88 | Paved Shoulder |
| Fifty - Ridge to Cokers | 2023-2031 | 1.51 | Paved Shoulder |
| Fifty - Coke to North Service Road | 2023-2031 | 2.24 | Bike Lane |
| Filman - Wilson St E to End | 2023-2031 | 0.4 | Signed Bike Route |
| First Road East - Highland Road to Ridge Road | 2023-2031 | 3.83 | Paved Shoulder |
| First Road West - North End to Highbury Drive | 2023-2031 | 0.1 | Bike Lane |
| Flamborough Puslinch Tlin - Maddaugh Road to Centre | 2023-2031 | 1.81 | Paved Shoulder |
| Fleming - North End to York | 2023-2031 | 0.26 | Signed Bike Route |
| Fletcher - Rymal to Pinehill | 2023-2031 | 0.32 | Paved Shoulder |
| Foreman - Boundary to Regional Road 97 | 2023-2031 | 3.08 | Signed Bike Route |
| Franklin - Parkview to Longwood | 2023-2031 | 0.2 | Signed Bike Route |
| Frederick - Barton to Roxborough | 2023-2031 | 0.62 | Signed Bike Route |
| Freelton - Concession 11 E to South of Highway 6 | 2023-2031 | 0.38 | Bike Lane |
| Fruitland - Highway 8 to North Service Road | 2023-2031 | 2.42 | Bike Lane |
| Galbraith - Lake Avenue to Galbraith Three-way Intersection | 2023-2031 | 0.52 | Signed Bike Route |
| Garth - Denlow to Fennell | 2023-2031 | 0.14 | Paved Multi-Use Recreational Trail |
| Garth St Extension - 20 Rd W to Dickenson Rd W | 2023-2031 | 1.38 | Bike Lane |
| Glancaster - Carluke to Airport | 2023-2031 | 1.45 | Bike Lane |
| Glenfern - Kent to Kent | 2023-2031 | 0.04 | Signed Bike Route |
| Glover - Watercrest to End | 2023-2031 | 0.11 | Bike Lane |
| Glow - Parkdale to East of Tate | 2023-2031 | 0.63 | Signed Bike Route |
| Golf Club - Woodburn to Westbrook | 2023-2031 | 2.07 | Signed Bike Route |
| Golf Links - Stone Church to Kitty Murray | 2023-2031 | 1.3 | Bike Lane |
| Gordon Drummond - Marston to Nordale | 2023-2031 | 0.04 | Signed Bike Route |
| Governors - Binkley to Lynden | 2023-2031 | 10 | Paved Shoulder |
| Graham Ave North - Central to Roxborough | 2023-2031 | 0.78 | Signed Bike Route |
| Greenford - Owen Pl to Cromwell | 2023-2031 | 0.21 | Signed Bike Route |
| Greenford - Cromwell to Kenora | 2023-2031 | 0.36 | Bike Lane |
| Guise - Leander to Catharine | 2023-2031 | 0.54 | Bike Lane |
| Gunby - Sadielou to Painter | 2023-2031 | 0.5 | Bike Lane |
| Hamilton - Nisbet to Dundas St E | 2023-2031 | 1.21 | Bike Lane |
| Harrison - Kirk to Binbrook Conservation Area Road | 2023-2031 | 1.3 | Paved Multi-Use Recreational Trail |
| Harvest - Sydenham to Brock | 2023-2031 | 3.4 | Paved Shoulder |
| Highbury Drive - Highland Road W to Whitedeer | 2023-2031 | 1.04 | Bike Lane |
| Highland Rd E - Upper Red Hill Valley Pkwy to Winterberry | 2023-2031 | 0.94 | Bike Lane |
| Highland Rd E - Upper Centennial Pkwy to E Town Line | 2023-2031 | 10.17 | Paved Shoulder |
| Highway 5 West - Dundas St E to Sydenham | 2023-2031 | 3.02 | Paved Shoulder |
| Highway 8 (Flam) - Boundary to Brock | 2023-2031 | 22.3 | Paved Shoulder |
| Highway 8 (Sc) - King St E to Dewitt | 2023-2031 | 1.38 | Bike Lane |
| Highway 8 (Sc) - Fifty to Boundary | 2023-2031 | 0.81 | Bike Lane |
| Holton - King to Delaware | 2023-2031 | 0.57 | Signed Bike Route |
| Holton - King to Wilson | 2023-2031 | 0.18 | Bike Lane |
| Homestead Dr Path - Upper James to 1200m East of Upper James | 2023-2031 | 1.24 | Bike Lane |
| Hughson - Cannon to Hunter | 2023-2031 | 0.81 | Bike Lane |
| Hunt - Christ the King Elementary School Road to Breadalbane | 2023-2031 | 0.57 | Signed Bike Route |
| Hunter - Locke to Queen | 2023-2031 | 0.41 | Signed Bike Route |
| Inverness - Tanner to East 8th | 2023-2031 | 0.77 | Bike Lane |
| Jackson St W - End to Locke St S | 2023-2031 | 0.38 | Signed Bike Route |
| Jerseyville Rd W - Boundary to East of Paddy Greens | 2023-2031 | 18.45 | Paved Shoulder |
| Jerseyville Rd W - West of Shaver to Wilson | 2023-2031 | 3.49 | Paved Shoulder |

| Location | Timing (year) | Length (km) | Facility Type |
|---|---|---|---|
| John - Guise to Burlington | 2023-2031 | 0.29 | Bike Lane |
| John - Charlton Ave E to St Joseph's | 2023-2031 | 0.16 | Bike Lane |
| Kay Drage Park Link - Hunt to End | 2023-2031 | 0.55 | Signed Bike Route |
| Kay Drage Park Link - Macklin to End | 2023-2031 | 0.14 | Signed Bike Route |
| King William - James St N to Catharine St N | 2023-2031 | 0.34 | Signed Bike Route |
| Kirk - Harrison to Highway 56 | 2023-2031 | 0.98 | Paved Multi-Use Recreational Trail |
| Kirkwall - Regional Road 97 to South of Concession 8 W | 2023-2031 | 2.51 | Signed Bike Route |
| Kirkwall - South of Concession 8 W to Woodhill Rd | 2023-2031 | 5.78 | Paved Shoulder |
| Lafarge 2000 (Middletown Rd) - Concession 6 W to Highway 8 | 2023-2031 | 7.91 | Signed Bike Route |
| Lafarge 2000 (Middletown Rd/Binkley Rd) - Highway 8 to Mineral Springs Rd | 2023-2031 | 3.57 | Paved Shoulder |
| Lamoreaux - Dundurn t N to Strathcona Ave N | 2023-2031 | 0.23 | Signed Bike Route |
| Leland - Main to North of Ward | 2023-2031 | 0.29 | Signed Bike Route |
| Lido - Riviera to Winona | 2023-2031 | 0.39 | Signed Bike Route |
| Livingstone - Sydenham to Queen | 2023-2031 | 0.11 | Bike Lane |
| Locke - York Blvd to Barton | 2023-2031 | 0.26 | Bike Lane |
| Longwood - Main St W to Frid St | 2023-2031 | 0.4 | Bike Lane |
| Lormont - First Rd W to Picardy | 2023-2031 | 0.54 | Bike Lane |
| Macklin St S - King St W to Main St W | 2023-2031 | 0.24 | Signed Bike Route |
| Maddaugh Road - Gore  to Highway 6 | 2023-2031 | 0.95 | Signed Bike Route |
| Maddaugh Road - Highway 6 to Flamborough Puslinch Tlin | 2023-2031 | 1.11 | Paved Shoulder |
| Maggie Johnson - Tanglewood to Highway 56 | 2023-2031 | 0.23 | Bike Lane |
| Main - Osler to South of Osler | 2023-2031 | 1.52 | Bike Lane |
| Main - Osler to York | 2023-2031 | 0.25 | Bike Lane |
| Main St W - Frid to Dundurn St S | 2023-2031 | 0.27 | Bike Lane |
| Malton - Christine to Upper James | 2023-2031 | 0.34 | Signed Bike Route |
| Maple/Mountain Ave Extension - Lake Ave S to End | 2023-2031 | 0.4 | Signed Bike Route |
| Marion - Dromore to King St W | 2023-2031 | 0.34 | Signed Bike Route |
| Market - Hatt to MacNab | 2023-2031 | 0.09 | Bike Lane |
| Market - MacNab to Creighton | 2023-2031 | 0.09 | Signed Bike Route |
| Mayfair - Creighton to Tally Ho | 2023-2031 | 0.31 | Signed Bike Route |
| McNeilly/8th Road E - Highway 8 to Ridge Road | 2023-2031 | 1.55 | Signed Bike Route |
| Middleton Rd - North of Regional Road 97 to Regional Road 97 | 2023-2031 | 0.44 | Signed Bike Route |
| Middleton Rd - North of Concession 8 W to Safari | 2023-2031 | 2.32 | Signed Bike Route |
| Miles - Rymal Rd E to Boundary | 2023-2031 | 10.88 | Paved Shoulder |
| Mill - Dundas St E to Boundary | 2023-2031 | 2.8 | Bike Lane |
| Millgrove Sr - Highway 6 N to Highway 5 W | 2023-2031 | 0.71 | Paved Shoulder |
| Mineral Springs - Binkley to Sulphur Springs | 2023-2031 | 1.27 | Paved Shoulder |
| Mount Albion - Lawrence to South of Glen Castle | 2023-2031 | 1.39 | Bike Lane |
| Mountain Brow - Concession Street to Rendell | 2023-2031 | 0.27 | Bike Lane |
| Mountain Brow Blvd - Mohawk Rd E to Mud | 2023-2031 | 2.14 | Signed Bike Route |
| Mud - Eleventh Road E to Boundary | 2023-2031 | 0.89 | Paved Shoulder |
| Napier - Queen St N to Bay St N | 2023-2031 | 0.55 | Signed Bike Route |
| Nisbet - Centre Road to Wimberly | 2023-2031 | 0.97 | Bike Lane |
| Nordale - Gordon Drummond to | 2023-2031 | 0.39 | Signed Bike Route |
| North Service Road Link (Millen) - North Service Road to Shoreview | 2023-2031 | 0.19 | Bike Lane |
| Nugent - Kentley to Eugene | 2023-2031 | 0.13 | Signed Bike Route |
| Old Mud - Paramount to Cedarville | 2023-2031 | 0.39 | Bike Lane |
| Ottawa - Main to Montclair | 2023-2031 | 0.49 | Bike Lane |
| Owen Pl - King St E to Greenford | 2023-2031 | 0.55 | Signed Bike Route |
| Parkdale Ave - Nikola Tesla Blvd to Glow | 2023-2031 | 0.18 | Paved Multi-Use Recreational Trail |
| Pearl - Hunter to Tuckett | 2023-2031 | 0.23 | Signed Bike Route |
| Peel St S - King St W to Hatt | 2023-2031 | 0.14 | Signed Bike Route |
| Perrelli - Culotta to Dundas St E | 2023-2031 | 0.11 | Signed Bike Route |
| Picardy - Highland Rd W to Lormont | 2023-2031 | 0.5 | Bike Lane |
| Picton - Bay St n to Hughson St N | 2023-2031 | 0.39 | Signed Bike Route |
| Picton - John St N to Ferguson Ave N | 2023-2031 | 0.42 | Signed Bike Route |
| Queen - Alma to Livingstone | 2023-2031 | 0.16 | Bike Lane |
| Queen St S - Hunter to Canada | 2023-2031 | 0.08 | Signed Bike Route |
| Queensdale - Skyland to Upper Wellington | 2023-2031 | 0.4 | Signed Bike Route |
| Raymond - Stonehenge to Garner | 2023-2031 | 1.31 | Bike Lane |
| Redmond - Rushdale to Stone Church Rd E | 2023-2031 | 0.2 | Signed Bike Route |
| Regional Road 20 (Highway 20) - Tapleytown to Woodburn | 2023-2031 | 0.28 | Signed Bike Route |
| Regional Road 97 - Kirkwall to Foreman | 2023-2031 | 0.16 | Paved Shoulder |
| Ridge - Dewitt to Boundary | 2023-2031 | 7.05 | Paved Shoulder |
| Riley - West of Chudleigh to Braeheid | 2023-2031 | 0.21 | Signed Bike Route |
| Riviera Ridge - Bellavista to Lido | 2023-2031 | 0.12 | Undefined |
| Rock Chapel - Highway 5 W to Service Road East of Sydenham | 2023-2031 | 1.91 | Signed Bike Route |
| Roxborough - Frederick to Graham Ave N | 2023-2031 | 0.05 | Signed Bike Route |
| Rushdale - Southpark to Redmond | 2023-2031 | 0.08 | Signed Bike Route |
| Rymal - Upper Paradise to Spadara | 2023-2031 | 0.44 | Bike Lane |
| Rymal - Hazelton to West Fifth St | 2023-2031 | 0.77 | Bike Lane |
| Sadielou - Hollybush to End | 2023-2031 | 0.42 | Bike Lane |

| Location | Timing (year) | Length (km) | Facility Type |
|---|---|---|---|
| Santorium - Scenic to Redfern | 2023-2031 | 0.11 | Bike Lane |
| Scenic - Angela to West of Chateau | 2023-2031 | 1.84 | Bike Lane |
| Scenic - Colquhoun to Garth (via Scenic and Denlow) | 2023-2031 | 0.44 | Bike Lane |
| Second St N - King St W to North of Brandow | 2023-2031 | 0.14 | Signed Bike Route |
| Shaver - Wilson to Jerseyville Rd W | 2023-2031 | 1.47 | Bike Lane |
| Shaver - Garner to Carluke | 2023-2031 | 6.11 | Paved Shoulder |
| Sheppard - Sovereign to Fleming | 2023-2031 | 0.1 | Signed Bike Route |
| Sherman - Delaware to CP Rail Line | 2023-2031 | 0.33 | Signed Bike Route |
| Skinner - Dundas St E to East of McKnight Ave E | 2023-2031 | 1.39 | Bike Lane |
| South Bend - W Second St to Terrace | 2023-2031 | 0.42 | Signed Bike Route |
| South St W - Oglivie to Osler | 2023-2031 | 0.7 | Signed Bike Route |
| Southcote - Garner to Airport | 2023-2031 | 2.8 | Bike Lane |
| Southpark - Rushdale Park Trail to Rushdale Dr | 2023-2031 | 0.25 | Signed Bike Route |
| St Joseph's - John St S to End | 2023-2031 | 0.29 | Signed Bike Route |
| Sulphur Springs - Lover's to Mineral Springs Rd | 2023-2031 | 1.47 | Paved Shoulder |
| Sulphur Springs - Lover's to Wilson St E | 2023-2031 | 1.05 | Signed Bike Route |
| Sunnyridge - Wilson St W to Jerseyville Rd W | 2023-2031 | 2.83 | Paved Shoulder |
| Sydenham/Queen/Livingstone/Alma - Hatt to Romar Dr | 2023-2031 | 1.86 | Bike Lane |
| Talbot - Melvin to Barton St E | 2023-2031 | 0.19 | Signed Bike Route |
| Tally Ho - Mayfair to Overfield | 2023-2031 | 0.22 | Signed Bike Route |
| Tanner - Iverness to End | 2023-2031 | 0.05 | Signed Bike Route |
| Tapleytown Rd - Highway 20 E to Highland Rd E | 2023-2031 | 0.83 | Signed Bike Route |
| Terryberry - Private Rd to Rymal Rd | 2023-2031 | 0.2 | Bike Lane |
| Tradewind - Wilson St W to Cormorant | 2023-2031 | 0.7 | Bike Lane |
| Twenty Rd - Southcote to West of Nebo | 2023-2031 | 9.36 | Bike Lane |
| Upper Ottawa - Killbride to Mountain Brow Boulevard | 2023-2031 | 5.22 | Bike Lane |
| Upper Sherman - Macassa to Limeridge Rd E | 2023-2031 | 1.65 | Bike Lane |
| Upper Wellington - S Bend Rd E to Stone Church Rd E | 2023-2031 | 2.4 | Bike Lane |
| W 18th St - Bendamere to End | 2023-2031 | 0.17 | Signed Bike Route |
| W 5th St - Brantdale to Governors Blvd | 2023-2031 | 0.62 | Multi-Use Trail |
| W 5th St - Governors Blvd to Marlowe | 2023-2031 | 1.13 | Bike Lane |
| Westbrook - End to Golf Club Rd | 2023-2031 | 0.86 | Signed Bike Route |
| White Church Rd E - Trinity Church Rd to Upper James | 2023-2031 | 6.57 | Paved Shoulder |
| Whitedeer - Highbury to Rymal Rd E | 2023-2031 | 0.35 | Bike Lane |
| Wilson in Ancaster - Fiddler's Green to Boundary | 2023-2031 | 10.77 | Cycle Track |
| Wimberly - Parkside to Nisbet | 2023-2031 | 0.33 | Bike Lane |
| Windwood Dr - Bradley to Southbrook Dr | 2023-2031 | 0.7 | Bike Lane |
| Woodbine Crescent - Jones to Dundurn St N | 2023-2031 | 0.22 | Signed Bike Route |
| Woodburn - Binbrook Rd E to Highway 20 E | 2023-2031 | 7.56 | Signed Bike Route |
| Woodhill Rd - Governor's to 800m south of Highway 8 | 2023-2031 | 7.05 | Signed Bike Route |
| Woodhill Rd - Highway 8 to 800m south of Highway 8 | 2023-2031 | 1.04 | Paved Shoulder |
| Woodward Ave - Beach Blvd to 100m south of Beach Blvd | 2023-2031 | 0.1 | Bike Lane |
| York - Olympic to Baldwin | 2023-2031 | 2.33 | Bike Lane |
| York Road Valley Community Centre Park Hydro Corridor Trail - York to Highway 6 | 2023-2031 | 4.15 | Paved Multi-Use Recreational Trail |
| Highway 6 - Concession 10 W to Freelton | 2023-2031 | 0.39 | Paved Multi-Use Recreational Trail |
| Highway 6 N - Carlisle to Edgewood Road | 2023-2031 | 0.55 | Paved Multi-Use Recreational Trail |
| White Church Rd W Loop - White Church Rd W East of Carluke to White Church Road W West of Highway 6 | 2023-2031 | 2.24 | Paved Multi-Use Recreational Trail |
| Carlisle Road - Highway 6 to Milborough Townline | 2023-2031 | 5.85 | Paved Shoulder |
| Concession 5 West - Highway 6N to Moffatt Road | 2023-2031 | 3.01 | Paved Shoulder |
| Mosaic Dr - Parkside Dr to Highway 6 | 2023-2031 | 1.9 | Multi-Use Trail |

# Appendix C

## Strategic Transportation Network Review Costing Tables

*Exhibit 4.1: Road Project Component Unit Rate*

| Item | Quantity | Average Unit Price ($2023) |
|---|---|---|
| **Removals** | | |
| Clearing and Grubbing (Area) | $m^2$ | $4.53 |
| Excavation | $m^3$ | $28.24 |
| Concrete Sidewalk/Drive | $m^2$ | $19.42 |
| Culverts (Including headwalls/sewers) | m | $127.00 |
| Catch basin (Single) | Each | $876.67 |
| Catch basin (Double) | Each | $896.94 |
| Concrete Curb and Gutter | m | $12.01 |
| Maintenance Hole (Full Depth) | Each | $640.12 |
| Maintenance Hole (Partial Depth) | Each | $770.14 |
| Concrete Curb Outlets | Each | $12.01 |
| Cold Plan Existing Asphalt (Milling) | $m^2$ | $29.90 |
| Full Depth Asphalt | $m^2$ | $5.79 |
| **New Construction** | | |
| 20mm CRLS (Crusher Run Limestone) | Tonne | $32.38 |
| 50mm CRLS (Crusher Run Limestone) | Tonne | $32.89 |
| Granular A - Roadway | $m^3$ | $78.06 |
| Granular B - Roadway | $m^3$ | $77.43 |
| Tack Coat | $m^2$ | $0.69 |
| Surface Mix (40mm) | Tonne | $158.23 |
| Surface Mix (50mm) | Tonne | $126.12 |
| Binder Mix (80mm) | Tonne | $118.89 |
| Binder Mix (100mm) | Tonne | $113.88 |

| Item | Quantity | Average Unit Price ($2023) |
|---|---|---|
| Binder Mix (120mm) | Tonne | $168.35 |
| 100mm Diameter Non-Perforated Sub-Drain | m | $40.85 |
| 150mm Diameter Non-Perforated Sub-Drain | m | $33.01 |
| Concrete Sidewalk (Ex. Granular/Excavation) | $m^2$ | $72.75 |
| Concrete Sidewalk (Including Granular) | $m^2$ | $98.03 |
| Concrete Curb & Gutter | m | $121.59 |
| Topsoil & Sod (300mm) | $m^2$ | $23.61 |
| Supply/Install Storm/Sewer Pipes | m | $1,322.99 |
| Supply/Install Catch basin Leads (250mm) | m | $500.84 |
| Supply/Install Catch basin (OPSD 705.010) | Each | $4,683.02 |
| Supply/Install Catch basin (OPSD 705.020) | Each | $6,722.25 |
| Supply/Install Manhole (OPSD 701.010) | Each | $19,101.15 |
| Pavement Markings | m | $8.50 |
| Fire Hydrants | Each | $11,347.85 |
| **Adjustments** | | |
| Double Catch basin | Each | $765.50 |
| Single Catch basin | Each | $763.73 |
| Maintenance Holes | Each | $797.00 |
| Catch basin Manhole | Each | $564.48 |
| Water Valve Boxes | Each | $794.73 |

*Exhibit 4.2: Road Project Per Kilometre Cost by Improvement Type*

| Improvement Type | Code | Cost Per Kilometre ($2023) |
|---|---|---|
| **New Construction** | | |
| Industrial Collector 2 Lanes | 2i | $ 8,502,110.30 |
| Industrial Collector 3 Lanes | 3i | $ 9,308,901.69 |
| Collector Rural Residential | 2r | $ 5,854,196.86 |
| Rural 3 Lanes | 3r | $ 6,279,790.05 |
| Rural 4 Lanes | 4r | $ 6,681,294.09 |
| Rural 5 Lanes | 5r | $ 7,100,864.99 |
| Rural 6 Lanes | 6r | $ 7,520,435.89 |
| Collector Urban Residential | 2u | $ 7,044,788.91 |
| Urban 3 Lanes Arterial/Collector | 3u | $ 9,107,630.09 |
| Urban 4 Lanes Arterial | 4u | $10,004,419.36 |
| Urban 5 Lanes Arterial | 5u | $10,624,646.86 |
| Urban 6 Lanes Arterial | 6u | $11,244,874.36 |
| **Reconstruction and Urbanization** | | |
| Collector Rural Residential to Industrial Collector 2 Lanes | 2r-2i | $ 8,534,594.64 |
| Collector Rural Residential to Collector Urban Residential | 2r-2u | $ 7,731,543.27 |
| Collector Rural Residential to 3 Lane Urban | 2r-3u | $ 7,659,304.44 |
| Collector Rural Residential to 3 Lanes Rural Arterial/Collector | 2r-3r | $ 6,340,575.66 |
| Collector Rural Residential to 3 Lanes Rural Arterial with Bike Facilities | 2r-3r+Bikes | $ 7,790,478.99 |
| Collector Rural Residential to 4 Lanes Rural Arterial | 2r-4r | $ 7,367,234.44 |
| Collector Rural Residential to 4 Lanes Rural Arterial with no Base Removal | 2r-4r-nbr | $ 7,367,234.44 |
| Collector Rural Residential to 4 Lanes Urban Arterial | 2r-4u | $ 9,382,573.73 |
| Collector Rural Residential to 5 Lanes Urban Arterial | 2r-5u | $10,093,550.41 |
| Collector Urban Residential to 4 Lanes Urban Arterial | 2u-4u | $ 9,556,325.05 |

| Improvement Type | Code | Cost Per Kilometre ($2023) |
|---|---|---|
| 3 Lanes Rural to 3 Lanes Urban | 3r-3u | $ 9,264,853.85 |
| 3 Lanes Urban to 5 Lanes Urban | 3u-5u | $11,026,843.95 |
| 4 Lanes Rural to 6 Lanes Rural | 4r-6r | $11,130,934.09 |
| 4 Lanes Rural to 4 Lanes Urban | 4r-4u | $11,155,773.19 |
| 4 Lanes Rural to 5 Lanes Urban | 4r-5u | $11,943,397.78 |
| 4 Lanes Rural to 6 Lanes Urban | 4r-6u | $10,521,444.43 |
| 4 Lanes Rural to 5 Lanes Urban with no Base Removal | 4r-5u-nbr | $11,232,421.10 |
| 4 Lanes Urban to 5 Lanes Urban | 4u-5u | $11,943,397.78 |
| 4 Lanes Urban to 6 Lanes Urban | 4u-6u | $11,232,421.10 |

*Exhibit 4.3: Active Transportation Per Metre Cost by Facility Type*

| Facility Type | Cost ($/m) |
|---|---|
| Bike Lane | $140 |
| Cycle track | $500 |
| Paved Shoulder | $300 |
| Signed Bike Route | $40 |
| Commuter Trail | $66 |
| Paved Multi-Use Recreational Trail | $750 |
| Multi-Use Path | $750 |
| Multi-Use Trail | $750 |

# Appendix D

## Transportation Inputs to the 2024 Development Charges Background Study

# 1 Introduction

The City of Hamilton is conducting a 2024 Development Charges Background Study (2024 DC Study) to update the 2024 Development Charges By-Law. One of the goals of the STNR is to provide the transportation inputs to the 2024 DC Study. The 2024 DC By-Law will use the following transportation **service targets**:

- **2031** for all other transportation projects spanning roads, active transportation, structures and programs**.**
- **2032** for transit projects.

This means that projects in the STNR recommended for implementation after the service target years are not included in the 2024 DC Study or are included with a 100% deduction for post-period benefit (PPB).

The following report builds on the foundation of the STNR to describe how the identified future transportation projects will be included in the 2024 DC Study. This appendix is structured as follows:

- **Chapter 2** provides a background on the Development Charges (DC) framework in Ontario.
- **Chapter 3** describes how the updated capital costs of transportation projects from the STNR are carried forward to the 2024 DC Study;
- **Chapter 4** explains how the local service policy applies to certain projects as determined by the City of Hamilton. It is noted that the City of Hamilton *Local Service Policy* and *Financial Policies* are outside of the scope of the transportation inputs; and,
- **Chapter 5** explains how the costs of DC-eligible transportation projects are divided among different groups.

# 2 Development Charges Overview

Development charges (DCs) are a municipal financing tool in the Province of Ontario, governed by the *Development Charges Act* (DCA), intended to ensure that "growth pays for growth". This framework allows municipalities to collect funds from developers to help pay for the costs of hard and soft infrastructure needed to support new growth in the city. These charges are administered through by-law as a cost per unit for new residential development and cost per sq.ft for new non-residential development.

Section 2(4) in the *DCA* lists the types of services that may be funded through development charges, while section 5(1) in the *DCA* outlines the process for determining development charges and the necessary reductions. The *DCA* states that a DC background study must be completed in advance of the passing of a DC by-law.

There have been numerous changes to the provincial *DCA* since the last DC background study was published in 2019. A summary of key changes resulting from new legislation is described below. The transportation inputs to the 2024 DC Study conform to requirements of the *DCA*, including changes since 2019.

- ***COVID-19 Economic Recovery Act* (Bill 197, 2020):** Among other changes, this act removed the 10-year planning horizon limit for all services except for transit.
- ***Planning Act*:** Bills 108 and 138 introduced changes to the *Planning Act* by introducing community benefits charges (CBCs) to replace the former section 37. CBCs are a municipal financing tool intended to be applied in partnership with DCs. CBCs can be used to fund capital costs of public services associated with new growth provided that these costs have not already been funded through DCs or parkland dedication. Transportation-related services cannot be funded through CBCs if they are already being funded through DCs.
- ***More Homes Built Faster Act* (Bill 23, 2022):** This bill introduced significant changes to planning in Ontario. This included changes to DCs such as studies no longer being eligible for DCs, land acquisition costs potentially no longer being eligible for DCs and a longer historical service level (15 years) for determining service ceilings. Municipalities across the province are working to identify the implications of this new bill, including the City of Hamilton.

The City of Hamilton currently implements DCs through By-law 19-142 (as amended by by-law 21-102), supported by the 2019 DC Background Study. The existing DC by-law is set to expire in June 2024. The transportation inputs from this study will be included in the 2024 DC Study that will be used to develop the new 2024 development charges by-law.

# 3 Development Charges Transportation Project Costs

The STNR included a detailed costing exercise to update the capital costs of all future transportation projects. However, only the costs of the projects within the 2024 DC Study service targets are included in the 2024 DC Study. These costs are summarized below in Exhibit 3.1.

*Exhibit 3.1: Summary of STNR Project Capital Costs Included in the 2024 DC Study*

| Project Type | Approximate Capital Cost |
|---|---|
| Road | $735,000,000 |
| Transit | $475,000,000 |
| Active Transportation | $162,000,000 |
| Structures | $196,000,000 |
| Programs | $100,000,000 |
| **Total** | **$1,668,000,000** |

These capital costs will be subject to deductions described in the following sections.

# 4 Local Service Policy

The *Local Service Policy* (LSP) and the financial policies in the City of Hamilton *Comprehensive Development Guidelines and Financial Policies Manual* (*2019)* set the requirements for what is a direct developer responsibility and what is eligible for DC funding. Project costs that are directly funded by the developing landowner (as per the LSP and applicable financial policies) cannot also be included in the DC. For further information, including the treatment of local roads that are a direct developer responsibility, please refer to the LSP.

Developing the LSP and the financial policies are outside of the scope of the STNR study. The LSP and the financial policies were provided to the study team for incorporation into the 2024 DC Study calculations. This includes deductions from the DC-eligible costs to reflect the local share of roads (including bridges, culverts, land, and the road) that are a direct developer responsibility. Transportation project costs subject to the LSP were not included in the calculation of DC-recoverable costs.

In addition to the above, the City of Hamilton also includes a deduction to reflect the local share of urbanization along existing roads at the time of development.

# 5 Apportioning Benefit

DC funding for capital projects is intended to reflect the principle that "growth pays for growth". However, new capital projects can provide benefit to other users beyond the new growth population. Accordingly, the *DCA* requires a development charges by-law to apply deductions to ensure the new growth population only pays for the growth-related benefits of new capital projects. This process is known as apportioning benefit, and involves splitting the costs of the projects among three main groups:

- **Benefit to Existing (BTE):** This group comprises of the existing population that lives in the municipality as of the date a project is identified for inclusion in this study.
- **New Growth Population:** This group comprises of the new population that is added to the municipality during the growth period.
- **Post-Period Benefit (PPB):** This group comprises of the population that will be added to the municipality after the end of the growth period.

The calculation approach to apportioning benefit involves splitting the total cost of projects between the three groups above using percentages. The process of determining these benefit percentages varies by project, however, generally considers the following factors:

- The group that warranted the need for the project;
- The extent that the project benefits the specific population groups;
- The geographic location/application of the project; and,
- The amount of excess capacity in the project beyond the growth period horizon.

In addition to the factors above, the process for determining benefit allocation involved a peer review of four comparable municipalities (City of London, City of Ottawa, Niagara Region, Waterloo Region) to confirm best practices and help inform the applicable percentages used in this study. The following sections describe the benefit allocation for various project types.

## 5.1 Apportioning Benefit: Road Projects

The section describes the BTE and PPB percentages, and their rationale, for road projects within the service target.

### 5.1.1 Road Project Benefit to Existing

The BTE percentages for road projects largely follow the percentages that were identified in the *2019 DC Study*. Apportioning benefit for road projects is primarily based on which group

warrants the need for the road project. Exhibit 5.1 describes the BTE percentages and rationale below.

*Exhibit 5.1: Road Project Benefit to Existing Percentages and Rationale*

| Project Type | BTE Percentage | Rationale |
|---|---|---|
| Road Reconstruction with no Capacity Increase | 100% | These projects are not warranted by new growth and entirely benefit existing traffic. |
| Road Widening | 15% | This percentage applies to most road widening projects. These projects are primarily intended to increase capacity to support new traffic volumes, however there is a small benefit to existing users due to resurfacing and upgrades to meet new design standards. |
| | 40-50% | These percentages were applied for projects located in long established and/or developed corridors as well as mature neighbourhoods that are subject to increased travel demand generated by new growth located elsewhere. Higher BTE rates for these projects were identified by the City in the 2019 DC Study and carried forward for the 2024 DC Study. |
| | 80% | This was applied to one project in Ancaster in a highly developed corridor. The higher BTE rate for this project was identified by the City in the 2019 DC Study and carried forward for the 2024 DC Study. |
| Road Reconstruction and Urbanization | 15% | This percentage applies to most road reconstruction and urbanization projects. These projects are primarily driven by new developments, however there is a small benefit to existing users due to resurfacing and upgrades to meet new design standards. |
| | 40-50% | These percentages were applied to projects in long established and/or developed corridors and those rural corridors linking urban centres. Higher BTE rates for these projects were identified by the City in the 2019 DC Study and carried forward for the 2024 DC Study. |
| New Road | 0% | These projects are entirely warranted by new growth. |

### 5.1.2 Road Project Post-Period Benefit

All road projects scheduled for implementation beyond the 2024 DC Study service target have been assigned 100% PPB.

## 5.2 Apportioning Benefit: Transit

The process for apportioning benefit for transit is primarily based on the composition of future ridership between existing and new growth populations, in addition to determining the in-period and post-period ridership.

Ridership forecasts are used to assign benefit between the existing population (2022), the transit new growth population (2023-2032) and the post-period population (2033-2035). The method varies slightly between conventional and specialized transit. The details of the calculations for both conventional and specialized transit are described below[8].

### 5.2.1 Transit Mode Share and Ridership Forecasts

#### 5.2.1.1 Conventional Transit

The existing *City of Hamilton Transportation Master Plan* (*TMP)* identifies a transit mode share target of 12% by 2031. This mode share includes both local Hamilton Street Railway ("HSR") transit and GO Transit. Development charges are administered at the municipal level, so the 12% transit mode share needs to be adjusted to exclude GO Transit-only trips. The Transportation Tomorrow Survey (TTS) was used to divide the 12% total mode share between local and GO Transit-only trips as shown below in Exhibit 5.2. The 2031 local transit mode share is 11.3%, while the GO Transit-only transit mode share is 0.7%[9].

*Exhibit 5.2: 2031 A.M. Peak Period Transit Mode Share based on 2016 T.T.S.*

| | Origin and/or Destination in Hamilton | Distribution of Transit Trips (HSR & GO) | 2031 Transit Mode Share |
|---|---|---|---|
| Local Transit Only | 19,907 | 94.2% | **11.3%** |

[8] Values in the exhibits have been rounded to the nearest tenth for percentages and to the nearest whole number for all other values.

[9] This transit mode share distribution was used in the previous Development Charges Background Study (2019). The 2016 TTS survey, used in the previous Development Charges Background Study (2019), is the most updated version of the TTS survey, as the 2021 TTS survey was delayed due to the COVID-10 pandemic.

| | Origin and/or Destination in Hamilton | Distribution of Transit Trips (HSR & GO) | 2031 Transit Mode Share |
|---|---|---|---|
| Local Transit + GO | 1,218 | | |
| GO Only | 1,292 | 5.8% | **0.7%** |
| **Total Transit** | **22,417** | | **12.0%** |

Exhibit 5.3 outlines the total A.M. peak period person trips per year from the City's E.M.M.E. model. The total A.M. peak period person trips are then multiplied by the local transit mode share per year, derived from the 11.3% 2031 local transit mode share target identified in Exhibit 5.2, to determine the total local A.M. peak period transit ridership per year. This ridership is then split between bus and light rail transit (LRT), with an assumed LRT opening year of 2031.[10]

[10] The 2031 opening assumption is an estimate for the purposes of this project provided by the City of Hamilton.

*Exhibit 5.3: Summary of Projected Local HSR Transit Ridership and Mode Share (2022-2035)*

| | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total A.M. Peak Period Person Trips | 290,099 | 293,461 | 296,822 | 300,184 | 303,545 | 306,906 | 310,268 | 313,629 | 316,991 | 320,352 | 324,030 | 327,751 | 331,515 | 335,321 |
| Total Local A.M. Peak Period Ridership | 18,981 | 19,426 | 19,922 | 22,519 | 25,117 | 27,714 | 29,836 | 31,957 | 34,078 | 36,200 | 36,615 | 37,036 | 37,461 | 37,891 |
| A.M. Peak Period HSR Bus Ridership | 18,981 | 19,426 | 19,922 | 22,519 | 25,117 | 27,714 | 29,836 | 31,957 | 34,078 | 35,239 | 34,671 | 34,086 | 33,814 | 33,867 |
| A.M. Peak Period HSR LRT Ridership | - | - | - | - | - | - | - | - | - | 961 | 1,944 | 2,950 | 3,647 | 4,024 |
| A.M. Peak Period Bus Mode Share | - | - | - | 7.5% | 8.3% | 9.0% | 9.6% | 10.2% | 10.8% | 11.0% | 10.7% | 10.4% | 10.2% | 10.1% |
| A.M. Peak Period HSR LRT Mode Share | - | - | - | - | - | - | - | - | - | 0.3% | 0.6% | 0.9% | 1.1% | 1.2% |
| Local Transit Mode Share | 6.5% | 6.6% | 6.7% | 7.5% | 8.3% | 9.0% | 9.6% | 10.2% | 10.8% | 11.3% | 11.3% | 11.3% | 11.3% | 11.3% |

The TMP is the most recent transportation master plan and identifies a 2031 horizon – the total local transit mode share is assumed to remain constant beyond the TMP horizon between 2031-2035 and apply city-wide. Since the LRT infrastructure is not being funded through municipal development charges, the bus-only mode share is used for the transit DC calculations.

#### 5.2.1.2 Specialized Transit

HSR experienced a significant decrease in specialized transit ridership during the COVID-19 pandemic between 2020 and 2022. Specialized transit ridership has not recovered to 2019 pre-pandemic levels, and it is unclear when this may happen. Accordingly, HSR 2019-2022 ridership data was used to develop the specialized transit ridership forecast.

To address the impacts of the COVID-19 pandemic and limited data, the observed number of active registrants and rides per active registrant from 2019-2022 are used as the foundation of the forecast. The active registrant growth rate of 2.07% from the previous D.C. background study is used to calculate the number of active registrants between 2023-2032. Since specialized transit ridership recovery is unclear, the 2019 trip rate per active registrant is assumed to hold constant from 2023-2032. This is shown below in Exhibit 5.4.

*Exhibit 5.4: Specialized Service Active Registrant and Ridership Forecast (2019-2032)*

| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Active Registrants | 9,819 | 7,650 | 6,059 | 7,124 | 7,271 | 7,422 | 7,575 | 7,732 | 7,891 | 8,055 | 8,221 | 8,391 | 8,565 | 8,742 |
| Rides per Active Registrant | 86 | 42.8 | 46.4 | 63.8 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| Total Annual Specialized Transit Ridership | 844,434 | 327,420 | 281,138 | 454,511 | 625,330 | 638,257 | 651,451 | 664,919 | 678,665 | 692,694 | 707,014 | 721,630 | 736,549 | 751,775 |
| Increase in Specialized Transit Trips (Compared to 2022 Baseline Population) | - | - | - | - | 170,818 | 183,746 | 196,940 | 210,408 | 224,153 | 238,183 | 252,503 | 267,119 | 282,037 | 297,264 |

### 5.2.2 Transit Benefit to Existing

Future growth-related transit infrastructure projects provide benefits to the existing population. This is referred to as benefit to existing (BTE), and development charge calculations need to reflect this existing benefit where appropriate. This section describes how the BTE deductions are calculated for conventional transit vehicles, specialized transit vehicles, and facility and operations vehicles. The growth period is defined as 2023-2032.

#### 5.2.2.1 Conventional Transit Vehicles

New growth-related conventional transit fleet vehicles can be used to add to the fleet to increase service on existing routes (either through increased service frequency or additional service hours) and/or add to the fleet to introduce service on new routes. The benefit of these new conventional transit vehicles is primarily experienced through the increase in transit trips during the growth period (i.e. people making new transit trips). This includes both the existing population who begin taking transit in the growth period (due to increasing transit mode share) and the new growth population.

Accordingly, the conventional transit BTE is calculated using a proportional ridership method. Exhibit 5.5 below uses the ridership and mode share information from Exhibit 5.3 above to outline the proportion of bus trips made by existing 2022 residents who begin taking transit in the growth period versus new growth residents. This information is summarized below:

- 2023-2032 Increase in Bus Trips by 2022 Baseline Population (due to Increasing Transit Mode Share): **72,422**
- 2023-2032 Total Number of Bus Trips (New Growth Population): **18,247**
- 2023-2032 Total Increase in Bus Trips Versus 2022 Baseline Population: **90,669**

*Exhibit 5.5: Allocation of Bus Trips between Existing and New Growth Population (2022-2032)*

| | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | Sum of 2023-2032 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total A.M. Peak Period Person Trips | 290,099 | 293,461 | 296,822 | 300,184 | 303,545 | 306,906 | 310,268 | 313,629 | 316,991 | 320,352 | 324,030 | - |
| **Increase in Bus Trips by 2022 Baseline Population (Due to Increasing Mode Share)** | | | | | | | | | | | | |
| Increase in A.M. Peak Period Bus Mode Share (versus 2022 Baseline) | - | 0.1% | 0.2% | 1.0% | 1.7% | 2.5% | 3.1% | 3.6% | 4.2% | 4.5% | 4.2% | - |
| Increase in A.M. Peak Period Bus Trips by Existing 2022 Baseline Population (Due to Increasing Mode Share) | - | 222 | 490 | 2,781 | 5,023 | 7,215 | 8,916 | 10,578 | 12,206 | 12,930 | 12,060 | **72,422** |
| **New Growth Population (Versus 2022 Baseline Population)** | | | | | | | | | | | | |
| A.M. Peak Period Bus Mode Share | 6.5% | 6.6% | 6.7% | 7.5% | 8.3% | 9.0% | 9.6% | 10.2% | 10.8% | 11.0% | 10.7% | - |
| A.M. Peak Period Person Trips by New Growth Population (Versus 2022 Baseline Population) | - | 3,362 | 6,723 | 10,085 | 13,446 | 16,807 | 20,169 | 23,530 | 26,892 | 30,253 | 33,931 | - |
| A.M. Peak Period Bus Trips by New Growth Population (Versus 2022 Baseline Population) | - | 223 | 451 | 757 | 1,113 | 1,518 | 1,939 | 2,398 | 2,891 | 3,328 | 3,631 | **18,247** |
| **Total Increase in Bus Trips (Versus 2022 Baseline Population)** | | | | | | | | | | | | |
| Total Increase in Bus Trips Versus 2022 Baseline Population (by New Growth and Existing Population) | - | 445 | 941 | 3,538 | 6,136 | 8,733 | 10,855 | 12,976 | 15,097 | 16,258 | 15,690 | **90,669** |

The benefit to existing and benefit to growth shares are calculated on a proportional ridership basis. This is described below:

$$\textbf{Benefit to Existing} = \frac{\text{2023-2032 Increase in Bus Trips by 2022 Baseline Population}}{\text{2023-2032 Total Increase in Bus Trips (Versus 2022 Baseline Population)}}$$

$$= \frac{72{,}422}{90{,}669}$$

$$= \textbf{79.9\%}$$

$$\textbf{Benefit to Growth} = \frac{\text{2023-2032 Total Number of Bus Trips (New Growth Population)}}{\text{2023-2032 Total Increase in Bus Trips (Versus 2022 Baseline Population)}}$$

$$= \frac{18{,}247}{90{,}669}$$

$$= \textbf{20.1\%}$$

As stated above, new conventional transit fleet vehicles can be used to increase service frequency on existing routes. This can result in a small benefit to existing transit users (who used transit in 2022 and years prior) due to increased convenience when taking transit (i.e. more trip options, not needing to consult a schedule depending on service frequency). New conventional transit fleet vehicles can also be used to introduce transit service on new routes. Existing transit users may also experience a small benefit from these new routes (i.e. to access new destinations, transfers as part of a multi-route transit trip).

The BTE calculations above do not capture the small benefits of increased service frequency and new transit routes for existing transit users. Accordingly, an additional 5% BTE is added to the calculations above to reflect this small benefit. This results in the following benefit to existing and benefit to growth shares:

- **Benefit to Existing = 84.9%**
- **Benefit to Growth = 15.1%**

The benefit to existing share is 84.9%. The benefit to growth will be adjusted from 15.1% to 12.9% to account for post-period benefit deductions (described in Section 5.2.3).

#### 5.2.2.2 Specialized Transit Vehicles

Similar to conventional transit vehicles, a proportional ridership approach is used to calculate specialized transit BTE. Growth in specialized transit ridership can be partially attributed to the existing 2022 population, since the 2022 population will age during the growth period and, while individuals of any age can experience a disability, the prevalence of disability[11] is higher among older age cohorts. The new growth population who use specialized transit services will also account for a share of increasing specialized transit ridership in the growth period.

Ontario Ministry of Finance population projections by age cohort[12] and Statistics Canada disability prevalence percentages by age cohort[13] are used to determine the split of specialized transit ridership growth between the existing 2022 population ageing and the new growth population. Exhibit 5.6 outlines the Ontario Ministry of Finance population projections by age cohort from 2022-2032. Exhibit 5.7 multiplies the population projections by age cohort in Exhibit 5.6 by the prevalence of disability per age cohort percentages to project the number of people with a disability per age group by year from 2022-2032.

[11] Statistics Canada uses the International Classification of Functioning, Disability and Health (ICF) definition of disability, which is "the relationship between body structures and functions, daily activities and social participation, while recognizing the role of environmental factors…disability is a social disadvantage that an unsupportive environment imposes on top of an individual's impairment." Statistics Canada (2018). *Canadian Survey on Disability, 2017: Concepts and Methods Guide.* <https://www150.statcan.gc.ca/n1/pub/89-654-x/89-654-x2018001-eng.htm>. Accessed September 2023.

[12] Ontario Ministry of Finance (2021). *Population projections*. < https://data.ontario.ca/dataset/population-projections>. Accessed April 2023.

[13] Statistics Canada (2018). *A demographic, employment and income profile of Canadians with disabilities aged 15 years and over, 2017*. < https://www150.statcan.gc.ca/n1/pub/89-654-x/89-654-x2018002-eng.htm>. Accessed April 2023.

*Exhibit 5.6: City-Wide Population Projections by Age Cohort (2022-2032)*

| Age Group | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0-14 | 91,618 | 92,186 | 92,906 | 93,603 | 94,416 | 95,334 | 96,397 | 97,416 | 98,478 | 99,657 | 100,982 |
| 15-24 | 73,288 | 75,124 | 76,085 | 76,718 | 77,255 | 77,698 | 78,141 | 78,732 | 79,436 | 80,235 | 80,826 |
| 25-44 | 168,249 | 172,847 | 176,357 | 179,862 | 183,094 | 186,571 | 189,502 | 192,351 | 194,983 | 197,366 | 199,889 |
| 45-64 | 153,050 | 152,244 | 151,412 | 150,643 | 149,960 | 149,485 | 149,310 | 149,277 | 149,717 | 150,883 | 152,468 |
| 65-74 | 61,242 | 62,791 | 64,631 | 66,551 | 68,560 | 70,467 | 72,270 | 73,896 | 75,003 | 75,539 | 75,618 |
| 75+ | 48,839 | 50,650 | 52,295 | 53,891 | 55,634 | 57,468 | 59,444 | 61,595 | 64,011 | 66,465 | 69,014 |
| **Total** | **596,286** | **605,842** | **613,686** | **621,268** | **628,919** | **637,023** | **645,064** | **653,267** | **661,628** | **670,145** | **678,797** |

Source: Ontario Ministry of Finance Population Projections (2021).

*Exhibit 5.7: City-Wide Population with a Disability by Age Cohort (2022-2032)*

| Age Group | Prevalence of Disability | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15-24 | 13.1% | 9,601 | 9,841 | 9,967 | 10,050 | 10,120 | 10,178 | 10,236 | 10,314 | 10,406 | 10,511 | 10,588 |
| 25-44 | 15.3% | 25,742 | 26,446 | 26,983 | 27,519 | 28,013 | 28,545 | 28,994 | 29,430 | 29,832 | 30,197 | 30,583 |
| 45-64 | 24.3% | 37,191 | 36,995 | 36,793 | 36,606 | 36,440 | 36,325 | 36,282 | 36,274 | 36,381 | 36,665 | 37,050 |
| 65-74 | 32.0% | 19,597 | 20,093 | 20,682 | 21,296 | 21,939 | 22,549 | 23,126 | 23,647 | 24,001 | 24,172 | 24,198 |
| 75+ | 47.4% | 23,150 | 24,008 | 24,788 | 25,544 | 26,371 | 27,240 | 28,176 | 29,196 | 30,341 | 31,504 | 32,713 |
| **Total Persons with Disabilities** | | **115,281** | **117,383** | **119,213** | **121,016** | **122,884** | **124,838** | **126,815** | **128,861** | **130,962** | **133,049** | **135,131** |

Source: Analysis of Ontario Ministry of Finance Population Projections (2021) and Statistics Canada Prevalence of Disability Percentages (2018).

Exhibit 5.8 below uses the information from Exhibit 5.6 and Exhibit 5.7 to identify the total population (15 years +) and the total population with a disability (15 years +) between 2022-2032. The projected increase in total population with a disability (15 years +) between 2023-2032 is identified and this increase is split between the existing 2022 population ageing and the new growth population. It is assumed that the proportion of the population with a disability grows at the same rate as the overall population.

*Exhibit 5.8: Summary of Population with Disability Growth between Existing Ageing Population and New Growth Population (2022-2032)*

| Row # | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Total Population (15 years +)** | | | | | | | | | | | |
| **1** | **Total Population (15 years +)** | **504,668** | **513,656** | **520,780** | **527,665** | **534,503** | **541,689** | **548,667** | **555,851** | **563,150** | **570,488** | **577,815** |
| 2 | 2022 Existing Population Percentage | - | 98.3% | 96.9% | 95.6% | 94.4% | 93.2% | 92.0% | 90.8% | 89.6% | 88.5% | 87.3% |
| 3 | New Growth Percentage | - | 1.7% | 3.1% | 4.4% | 5.6% | 6.8% | 8.0% | 9.2% | 10.4% | 11.5% | 12.7% |
| | **Total Population with a Disability** | | | | | | | | | | | |
| **4** | **Total Population with a Disability (15 years +)** | **115,281** | **117,383** | **119,213** | **121,016** | **122,884** | **124,838** | **126,815** | **128,861** | **130,962** | **133,049** | **135,131** |
| 5 | Existing Ageing Population | - | 115,329 | 115,524 | 115,742 | 116,025 | 116,306 | 116,646 | 116,995 | 117,362 | 117,699 | 118,025 |
| 6 | New Growth Population | - | 2,054 | 3,688 | 5,274 | 6,859 | 8,532 | 10,170 | 11,866 | 13,600 | 15,351 | 17,107 |
| **7** | **Increase in Total Population with a Disability (15 years +) Versus 2022 Baseline Population** | **-** | **2,102** | **3,932** | **5,735** | **7,603** | **9,557** | **11,534** | **13,580** | **15,681** | **17,768** | **19,850** |
| 8 | Increase in Total Population with a Disability Due to Existing 2022 Population Ageing | - | 48 | 243 | 461 | 744 | 1,025 | 1,365 | 1,714 | 2,081 | 2,418 | 2,744 |
| *9* | *Percentage of Row 7 Due to Existing 2022 Population Ageing* | - | *2.3%* | *6.2%* | *8.0%* | *9.8%* | *10.7%* | *11.8%* | *12.6%* | *13.3%* | *13.6%* | *13.8%* |
| 10 | Increase in Total Population with a Disability Due to New Growth Population | - | 2,054 | 3,688 | 5,274 | 6,859 | 8,532 | 10,170 | 11,866 | 13,600 | 15,351 | 17,107 |
| *11* | *Percentage of Row 7 Due to New Growth Population* | - | *97.7%* | *93.8%* | *92.0%* | *90.2%* | *89.3%* | *88.2%* | *87.4%* | *86.7%* | *86.4%* | *86.2%* |

Exhibit 5.4 and Exhibit 5.8 are used to calculate the number of growth period specialized transit trips taken by the current users and ageing 2022 population compared to the new growth population.

The approach for apportioning specialized transit benefit is described below.

- **The total number of specialized transit trips** taken during the growth period can be attributed to two groups. The first group is the existing 2022 population (that will age over the growth period), while the second group is the new growth population.
- **The existing 2022 population group** is comprised of two sub-groups. The first is the 2022 population that used specialized transit in 2022 and will continue to do so throughout the growth period. The second is the 2022 population that did not use specialized transit in 2022 but will begin to use specialized transit during the growth period, largely due to ageing and the associated higher disability prevalence (Exhibit 1.6).
- **The new growth population group** is comprised of people who move to Hamilton during the growth period (2023-2032) and use specialized transit. This population group is not present in Hamilton in the 2022 baseline year.
- **A proportional approach between these two groups**, based on specialized transit ridership during the growth period, is used to allocate benefit for specialized transit.

The calculation for this approach is described in detail below:

| | | |
|---|---|---|
| **Number of Specialized Transit Trips by Existing and Ageing 2022 Population (2023-2032)** | = | (2022 Active Registrants x 2023-2032 Riders Per Active Registrant Rate x Number of Years in the Growth Period) + (Sum of the products of Increase in Specialized Transit Ridership from 2022 per year and the Existing 2022 Population Ageing Percentage of Increase in Total Population with a Disability per year) |
| | = | (7,124 x 86 x 10) + 250,684 |
| | = | **6,377,324** |

| | | |
|---|---|---|
| **Number of Specialized Transit Trips by New Growth Population (2023-2032)** | = | Sum of the products of Increase in Specialized Transit Ridership from 2022 per year and the New Growth Population percentage of Increase in Total Population with a Disability per year |
| | = | **2,072,488** |

The benefit to existing and benefit to growth shares are calculated on a proportional ridership basis. This is described below:

**Benefit to Existing** = $\frac{\text{Number of Specialized Transit Trips by Existing and Ageing 2022 Population (2023-2032)}}{\text{Total Number of 2023-2032 Specialized Transit Trips (Existing and Ageing 2022 Population and New Growth Population)}}$

= $\frac{6,377,324}{8,449,812}$

= **75.5%**

**Benefit to Growth** = $\frac{\text{Number of Specialized Transit Trips by New Growth Population (2023-2032)}}{\text{Total Number of 2023-2032 Specialized Transit Trips (Existing and Ageing 2022 Population and New Growth Population)}}$

= $\frac{2,072,488}{8,449,812}$

= **24.5%**

The benefit to existing share is 75.5% and the benefit to growth share is 24.5% for specialized transit.

#### 5.2.2.3 Operations and Facility Vehicles

Operations vehicles are used to supervise transit operations throughout the service area. Existing operations vehicles can continue to be used in the existing service areas. New operations vehicles are required to supervise transit service in new growth areas. Since these new operations vehicles are solely needed for the new growth areas, they are fully allocated to growth and have a 0% BTE.

Facility vehicles are required to support the operations of the new transit maintenance facility that is required to support growth in the transit fleet. The facility vehicles should have the same benefit allocation as the overall new transit facility. Watson & Associates assessed the new facility and determined the following growth allocations for the facility and facility vehicles:

- Benefit to Existing: **77.6%**
- Benefit to Growth: **22.4%** (will be further adjusted to 15.7% to account for post-period benefit deductions in Section 5.2.3)

### 5.2.3 Transit Post-Period Benefit

Future growth-related transit projects provide some benefit to users beyond the transit growth period horizon (2023-2032). This is referred to as post-period benefit (PPB), and development charge calculations need to reflect this future benefit where appropriate. This section describes how the PPB deductions are calculated for transit services. The post-period is defined as 2033-2035.

#### 5.2.3.1 Conventional Vehicles

HSR's transit fleet features vehicles of various sizes, including 30-foot, 40-foot and 60-foot buses. The capital plan identifies the number of required new vehicles, of varying sizes, to meet anticipated ridership demand. However, there is limited ability to right-size a bus. If a service level threshold is met to warrant an additional vehicle on a route, the entire bus will be used regardless of whether it is full or not. This results in excess vehicle capacity during the growth period, and this excess capacity will be used in the post-period.

Similar to the BTE approach, a proportional ridership method is used to calculate the PPB deductions for conventional transit vehicles. Exhibit 5.9 below uses the information from Exhibit 1.2, Summary of Projected Local HSR Transit Ridership and Mode Share (2022-2035), to outline the total number of A.M. Peak period transit trips in the post-period and the split of these trips between the 2032 population and the post-period population.

The total number of transit trips and the split between trips made by the growth period baseline population (2032) and the post-period population (2033-2035) is described below:

- 2033-2035 Total Number of Transit Trips (Growth Period and Post-Period Population): **101,768**
- 2033-2035 Total Number of Transit Trips (Growth Period): **99,477**
- 2033-2035 Total Number of Transit Trips (Post-Period Population): **2,291**

*Exhibit 5.9: Allocation of Transit Trips between Existing and New Growth Population (2032-2035)*

| | 2032 | 2033 | 2034 | 2035 | Sum of 2033-2035 |
|---|---|---|---|---|---|
| Total A.M. Peak Period Person Trips (Model) | 324,030 | 327,751 | 331,515 | 335,321 | - |
| A.M. Peak Period Additional Person Trips (Versus 2032 Baseline Population) | - | 3,721 | 7,484 | 11,291 | - |
| A.M. Peak Period Bus Mode Share | 10.7% | 10.4% | 10.2% | 10.1% | - |
| A.M. Peak Period HSR Bus Ridership | 34,671 | 34,086 | 33,814 | 33,867 | **101,768** |
| A.M. Peak Period Transit Trips made by Growth Period 2032 Population | 34,671 | 33,699 | 33,051 | 32,727 | **99,477** |
| A.M. Peak Period Transit Trips by Post-Period Population (Versus 2032 Baseline Population) | - | 387 | 763 | 1,140 | **2,291** |

The post-period benefit is calculated using a proportional ridership basis as described below:

$$\textbf{Post-Period Benefit} = \frac{\text{2033-2035 Total Number of Transit Trips (Post-Period Population)}}{\text{2033-2035 Total Number of Transit Trips (Growth Period and Post-Period Population)}}$$

$$= \frac{2,291}{101,768}$$

$$= \textbf{2.2\%}$$

Since the growth period accounts for 2.2% of assumed transit trips beyond 2032, the growth period benefit share outlined in Section 5.2.2 needs to be adjusted:

| | | |
|---|---|---|
| **Adjusted Growth Period Benefit** | = | Original Growth Period Benefit – Post-Period Benefit |
| | = | 15.1% - 2.2% |
| | = | **12.9%** |

The adjusted growth period benefit share is 12.9% and the post-period benefit share is 2.2% for conventional transit.

#### 5.2.3.2 Specialized, Operations and Facility Vehicles

The new accessible supervisory vehicles for specialized transit are needed to support specialized transit operations in the growth period. Similarly, the new operations support vehicles are needed to support conventional transit operations in the growth period. Accordingly, there is no post-period benefit for the purchase of these vehicles.

Additional facility vehicles are needed to support the new transit maintenance facility. The service truck, stock room vehicle and garage equipment repair express van vehicles have an operational life of approximately 10 years. This is within the growth period, and these vehicles have no post-period benefit.

The garage equipment repair walk behind forklift, garage forklift and garage tow mobile have an operational life of approximately 20 years, which extends beyond the growth period into the post-period. These vehicles have been assigned the same post-period benefit as the overall transit maintenance facility.

This post-period benefit share is 6.7% based on an assessment by Watson & Associates. `

The growth period share for these vehicles is adjusted to accommodate the post-period benefit share as described below:

| | | |
|---|---|---|
| **Adjusted Growth Period Benefit** | = | Original Growth Period Benefit – Post-Period Benefit |
| | = | 22.4% - 6.7% |
| | = | **15.7%** |

The adjusted growth period benefit share is 15.7% and the post-period benefit share is 6.7% for the garage equipment repair walk behind forklift, garage forklift and garage tow mobile.

### 5.2.4 Transit Benefit to Existing, Growth Period Benefit and Post-Period Benefit Summary

Exhibit 5.10 below summarizes the benefit allocation for transit services.

*Exhibit 5.10: Summary of Transit Benefit Allocation*

| | Benefit to Existing | Benefit to Growth | Post-Period Benefit |
|---|---|---|---|
| Conventional Transit Vehicles | 84.9% | 12.9% | 2.2% |
| Specialized Transit Vehicles | 75.5% | 24.5% | 0% |
| Operations Vehicles | 0% | 100% | 0% |
| Facility Vehicles – 10-Year Operational Life | 77.6% | 22.4% | 0% |
| Facility Vehicles – 20-Year Operational Life | 77.6% | 15.7% | 6.7% |

## 5.3 Apportioning Benefit: Active Transportation Projects

The section describes the BTE and PPB percentages, and their rationale, for AT projects within the service target.

### 5.3.1 Active Transportation Benefit to Existing

The BTE percentages for AT projects vary based on the geographic location and the nature of the upgrade.  describes the BTE percentages and rationale below:

*Exhibit 5.11: Active Transportation Benefit to Existing Percentages and Rationale*

| Project Type | BTE Percentage | Rationale |
|---|---|---|
| Infill Active Transportation (Cycling and/or Pedestrian Facilities) | 81% | These projects are located within the urban boundary where there is a mix of existing and new growth residents. Existing and new residents benefit from active transportation projects in these infill areas. A population proportion approach is used to calculate the BTE percentage to reflect the 2023 population size relative to the 2041 STNR planning horizon population size. |

| Project Type | BTE Percentage | Rationale |
|---|---|---|
| New Growth Active Transportation (Upgrade Existing Cycling and/or Pedestrian Facilities) | 15% | These projects are located outside of the urban boundary and are upgrades to existing facilities. The need for these upgrades is due to the new growth population, however existing users receive small benefits (i.e. repaving). This is consistent with BTE approach for road widenings. |
| New Growth Active Transportation (New Cycling and/or Pedestrian Facilities) | 0% | These projects are located outside of the urban boundary. Since there is no existing facility, the need is driven entirely by new development. |

### 5.3.2 Active Transportation Post-Period Benefit

A 30% PPB has been applied to all AT projects to account for the portion of the projects that would benefit growth beyond the service target – this aligns with the 2019 DC Study.

## 5.4 Apportioning Benefit: Structures

This section describes the BTE and PPB percentages and their rationale for structures within the service target.

### 5.4.1 Structures Benefit to Existing

Structures comprise of three groups of projects: interchanges, active transportation bridges and grade separations. The BTE rates and explanations for each of these groups is outlined below:

- **Interchanges:** These projects increase the capacity of intersections and help to accommodate growing traffic. The nature of these projects can differ based on location and are thus assessed at an individual project level. The BTE rates from the *2019 DC Study* have been carried forward for two projects, with the Highway 5/6 Interchange project receiving 0% BTE and the Mohawk Road-Highway 403 Interchange Ramp project receiving 50% BTE. This study also includes two interchange projects that were not included in the *2019 DC Study*. The Centennial Parkway at QEW Interchange Reconfiguration received 50% BTE (similar to the Mohawk Road-Highway 403 Interchange Ramp project) as it

appears to be warranted by both the existing and new growth populations, while the QEW Off-Ramps at Fifty Road (signalization and ramp reconfiguration) received 15% BTE as it appears to be largely growth-driven.

- **Active Transportation Bridges:** These projects are generally located in built-up areas and benefit existing and new growth residents. A population proportion approach is used to calculate the BTE as 81% -- this reflects the 2023 population size relative to the 2041 STNR planning horizon population size.
- **Grade Separation:** These projects are designed to accommodate increased traffic flow and are warranted by new growth. It is recognized that these projects provide some benefit to existing users due to increased safety and improved travel time. These projects have been assigned 25% BTE.

### 5.4.2 Structures Post-Period Benefit

Most structures are scheduled for implementation prior to the service target and accordingly have no PPB. The Strathcona Pedestrian Bridge is scheduled for implementation beyond the service target and has been assigned 100% PPB. Grade separation was assigned a 50% PPB in the 2019 DC Study – this has been carried forward as it was deemed that project benefit will extend to development built beyond the service target.

## 5.5 Apportioning Benefit: Programs

This section describes the BTE and PPB percentages and their rationale for programs within the service target.

### 5.5.1 Programs Benefit to Existing

Exhibit 5.12 below outlines the various programs, their BTE level, and the associated rationale.

*Exhibit 5.12: Programs Benefit to Existing Percentages and Rationale*

| Program | BTE Percentage | Rationale |
|---|---|---|
| Development Road Urbanization | 5% | This program is largely driven by growth in adjacent developments. There is a small benefit to existing users due to resurfacing. |
| Advanced Traffic Management Systems | 75% | This program improves traffic flow throughout the city and primarily benefits existing users. There is a benefit to growth as the systems help to accommodate growth-related traffic increases. |

| Program | BTE Percentage | Rationale |
|---|---|---|
| New Traffic Signals | 5% | These signals are warranted by growth. There is a small benefit to existing users due to safety improvements. |
| Traffic Signal Upgrades | 5% | These upgrades are primarily conducted to accommodate growth. There is a small benefit to existing users due to safety improvements. |
| Traffic Signal LED Replacement Program | 100% | This program is not growth-related. |
| Traffic Controller Cabinet Replacements (Capacity Related) | 5% | Traffic controller cabinet replacements are generally undertaken to accommodate growth and road network capacity increases. There may be a small benefit to existing users due to improved traffic signal operations. |
| Unidentified intersection improvements (excluding Traffic Signals) | 81% | Improvements can be driven by growth (e.g. new signal phasing, intersection widening requiring signal changes), or could be driven by safety upgrades (i.e. cross-rides for AT users, new signals to address high collision locations) that benefit both existing users and new growth users. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size. |
| Miscellaneous Land Acquisitions | 5% | Land acquisition is typically used to add road capacity through adding additional lanes. There is a small benefit to existing users due to repaving. |
| Transit Shelter Expansion Program | 50% | Many new transit shelters are located in growth areas, but some transit shelters are replacements in infill areas. |
| Bus Stop Shelter Rehabilitation Program | 85% | Rehabilitation of bus shelters benefits new growth and existing users. It is assumed that many bus shelters in infill areas with existing users, however there will be some bus shelters that are rehabilitated in new growth areas to accommodate new users. |

| Program | BTE Percentage | Rationale |
|---|---|---|
| Annual Bike Parking at B/A Line Stops | 81% | Hamilton's rapid transit network is largely located within the urban boundary on intensification corridors. New growth and existing residents both benefit. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size. |
| Annual Enhanced Bike Parking at Express Bus/Rapid Transit Stops | 81% | New growth and existing residents both benefit. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size. |
| Bike Parking | 81% | New growth and existing residents both benefit. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size. |
| Micromobility | 81% | New growth and existing residents both benefit. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size. |
| Transportation Demand Management | 81% | New growth and existing residents both benefit. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size. |
| New Signals (Pedestrian and/or Regular) | 5% | New signals are warranted by new development. There is a small benefit to existing users due to improved safety and traffic operations. |
| Street Lighting Enhancement Program | 81% | New growth and existing residents both benefit. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size. |
| Pedestrian Crossovers | 81% | New growth and existing residents both benefit. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size. |
| New Sidewalk Program | 0% | New sidewalks are warranted by new developments. |

| Program | BTE Percentage | Rationale |
|---|---|---|
| Durable Pavement Markings – New Installations | 15% | These projects are similar to road as they are warranted by growth but provide small benefits (i.e. safety) to existing users. |
| Sidewalk Missing Link Program | 81% | New growth and existing residents both benefit. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size. |

### 5.5.2 Programs Post-Period Benefit

All programs are scheduled for implementation prior to the service target and accordingly have no PPB.

# Appendix E

## 2024 Development Charges Background Study Transportation Capital Projects List

| Increased Service Needs Attributable to Anticipated Development | Timing (year) | Length (km) | Capital Improvement | Gross Capital Cost Estimate (2023$) | Other Deductions | Benefit to Existing Development | Post Period Benefit | Net Capital Cost |
|---|---|---|---|---|---|---|---|---|
| **Road Projects** | | | | | | | | |
| **AEGD** | | | | | | | | |
| Airport Road - Terminal Access Road to East Cargo Road | To 2031 | 0.32 | 2r-4u | $ 3,789,353 | $ - | $ 1,515,741 | $ - | $ 2,273,612 |
| Book Road - Southcote Road to Highway 6 | To 2031 | 1.05 | 2r-5u | $ 10,580,564 | $ - | $ 1,587,085 | $ - | $ 8,993,480 |
| Collector 1E - Collector 6N to Dickenson Road | 2031 to 2041 | 0.67 | 3u | $ 6,458,583 | $ 6,458,583 | $ - | $ - | $ - |
| Arterial 1N - Collector 2N to Dickenson Road/Garth Street Extension | To 2031 | 2.97 | 5u | $ 34,248,600 | $ - | $ - | $ - | $ 34,248,600 |
| Collector 2N - Collector 5W to Arterial 1N | 2031 to 2041 | 0.42 | 3u | $ 4,042,840 | $ 4,042,840 | $ - | $ - | $ - |
| Collector 6N - Upper James Street to Collector 6E | 2031 to 2041 | 0.95 | 4u | $ 10,307,184 | $ 10,307,184 | $ - | $ - | $ - |
| Collector 6N - Collector 6E to Garth Street | 2031 to 2041 | 0.41 | 4u | $ 4,524,353 | $ 4,524,353 | $ - | $ - | $ - |
| Collector 6N - Garth Street to Glancaster Road | 2031 to 2041 | 1.54 | 4u | $ 16,775,250 | $ 16,775,250 | $ - | $ - | $ - |
| Collector 6E - Collector 6N to Dickenson Road | To 2031 | 0.64 | 3u | $ 6,245,695 | $ 4,414,549 | $ - | $ - | $ 1,831,146 |
| Collector 7N - Collector 5W to Collector 2W | 2031 to 2041 | 1.19 | 3u | $ 11,577,708 | $ 11,577,708 | $ - | $ - | $ - |
| Collector 8W - Garner Road to Collector 5N | 2031 to 2041 | 1.07 | 2u | $ 8,301,996 | $ 8,301,996 | $ - | $ - | $ - |
| Dickenson Road - Glancaster Road to Upper James Street | To 2031 | 2.90 | 2r-5u | $ 31,576,263 | $ - | $ 4,736,439 | $ - | $ 26,839,824 |
| Dickenson Road Extension - Glancaster Road to Smith Road | To 2031 | 0.83 | 5r | $ 6,526,966 | $ - | $ - | $ - | $ 6,526,966 |
| Book Road - Smith Road to Southcote Road | To 2031 | 0.45 | 2r-5u | $ 4,935,759 | $ - | $ 740,364 | $ - | $ 4,195,395 |
| Garth Street Extension - Twenty Road to Collector 6N | 2031 to 2041 | 0.81 | 5u | $ 9,296,472 | $ - | $ - | $ 9,296,472 | $ - |
| Garth Street Extension - Collector 6N to Dickenson Road | 2031 to 2041 | 0.66 | 5u | $ 7,561,667 | $ - | $ - | $ 7,561,667 | $ - |
| Glancaster Road - Garner Road to Dickenson Road | To 2031 | 2.67 | 2r-3u | $ 23,144,329 | $ - | $ 3,471,649 | $ - | $ 19,672,680 |
| Glancaster Road - Dickenson Road to Arterial 1N | 2031 to 2041 | 0.39 | 3u-5u | $ 4,605,603 | $ - | $ - | $ 4,605,603 | $ - |
| Garner Road - Glancaster Road to Highway 6 South | To 2031 | 3.12 | 2r-5u | $ 31,491,877 | $ - | $ 4,723,782 | $ - | $ 26,768,096 |
| Smith Road - Garner Road to Hydro Corridor | To 2031 | 0.88 | 3u | $ 8,503,884 | $ - | $ - | $ - | $ 8,503,884 |
| Smith Road - Hydro Corridor to Book Road | 2031 to 2041 | 1.01 | 3u | $ 9,794,999 | $ - | $ - | $ 9,794,999 | $ - |
| Smith Road - Book Road to Arterial 1N | 2031 to 2041 | 0.63 | 3u | $ 6,072,996 | $ - | $ - | $ 6,072,996 | $ - |
| Southcote Road - Garner Road to Book Road | To 2031 | 1.95 | 2r-5u | $ 26,708,722 | $ - | $ 4,006,308 | $ - | $ 22,702,414 |
| Upper James Street - Rymal Road to Highway 6 South | 2031 to 2041 | 7.22 | 4r-6u | $ 86,351,332 | $ - | $ - | $ 86,351,332 | $ - |
| Glancaster Road - Arterial 1N to Airport Boundary | 2031 to 2041 | 0.48 | 2u | $ 3,512,806 | $ - | $ - | $ 3,512,806 | $ - |
| Collector 9W - Garner Road to Collector 11N | 2031 to 2041 | 0.33 | 2u | $ 2,536,970 | $ 2,536,970 | $ - | $ - | $ - |
| Smith Road - Arterial 1N to Airport Boundary | To 2031 | 0.21 | 3u | $ 2,046,951 | $ 1,446,815 | $ - | $ - | $ 600,136 |
| Airport Road - East Cargo Road to Upper James Street | To 2031 | 1.08 | 2r-3u | $ 8,247,539 | $ - | $ 3,299,016 | $ - | $ 4,948,523 |
| Book Road East - Collector 2W to Glancaster Road | 2031 to 2041 | 0.85 | 2r-3u | $ 6,510,409 | $ 6,510,409 | $ - | $ - | $ - |
| Collector 10N - Garner Road to Smith Road | To 2031 | 1.17 | 3u | $ 11,312,884 | $ 7,996,113 | $ - | $ - | $ 3,316,771 |
| Twenty Road - Glancaster Road to Upper James Street | 2031 to 2041 | 2.90 | 2r-4u | $ 32,145,181 | $ 32,145,181 | $ - | $ - | $ - |
| Airport Road - Glancaster Road to Terminal Access Road | To 2031 | 1.71 | 2r-2u | $ 15,971,496 | $ - | $ 6,388,598 | $ - | $ 9,582,898 |
| Collector 11N - Fiddler's Green Road to Collector 9W | 2031 to 2041 | 0.35 | 2u | $ 2,724,513 | $ 2,724,513 | $ - | $ - | $ - |
| Collector 1W - Collector 10N to Garner Road | 2031 to 2041 | 0.39 | 3u | $ 3,761,610 | $ 3,761,610 | $ - | $ - | $ - |
| **Ancaster** | | | | | | | | |
| Garner Road - Highway 6 South to Wilson Street | To 2031 | 4.86 | 2r-5u | $ 49,311,040 | $ - | $ 7,396,656 | $ - | $ 41,914,384 |
| Golf Links Road - McNiven Road to Kitty Murray Lane | To 2031 | 0.84 | 2r-3u | $ 9,147,781 | $ - | $ 1,372,167 | $ - | $ 7,775,614 |
| Jerseyville Road - Wilson Street to Lloyminn Avenue | 2031 to 2041 | 0.79 | 2r-3u | $ 6,367,167 | $ - | $ - | $ 6,367,167 | $ - |

| Increased Service Needs Attributable to Anticipated Development | Timing (year) | Length (km) | Capital Improvement | Gross Capital Cost Estimate (2023$) | Other Deductions | Benefit to Existing Development | Post Period Benefit | Net Capital Cost |
|---|---|---|---|---|---|---|---|---|
| Shaver Road - Trustwood to Garner Road | To 2031 | 0.74 | 2r-2i | $ 6,303,822 | $ - | $ 945,573 | $ - | $ 5,358,249 |
| McNiven Road - Rousseaux Street/Mohawk Road to Golf Links Road | To 2031 | 0.62 | 2r-3u | $ 4,895,491 | $ - | $ 3,916,393 | $ - | $ 979,098 |
| Jerseyville Road - Lloyminn Avenue to Meadowbrook Drive | 2031 to 2041 | 1.25 | 2r-2u | $ 10,164,929 | $ - | $ - | $ 10,164,929 | $ - |
| **Fruitland - Winona** | | | | | | | | |
| Barton Street - Fruitland Road to Fifty Road | To 2031 | 5.11 | 2r-5u | $ 53,873,435 | $ - | $ 21,549,374 | $ - | $ 32,324,061 |
| Fifty Road - Barton Street to South Service Road | To 2031 | 0.55 | 2r-4u | $ 5,178,149 | $ - | $ 776,722 | $ - | $ 4,401,426 |
| Fifty Road - Barton Street to Highway 8 | 2031 to 2041 | 0.24 | 2r-3u | $ 1,834,403 | $ - | $ - | $ 1,834,403 | $ - |
| Gordon Dean Avenue - Barton Street to Highway 8 | To 2031 | 1.08 | 4u | $ 11,551,567 | $ - | $ - | $ - | $ 11,551,567 |
| Trinity Road/Highway 52 - Highway 403 Interchange to Cormorant Road | To 2031 | 1.79 | 2r-4u | $ 17,792,911 | $ - | $ 2,668,937 | $ - | $ 15,123,974 |
| Highway 8 - Dewitt Road to Jones Road | To 2031 | 1.73 | 2r-4u | $ 16,331,501 | $ - | $ 6,532,600 | $ - | $ 9,798,900 |
| Highway 8 - Jones Road to McNeilly Road | 2031 to 2041 | 1.73 | 2r-4u | $ 17,715,501 | $ - | $ - | $ 17,715,501 | $ - |
| Highway 8 - McNeilly Road to Fifty Road | 2031 to 2041 | 2.67 | 2r-3u | $ 20,604,135 | $ - | $ - | $ 20,604,135 | $ - |
| Collector B (Block 1) - Fruitland Road to Jones Road | 2031 to 2041 | 0.89 | 2u | $ 6,779,781 | $ 6,779,781 | $ - | $ - | $ - |
| Collector C (Block 2) - Barton Street to Highway 8 | To 2031 | 0.74 | 2u | $ 5,642,466 | $ 5,642,466 | $ - | $ - | $ - |
| Collector D (Block 3) - McNeilly Road to Collector F | 2031 to 2041 | 1.25 | 2u | $ 9,537,486 | $ 9,537,486 | $ - | $ - | $ - |
| Collector E (Block 3) - Barton Street to Highway 8 | To 2031 | 0.66 | 2u | $ 5,060,086 | $ 5,060,086 | $ - | $ - | $ - |
| Collector F (Block 3) - Barton Street to Collector D | To 2031 | 0.22 | 2u | $ 1,713,732 | $ 1,713,732 | $ - | $ - | $ - |
| Fruitland Road - Highway 8 to Barton Street | To 2031 | 1.05 | 2r-3u | $ 8,937,129 | $ - | $ 1,340,569 | $ - | $ 7,596,559 |
| Fruitland Road - Arvin Avenue to Barton Street | To 2031 | 0.36 | 2u-5u | $ 4,339,490 | $ - | $ 650,923 | $ - | $ 3,688,566 |
| **MTO** | | | | | | | | |
| Highway 403 - Mohawk Road/Lincoln M. Alexander Parkway to Highway 6 south interchange | To 2031 | 0.00 | Truck Climbing Lane | $ 4,878,650 | $ 2,439,325 | $ 365,899 | $ - | $ 2,073,426 |
| **Red Hill Business Park** | | | | | | | | |
| Dartnall Road - Twenty Road to Dickenson Road | To 2031 | 1.55 | 4u | $ 17,001,938 | $ - | $ - | $ - | $ 17,001,938 |
| Twenty Road East - Glover Road to Upper Redhill Valley Parkway | To 2031 | 0.35 | 2i | $ 3,185,739 | $ - | $ - | $ - | $ 3,185,739 |
| Upper Red Hill Valley Parkway - Rymal Road to Twenty Road | 2031 to 2041 | 1.22 | 4u | $ 13,103,066 | $ - | $ - | $ 13,103,066 | $ - |
| Dickenson Road - 350 meters west of Nebo to 330m west of Glover Road | 2031 to 2041 | 1.20 | 2r-2i | $ 11,285,379 | $ - | $ - | $ 11,285,379 | $ - |
| Glover Road - Twenty Road to Rymal Road | To 2031 | 1.31 | 2r-2i | $ 11,485,019 | $ - | $ 1,722,753 | $ - | $ 9,762,267 |
| Nebo Road - Twenty Road to Dickenson Road/Dartnall Road | To 2031 | 0.74 | 2r-2i | $ 6,302,030 | $ - | $ 945,305 | $ - | $ 5,356,726 |
| Nebo Road - Rymal Road to Twenty Road East | To 2031 | 1.30 | 2r-2i | $ 11,085,926 | $ - | $ 1,662,889 | $ - | $ 9,423,037 |
| **South Mountain Area** | | | | | | | | |
| Rymal Road - Dartnall Road to Upper James Street | To 2031 | 5.17 | 2r-5u | $ 71,111,462 | $ - | $ 10,666,719 | $ - | $ 60,444,742 |
| Upper Wellington Street - Limeridge Road to Stone Church Road | To 2031 | 1.04 | 2r-3u | $ 12,702,186 | $ - | $ 5,080,874 | $ - | $ 7,621,312 |
| Garth Street - Rymal Road to Twenty Road West | 2031 to 2041 | 1.41 | 2r-5u | $ 15,963,350 | $ - | $ - | $ 15,963,350 | $ - |
| Rymal Road - Glancaster Road to Upper Paradise Street | To 2031 | 0.55 | 2r-5u | $ 5,594,604 | $ - | $ 839,191 | $ - | $ 4,755,413 |
| West 5th Street - Rymal Road to Stone Church Road | To 2031 | 1.01 | 2r-3u | $ 7,728,774 | $ - | $ 3,091,510 | $ - | $ 4,637,265 |
| **Stoney Creek** | | | | | | | | |
| Arvin Avenue - McNeilly Road to Lewis Road | To 2031 | 0.85 | 2i | $ 7,736,794 | $ - | $ - | $ - | $ 7,736,794 |
| South Service Road - Lewis Road to Fifty Road | To 2031 | 1.79 | 2r-4r | $ 13,701,195 | $ - | $ 2,055,179 | $ - | $ 11,646,015 |
| McNeilly Road - Highway 8 to Barton Street | To 2031 | 0.90 | 2r-2u | $ 7,156,843 | $ 1,618 | $ 1,073,284 | $ - | $ 6,081,941 |

| Increased Service Needs Attributable to Anticipated Development | Timing (year) | Length (km) | Capital Improvement | Gross Capital Cost Estimate (2023$) | Other Deductions | Benefit to Existing Development | Post Period Benefit | Net Capital Cost |
|---|---|---|---|---|---|---|---|---|
| Lewis Road - Highway 8 to Barton Street | To 2031 | 0.49 | 2r-2u | $ 3,908,425 | $ 884 | $ 586,131 | $ - | $ 3,321,410 |
| Glover Road - Highway 8 to Barton Street | 2031 to 2041 | 0.81 | 2r-2u | $ 6,259,225 | $ 6,259,225 | $ - | $ - | $ - |
| Jones Road - Highway 8 to Barton Street | To 2031 | 0.92 | 2r-2u | $ 7,293,473 | $ 1,649 | $ 1,093,774 | $ - | $ 6,198,050 |
| Jones Road - Barton Street to South Service Road | To 2031 | 0.92 | 2r-2i | $ 8,035,897 | $ - | $ 4,017,949 | $ - | $ 4,017,949 |
| Lewis Road - Barton Street to South Service Road | To 2031 | 0.87 | 2r-2i | $ 7,871,843 | $ - | $ 3,935,922 | $ - | $ 3,935,922 |
| Millen Road - Barton Street to South Service Road | To 2031 | 1.07 | 2r-2i | $ 9,092,330 | $ - | $ 3,636,932 | $ - | $ 5,455,398 |
| South Service Road - Millen Road to Gray Road | 2031 to 2041 | 1.55 | 2r-2u | $ 12,006,082 | $ - | $ - | $ 12,006,082 | $ - |
| **Twenty Road East** | | | | | | | | |
| Upper Ottawa Street - End to Twenty Road | 2031 to 2041 | 0.95 | 4u | $ 10,215,838 | $ - | $ - | $ 10,215,838 | $ - |
| **Waterdown** | | | | | | | | |
| North Waterdown Drive - Centre Road to Parkside Drive | To 2031 | 1.28 | 3u | $ 12,464,597 | $ - | $ - | $ - | $ 12,464,597 |
| Parkside Drive - North Waterdown Drive to Avonsyde Boulevard | To 2031 | 1.47 | 2r-3u | $ 37,342,355 | $ - | $ 5,601,353 | $ - | $ 31,741,002 |
| North Waterdown Drive - Clappison Avenue Extension to Mosaic Drive | To 2031 | 0.59 | 3u | $ 5,726,919 | $ - | $ - | $ - | $ 5,726,919 |
| Clappison Avenue Extension - Parkside Drive to North Waterdown Drive | To 2031 | 0.54 | 2u | $ 4,132,544 | $ - | $ - | $ - | $ 4,132,544 |
| Parkside Drive - Hollybush Drive to Highway 6 | To 2031 | 1.07 | 2r-4u | $ 10,266,769 | $ - | $ 4,106,708 | $ - | $ 6,160,062 |
| Parkside Drive - Main Street to North Waterdown Drive | 2031 to 2041 | 0.59 | 2r-3u | $ 4,533,236 | $ - | $ - | $ 4,533,236 | $ - |
| **Other** | | | | | | | | |
| Binbrook Road - Fletcher Road to Binhaven Road | To 2031 | 0.91 | 2r-2u | $ 7,297,133 | $ - | $ 1,094,570 | $ - | $ 6,202,563 |
| LRT corridor - Centennial Parkway/Main Street/King Street to McMaster University | To 2031 | 13.77 | Public Realm Improvements | $ 9,990,000 | $ - | $ 1,498,500 | $ - | $ 8,491,500 |
| Longwood Road - Aberdeen Avenue to Main Street | To 2031 | 0.64 | 4u | $ 8,192,524 | $ - | $ 4,096,262 | $ - | $ 4,096,262 |
| Lincoln M. Alexander Parkway-Red Hill Valley Parkway - Highway 403 to Queen Elizabeth Way | 2031 to 2041 | 17.30 | 4r-6u | $ 135,000,000 | $ - | $ - | $ 135,000,000 | $ - |
| **Local Share Deductions** | | | | | | | | |
| Provision for Local Share of Urbanization (Urbanization Rate) | | | | $ (4,684,630) | | | | $ (4,684,630) |

| Increased Service Needs Attributable to Anticipated Development | Timing (year) | Length (km) | Capital Improvement | Gross Capital Cost Estimate (2023$) | Other Deductions | Benefit to Existing Development | Post Period Benefit | Net Capital Cost |
|---|---|---|---|---|---|---|---|---|
| **Major Structures** | | | | | | | | |
| Highway 5/6 Interchange | To 2031 | - | Structure | $ 49,093,158 | $ 36,819,869 | $ - | $ - | $ 12,273,290 |
| Mohawk Road - Highway 403 Interchange Ramp | To 2031 | - | Structure | $ 4,042,310 | $ - | $ 2,021,155 | $ - | $ 2,021,155 |
| Centennial Parkway at QEW | To 2031 | - | Interchange Reconfiguration | $ 8,500,000 | $ - | $ 4,250,000 | $ - | $ 4,250,000 |
| QEW Off-Ramps at Fifty Road | To 2031 | - | Signalization and Ramp Reconfiguration | $ 4,000,000 | $ - | $ 600,000 | $ - | $ 3,400,000 |
| Strathcona Pedestrian Bridge | 2031 to 2041 | - | Structure | $ 31,500,000 | $ - | $ - | $ 31,500,000 | $ - |
| Limeridge Mall Bridge | To 2031 | - | Structure | $ 6,500,000 | $ 3,500,000 | $ 2,430,000 | $ - | $ 570,000 |
| Henderson Lift Bridge | To 2031 | - | Structure | $ 20,000,000 | $ - | $ 16,200,000 | $ - | $ 3,800,000 |
| Hamilton Centre Bridge | To 2031 | - | Structure | $ 9,500,000 | $ - | $ 7,695,000 | $ - | $ 1,805,000 |
| Red Hill Bridge | To 2031 | - | Structure | $ 19,000,000 | $ - | $ 15,390,000 | $ - | $ 3,610,000 |
| Dundas Bridge | To 2031 | - | Structure | $ 3,125,000 | $ - | $ 2,531,250 | $ - | $ 593,750 |
| Grade Separation | To 2031 | - | Grade Separation | $ 71,827,667 | $ - | $ 17,956,917 | $ 26,935,375 | $ 26,935,375 |
| **Programs** | | | | | | | | |
| New Signals (Pedestrian and/or Regular) | 2024-2031 | - | City-Wide Program | $ 32,000,000 | $ - | $ 1,600,000 | $ - | $ 30,400,000 |
| Development Road Urbanization | 2024-2031 | - | City-Wide Program | $ 6,500,000 | $ - | $ 325,000 | $ - | $ 6,175,000 |
| Street Lighting Enhancement Program | 2024-2031 | - | City-Wide Program | $ 3,250,000 | $ - | $ 2,632,500 | $ - | $ 617,500 |
| Pedestrian Crossovers | 2024-2031 | - | City-Wide Program | $ 1,680,000 | $ - | $ 1,360,800 | $ - | $ 319,200 |
| Advanced Traffic Management Systems | 2024-2031 | - | City-Wide Program | $ 6,000,000 | $ - | $ 4,500,000 | $ - | $ 1,500,000 |
| Transit Shelter Expansion Program | 2024-2031 | - | City-Wide Program | $ 1,200,000 | $ - | $ 600,000 | $ - | $ 600,000 |
| Bus Stop Shelter Rehabilitation Program | 2024-2031 | - | City-Wide Program | $ 1,000,000 | $ - | $ 850,000 | $ - | $ 150,000 |
| New Sidewalk Program | 2024-2031 | - | City-Wide Program | $ 6,500,000 | $ - | $ - | $ - | $ 6,500,000 |
| New Traffic Signals | 2024-2031 | - | City-Wide Program | $ 12,000,000 | $ - | $ 600,000 | $ - | $ 11,400,000 |
| New Traffic Signal - Drakes Drive at North Service Road | 2024-2031 | - | Traffic Signal | $ 350,000 | $ - | $ 17,500 | $ - | $ 332,500 |
| New Traffic Signal - Regional Road 20 at Westbrook Road | 2024-2031 | - | Traffic Signal | $ 350,000 | $ - | $ 17,500 | $ - | $ 332,500 |
| New Traffic Signal - Regional Road 56 at Kirk Road | 2024-2031 | - | Traffic Signal | $ 350,000 | $ - | $ 17,500 | $ - | $ 332,500 |
| New Traffic Signal - Fifty Road at North Service Road | 2024-2031 | - | Traffic Signal | $ 350,000 | $ - | $ 17,500 | $ - | $ 332,500 |
| New Traffic Signal - Fruitland Road at North Service Road | 2024-2031 | - | Traffic Signal | $ 350,000 | $ - | $ 17,500 | $ - | $ 332,500 |
| Unidentified intersection improvements (excluding Traffic Signals) | 2024-2031 | - | City-Wide Program | $ 3,250,000 | $ - | $ 2,632,500 | $ - | $ 617,500 |
| Annual Bike Parking at B/A Line Stops | 2024-2031 | - | City-Wide Program | $ 46,000 | $ - | $ 37,260 | $ - | $ 8,740 |
| Annual Enhanced Bike Parking at Express Bus/Rapid Transit Stops | 2024-2031 | - | City-Wide Program | $ 275,000 | $ - | $ 222,750 | $ - | $ 52,250 |
| Transportation Demand Management | 2024-2031 | - | City-Wide Program | $ 4,400,000 | $ - | $ 3,564,000 | $ - | $ 836,000 |
| Durable Pavement Markings – New Installations | 2024-2031 | - | City-Wide Program | $ 1,600,000 | $ - | $ 240,000 | $ - | $ 1,360,000 |
| Traffic Controller Cabinet Replacements (Capacity Related) | 2024-2031 | - | City-Wide Program | $ 3,200,000 | $ - | $ 160,000 | $ - | $ 3,040,000 |
| Traffic Signal Upgrades | 2024-2031 | - | City-Wide Program | $ 2,400,000 | $ - | $ 120,000 | $ - | $ 2,280,000 |
| Traffic Signal LED Replacement Program | 2024-2031 | - | City-Wide Program | $ 1,760,000 | $ - | $ 1,760,000 | $ - | $ - |
| Sidewalk Missing Link Program | 2024-2031 | - | City-Wide Program | $ 2,000,000 | $ - | $ 1,620,000 | $ - | $ 380,000 |
| Bike Parking | 2024-2031 | - | City-Wide Program | $ 720,000 | $ - | $ 583,200 | $ - | $ 136,800 |

| Increased Service Needs Attributable to Anticipated Development | Timing (year) | Length (km) | Capital Improvement | Gross Capital Cost Estimate (2023$) | Other Deductions | Benefit to Existing Development | Post Period Benefit | Net Capital Cost |
|---|---|---|---|---|---|---|---|---|
| Micromobility | 2024-2031 | - | City-Wide Program | $ 1,200,000 | $ - | $ 972,000 | $ - | $ 228,000 |
| Miscellaneous Land Acquisitions | 2024-2031 | - | City-Wide Program | $ 6,969,500 | $ - | $ 348,475 | $ - | $ 6,621,025 |

| Increased Service Needs Attributable to Anticipated Development | Timing (year) | Length (km) | Capital Improvement | Gross Capital Cost Estimate (2023$) | Other Deductions | Benefit to Existing Development | Post Period Benefit | Net Capital Cost |
|---|---|---|---|---|---|---|---|---|
| **Active Transportation Projects** | | | | | | | | |
| Barton - Brockley to Fruitland | 2023-2031 | 3.95 | Multi-Use Trail | $ 171,450 | $ - | $ 138,874 | $ 9,773 | $ 22,803 |
| Barton - Red Hill Valley to Lake | 2023-2031 | 1.61 | Cycle track | $ 326,173 | $ - | $ 264,200 | $ 18,592 | $ 43,381 |
| Baseline/ Lockport - Winona Road to Niagara border | 2023-2031 | 1.15 | Bike Lane | $ 32,060 | $ - | $ 25,968 | $ 1,827 | $ 4,264 |
| Battlefield Park - Bruce Trail Link - Greenhill to Bruce Trail to Glover Mtn | 2023-2031 | 0.75 | Multi-Use Trail | $ 742,949 | $ - | $ 601,788 | $ 42,348 | $ 98,812 |
| Beach Bike Lane - under QEW | 2023-2031 | 0.24 | Bike Lane | $ 9,757 | $ - | $ 7,903 | $ 556 | $ 1,298 |
| Beach Boulevard - lift bridge to Woodward/Eastport | 2023-2031 | 4.52 | Bike Lane | $ 131,027 | $ - | $ 106,132 | $ 7,469 | $ 17,427 |
| Beddoe Drive Link | 2023-2031 | 0.91 | Multi-Use Trail | $ 723,434 | $ - | $ 585,982 | $ 41,236 | $ 96,217 |
| Binbrook Road - Regional Road 56 to Southbrook | 2023-2031 | 0.28 | Bike Lane | $ 9,757 | $ - | $ 7,903 | $ 556 | $ 1,298 |
| Binbrook Road - Trinity Church to Royal Winter/Binhaven | 2023-2031 | 2.16 | Multi-Use Trail | $ 342,899 | $ - | $ - | $ 102,870 | $ 240,030 |
| Birch/ Holton - Burlington St to Cannon/ King/ Delaware | 2023-2031 | 1.40 | Bike Lane | $ 43,211 | $ - | $ 35,001 | $ 2,463 | $ 5,747 |
| Burlington Street East Boulevard Trail - Ottawa to Parkdale to Glow | 2023-2031 | 2.30 | Multi-Use Trail | $ 1,463,595 | $ - | $ 1,185,512 | $ 83,425 | $ 194,658 |
| Burlington Street Link - Ferguson/ Dock Service Road to Sherman | 2023-2031 | 1.88 | Multi-Use Trail | $ 144,966 | $ - | $ 117,422 | $ 8,263 | $ 19,280 |
| Burlington/ Industrial - Sherman to Gage | 2023-2031 | 0.86 | Cycle track | $ 137,996 | $ - | $ 111,777 | $ 7,866 | $ 18,353 |
| Centennial Parkway - North Service to GO station/ Kenora | 2023-2031 | 1.20 | Multi-Use Trail | $ 217,448 | $ - | $ 176,133 | $ 12,395 | $ 28,921 |
| Centre - Concession 8 E to Concession 7 E | 2023-2031 | 1.80 | Paved Shoulder | $ 489,259 | $ - | $ 73,389 | $ 124,761 | $ 291,109 |
| Centre - Grindstone Creek to Concession 5 E | 2023-2031 | 0.45 | Paved Shoulder | $ 122,663 | $ - | $ 18,399 | $ 31,279 | $ 72,985 |
| Centre - Warren/ Carlisle Road to Progreston | 2023-2031 | 0.78 | Paved Shoulder | $ 210,479 | $ - | $ 31,572 | $ 53,672 | $ 125,235 |
| Charlton/ John - James to Ferguson & St Joseph's Dr | 2023-2031 | 0.80 | Bike Lane | $ 117,088 | $ - | $ 94,841 | $ 6,674 | $ 15,573 |
| Chedmac - Southridge to Rice | 2023-2031 | 0.53 | Bike Lane | $ 32,060 | $ - | $ 25,968 | $ 1,827 | $ 4,264 |
| Chedoke Rail Trail - Highway 403 to Dundurn | 2023-2031 | 4.68 | Multi-Use Trail | $ 2,072,729 | $ - | $ 1,678,911 | $ 118,146 | $ 275,673 |
| Cherry Beach Road Link - Millen to Dewitt | 2023-2031 | 0.91 | Multi-Use Trail | $ 326,173 | $ - | $ 264,200 | $ 18,592 | $ 43,381 |
| Christie-Tews - Christie C.A. to Harvest | 2023-2031 | 2.75 | Multi-Use Trail | $ 1,566,744 | $ - | $ 235,012 | $ 399,520 | $ 932,212 |
| Delawana - Kenora to Lake | 2023-2031 | 1.02 | Bike Lane | $ 12,545 | $ - | $ 10,162 | $ 715 | $ 1,668 |
| Devil's Punchbowl Link - Mountain Ave/ Lake Ave to Ridge Road/ Devil's | 2023-2031 | 0.42 | Multi-Use Trail | $ 209,085 | $ - | $ 169,359 | $ 11,918 | $ 27,808 |
| Dewitt - Barton to Dundee | 2023-2031 | 0.90 | Bike Lane | $ 29,272 | $ - | $ 23,710 | $ 1,668 | $ 3,893 |
| Dewitt - Dundee to Ridge | 2023-2031 | 0.50 | Bike Lane | $ 1,045,425 | $ - | $ 846,794 | $ 59,589 | $ 139,042 |
| Dundas St - Main to Cootes | 2023-2031 | 0.68 | Bike Lane | $ 22,302 | $ - | $ 18,065 | $ 1,271 | $ 2,966 |
| Dundas St in Waterdown - Highway 6 to Kearns (border) | 2023-2031 | 6.03 | Multi-Use Trail | $ 179,813 | $ - | $ 145,649 | $ 10,249 | $ 23,915 |
| East Townline - Mud to Highland | 2023-2031 | 1.10 | Bike Lane | $ 18,121 | $ - | $ 2,718 | $ 4,621 | $ 10,782 |
| Eastport Drive Lift Bridge Link | 2023-2031 | 0.60 | Multi-Use Trail | $ 2,439,325 | $ - | $ 1,975,853 | $ 139,042 | $ 324,430 |
| Edgewood - Safari to Highway 6 | 2023-2031 | 0.90 | Bike Lane | $ 15,333 | $ - | $ - | $ 4,600 | $ 10,733 |
| Emperor - Brigade to Acadia | 2023-2031 | 0.44 | Bike Lane | $ 22,302 | $ - | $ 18,065 | $ 1,271 | $ 2,966 |
| Existing Pipeline Trail - Main to Strathearne | 2023-2031 | 2.20 | Multi-Use Trail | $ 6,522,058 | $ - | $ 5,282,867 | $ 371,757 | $ 867,434 |
| Fallsview - Sydenham to Rock Chapel Road | 2023-2031 | 1.40 | Multi-Use Trail | $ 487,865 | $ - | $ - | $ 146,360 | $ 341,506 |
| Fennell Avenue Boulevard Trail - Garth/ West 18th to West 5th | 2023-2031 | 1.20 | Multi-Use Trail | $ 574,287 | $ - | $ 465,172 | $ 32,734 | $ 76,380 |
| Ferguson - Young to Charlton | 2023-2031 | 0.21 | Bike Lane | $ 2,788 | $ - | $ 2,258 | $ 159 | $ 371 |
| Fiddler's Green - Amberly to Carluke | 2023-2031 | 6.77 | Bike Lane | $ 29,272 | $ 8,509 | $ - | $ 6,229 | $ 14,534 |
| Fiddler's Green - Jerseyville to Wilson | 2023-2031 | 0.25 | Bike Lane | $ 8,363 | $ - | $ 6,774 | $ 477 | $ 1,112 |

| Increased Service Needs Attributable to Anticipated Development | Timing (year) | Length (km) | Capital Improvement | Gross Capital Cost Estimate (2023$) | Other Deductions | Benefit to Existing Development | Post Period Benefit | Net Capital Cost |
|---|---|---|---|---|---|---|---|---|
| First Rd W/Whitedeer/Terryberry & Picardy/ Highbury - Glover Mtn Road/ Ridgeview Dr to Rymal/ Bellagio | 2023-2031 | 4.08 | Bike Lane | $ 66,907 | $ - | $ 54,195 | $ 3,814 | $ 8,899 |
| Frances - Grays to Southshore | 2023-2031 | 1.15 | Bike Lane | $ 217,448 | $ - | $ 176,133 | $ 12,395 | $ 28,921 |
| Frid/Chatham - Longwood to Dundurn | 2023-2031 | 1.00 | Bike Lane | $ 8,363 | $ - | $ 6,774 | $ 477 | $ 1,112 |
| Golf Links/ Halson - Wilson to Southcote | 2023-2031 | 1.19 | Bike Lane | $ 39,029 | $ - | $ 31,614 | $ 2,225 | $ 5,191 |
| Governor's - Wainwright to Lynden | 2023-2031 | 13.06 | Paved Shoulder | $ 908,823 | $ - | $ - | $ 272,647 | $ 636,176 |
| Governor's - Ogilvie to Main | 2023-2031 | 0.24 | Bike Lane | $ 59,938 | $ - | $ 48,550 | $ 3,416 | $ 7,972 |
| Grays/ Gray - Confederation Park gate to King | 2023-2031 | 3.00 | Multi-Use Trail | $ 163,086 | $ 163,086 | $ - | $ - | $ - |
| Greenhill - Harrisford to Summercrest | 2023-2031 | 1.94 | Bike Lane | $ 105,936 | $ - | $ 85,808 | $ 6,038 | $ 14,090 |
| Greenhill - Summercrest to King | 2023-2031 | 1.20 | Bike Lane | $ 65,513 | $ - | $ 53,066 | $ 3,734 | $ 8,713 |
| Hamilton Drive Link | 2023-2031 | - | Multi-Use Trail | $ 2,759,922 | $ - | $ 2,235,537 | $ 157,316 | $ 367,070 |
| Hamilton in Waterdown - Centre/Main to Highway 5/Dundas | 2023-2031 | 1.00 | Multi-Use Trail | $ 86,422 | $ - | $ 70,002 | $ 4,926 | $ 11,494 |
| Hamilton-Brantford Rail Ttrail - Bridlewood Dr to Ewen | 2023-2031 | 4.00 | Multi-Use Trail | $ 565,923 | $ - | $ 458,398 | $ 32,258 | $ 75,268 |
| Hatt - Peel to John | 2023-2031 | 0.65 | Cycle track | $ 40,423 | $ - | $ 32,743 | $ 2,304 | $ 5,376 |
| Hollybush - Parkside to Dundas St | 2023-2031 | 1.10 | Bike Lane | $ 22,302 | $ - | $ 18,065 | $ 1,271 | $ 2,966 |
| Hydro Corridor - Barton to Lawrence | 2023-2031 | 1.90 | Multi-Use Trail | $ 1,743,769 | $ 1,743,769 | $ - | $ - | $ - |
| Hydro Corridor - Lawrence Avenue to Greenhill Avenue | 2023-2031 | 1.15 | Multi-Use Trail | $ 599,377 | $ - | $ 485,495 | $ 34,164 | $ 79,717 |
| Hydro Corridor - Wilson/Highway 52 to Regional Road 56 | 2023-2031 | 12.70 | Multi-Use Trail | $ 10,617,336 | $ - | $ 8,600,042 | $ 605,188 | $ 1,412,106 |
| Iroquois Heights to Old Mohawk - Chedoke Rail Trail to Old Mohawk Road | 2023-2031 | 0.85 | Multi-Use Trail | $ 443,260 | $ - | $ 359,041 | $ 25,266 | $ 58,954 |
| Jones Road Link | 2023-2031 | 2.67 | Multi-Use Trail | $ 309,446 | $ 224,257 | $ - | $ 25,557 | $ 59,632 |
| Karst Escarpment Loop - Pritchard to Mount Albion/Winterberry | 2023-2031 | 0.70 | Multi-use Trail | $ 543,621 | $ - | $ 440,333 | $ 30,986 | $ 72,302 |
| Kenora/ Greenford/ Owen - Bancroft to King | 2023-2031 | 2.60 | Bike Lane | $ 239,751 | $ - | $ 194,198 | $ 13,666 | $ 31,887 |
| Kentley - Eugene to Kenora | 2023-2031 | 0.40 | Signed Bike Route | $ 5,576 | $ - | $ 4,516 | $ 318 | $ 742 |
| Kerns Road,Waterdown South Link | 2023-2031 | - | Multi-Use Trail | $ 1,333,962 | $ - | $ 1,080,509 | $ 76,036 | $ 177,417 |
| King in Dundas - Bond to Peel | 2023-2031 | 0.80 | Bike Lane | $ 43,211 | $ - | $ 35,001 | $ 2,463 | $ 5,747 |
| King over Red Hill Valley Parkway - Lawrence to Pottruff | 2023-2031 | 0.60 | Cycle track | $ 37,635 | $ - | $ 30,485 | $ 2,145 | $ 5,005 |
| Kitty Murray - Garner to Golf Links | 2023-2031 | 2.26 | Bike Lane | $ 73,877 | $ - | $ 59,840 | $ 4,211 | $ 9,826 |
| Limeridge - Birchview to Mtn Brow | 2023-2031 | 1.98 | Bike Lane | $ 97,573 | $ - | $ 79,034 | $ 5,562 | $ 12,977 |
| Limeridge - Garth/ Bonaventure to West 5th/ Hawkridge | 2023-2031 | 1.37 | Bike Lane | $ 73,877 | $ 73,877 | $ - | $ - | $ - |
| Limeridge Mall Hydro Corridor Trail - Mohawk Road to South of Rymal | 2023-2031 | 3.80 | Multi-Use Trail | $ 1,957,036 | $ - | $ 1,585,199 | $ 111,551 | $ 260,286 |
| Lovers Lane - Sulpher Springs to Jerseyville | 2023-2031 | 0.90 | Bike Lane | $ 29,272 | $ - | $ 23,710 | $ 1,668 | $ 3,893 |
| Marston - Paramount to Gordon Drummond | 2023-2031 | 0.40 | Bike Lane | $ 19,515 | $ - | $ 15,807 | $ 1,112 | $ 2,595 |
| Meadowbrook | 2023-2031 | 1.00 | Bike Lane | $ 22,302 | $ - | $ 18,065 | $ 1,271 | $ 2,966 |
| Meadowlands/ Raymond - Golf Links to Garner | 2023-2031 | 2.10 | Bike Lane | $ 68,301 | $ - | $ 55,324 | $ 3,893 | $ 9,084 |
| Millen - Shoreview to Millen/ Seaman | 2023-2031 | 0.50 | Bike Lane | $ 43,211 | $ 20,532 | $ 18,370 | $ 1,293 | $ 3,016 |
| Mohawk - Old Mohawk to Upper Paradise | 2023-2031 | 1.83 | Bike Lane | $ 65,513 | $ - | $ 53,066 | $ 3,734 | $ 8,713 |
| Montclair/ Central/ Graham/ Frederick | 2023-2031 | 3.80 | Signed Bike Route | $ 26,484 | $ - | $ 21,452 | $ 1,510 | $ 3,522 |
| Mountain Brow Boulevard Trail - Mohawk to Arbour | 2023-2031 | 1.81 | Multi-Use Trail | $ 521,319 | $ - | $ 422,268 | $ 29,715 | $ 69,335 |
| Mountain Brow East Path - Rendell to Oakcrest | 2023-2031 | 0.81 | Multi-Use Trail | $ 2,174,484 | $ - | $ 1,761,332 | $ 123,946 | $ 289,206 |
| Mountain Brow in Waterdown - Mill to Burke to King Road | 2023-2031 | 1.20 | Multi-Use Trail | $ 919,974 | $ - | $ 745,179 | $ 52,439 | $ 122,357 |

| Increased Service Needs Attributable to Anticipated Development | Timing (year) | Length (km) | Capital Improvement | Gross Capital Cost Estimate (2023$) | Other Deductions | Benefit to Existing Development | Post Period Benefit | Net Capital Cost |
|---|---|---|---|---|---|---|---|---|
| Museum of Steam and Tech Link - Woodward to Red Hill Valley Trail | 2023-2031 | 0.75 | Multi-Use Trail | $ 846,097 | $ - | $ 685,339 | $ 48,228 | $ 112,531 |
| Nash - Bancroft to King | 2023-2031 | 2.58 | Cycle track | $ 140,784 | $ - | $ 114,035 | $ 8,025 | $ 18,724 |
| North Service Road - Bellavista to Baseline | 2023-2031 | 0.98 | Bike Lane | $ 32,060 | $ - | $ 25,968 | $ 1,827 | $ 4,264 |
| North Service Road - Dewitt to Lakeview | 2023-2031 | 0.73 | Bike Lane | $ 22,302 | $ - | $ 18,065 | $ 1,271 | $ 2,966 |
| Northlawn Avenue Link | 2023-2031 | 1.10 | Multi-Use Trail | $ 557,560 | $ 81,100 | $ - | $ 142,938 | $ 333,522 |
| Ogilvie/ Old Ancaster - Hatt/ King to Hamilton-Brantford Rail Trail | 2023-2031 | 0.80 | Bike Lane | $ 19,515 | $ - | $ 15,807 | $ 1,112 | $ 2,595 |
| Old Guelph Road - Paterson to York Bike Lane | 2023-2031 | 3.53 | Paved Shoulder | $ 1,264,267 | $ - | $ 189,640 | $ 322,388 | $ 752,239 |
| Old Mud - Mt Albion to Winterberry | 2023-2031 | 0.40 | Bike Lane | $ 12,545 | $ - | $ 10,162 | $ 715 | $ 1,668 |
| Osler/ Main - Hatt/ King to Main + 125m of Main | 2023-2031 | 2.00 | Bike Lane | $ 122,663 | $ - | $ 99,357 | $ 6,992 | $ 16,314 |
| Ottawa Street South - Bruce Trail Link | 2023-2031 | 0.39 | Multi-Use Trail | $ 956,215 | $ - | $ 774,534 | $ 54,504 | $ 127,177 |
| Proposed Pipeline Trail - Museum of Steam and Technology to Mahoney | 2023-2031 | 2.40 | Multi-Use Trail | $ 720,646 | $ - | $ 583,724 | $ 41,077 | $ 95,846 |
| Queensdale - Upper Sherman to Upper Ottawa | 2023-2031 | 1.56 | Bike Lane | $ 50,180 | $ - | $ 40,646 | $ 2,860 | $ 6,674 |
| Queensdale - Upper Wellington to Skyland | 2023-2031 | 0.39 | Bike Lane | $ 54,362 | $ - | $ 44,033 | $ 3,099 | $ 7,230 |
| Queenston/ Highway 8 - King to Dewitt | 2023-2031 | 1.37 | Bike Lane | $ 342,899 | $ - | $ 277,749 | $ 19,545 | $ 45,606 |
| Red Hill Pedestrian Crossing - Eugene Street to Glengrove Avenue | 2023-2031 | - | Active Transportation Bridge | $ 2,439,325 | $ 2,439,325 | $ - | $ - | $ - |
| Regional Road 56 - Swayze Road to Cemetery | 2023-2031 | 4.60 | Multi-Use Trail | $ 4,347,574 | $ 1,414,215 | $ - | $ 880,008 | $ 2,053,351 |
| Regional Road 56 south of Kirk - Windwood to Kirk | 2023-2031 | 1.14 | Multi-Use Trail | $ 1,087,242 | $ - | $ 163,086 | $ 277,247 | $ 646,909 |
| Ridge Road - Devil Punch Bowl to Dewitt | 2023-2031 | 2.91 | Multi-Use Trail | $ 1,087,242 | $ - | $ 880,666 | $ 61,973 | $ 144,603 |
| Rousseaux/ Mohawk - Wilson to Filman | 2023-2031 | 1.60 | Bike Lane | $ 313,628 | $ - | $ 254,038 | $ 17,877 | $ 41,712 |
| Scenic - Chedoke Rail Ttrail to Upper Paradise | 2023-2031 | 2.27 | Bike Lane | $ 37,635 | $ - | $ 30,485 | $ 2,145 | $ 5,005 |
| Scenic/ Denlow - Upper Paradise to Garth | 2023-2031 | 0.95 | Bike Lane | $ 15,333 | $ - | $ 12,420 | $ 874 | $ 2,039 |
| Shaver - Wilson to Garner | 2023-2031 | 0.52 | Multi-Use Trail | $ 16,727 | $ - | $ 13,549 | $ 953 | $ 2,225 |
| Strachan Street Trail - James to Ferguson | 2023-2031 | 0.66 | Multi-Use Trail | $ 469,744 | $ - | $ 380,493 | $ 26,775 | $ 62,476 |
| Stuart Street Rail Link | 2023-2031 | 0.94 | Multi-Use Trail | $ 354,051 | $ - | $ 286,781 | $ 20,181 | $ 47,089 |
| Upper James - William Connell Park | 2023-2031 | 0.38 | Multi-Use Trail | $ 313,628 | $ - | $ 254,038 | $ 17,877 | $ 41,712 |
| Upper Sherman - Stone Church to Rymal to Miles | 2023-2031 | 1.00 | Bike Lane | $ 249,508 | $ - | $ 202,102 | $ 14,222 | $ 33,185 |
| Upper Wentworth - Concession to Fennell | 2023-2031 | 1.03 | Bike Lane | $ 55,756 | $ - | $ 45,162 | $ 3,178 | $ 7,416 |
| Upper Wentworth - Fennell to East 24th | 2023-2031 | 1.03 | Bike Lane | $ 55,756 | $ - | $ 45,162 | $ 3,178 | $ 7,416 |
| Valley Road - Rock Chapel to York Road | 2023-2031 | 1.40 | Paved Shoulder | $ 434,897 | $ - | $ 65,235 | $ 110,899 | $ 258,764 |
| Van Wagner's - Beach Bike Lane to Centennial Parkway | 2023-2031 | 2.50 | Bike Lane | $ 108,724 | $ - | $ 88,067 | $ 6,197 | $ 14,460 |
| Victoria - Young to Burlington | 2023-2031 | 2.53 | Bike Lane | $ 55,756 | $ - | $ 45,162 | $ 3,178 | $ 7,416 |
| Walnut Grove & Sanctuary Park - Walnut Grove/ Ogilvie to Highland Park Dr | 2023-2031 | 0.40 | Multi-Use Trail | $ 510,167 | $ - | $ 413,236 | $ 29,080 | $ 67,852 |
| Warrington/ South Service/ Lake - Centennial Parkway to Maple | 2023-2031 | 3.86 | Multi-Use Trail | $ 108,724 | $ - | $ 88,067 | $ 6,197 | $ 14,460 |
| White Church Road West Airport Link | 2023-2031 | - | Multi-Use Trail | $ 938,095 | $ 938,095 | $ - | $ - | $ - |
| White Church Road West Link | 2023-2031 | 6.55 | Multi-Use Trail | $ 1,832,979 | $ 798,725 | $ - | $ 310,276 | $ 723,977 |
| Wilson in Ancaster - Rousseaux to Halson | 2023-2031 | 0.85 | Bike Lane | $ 27,878 | $ - | $ 22,581 | $ 1,589 | $ 3,708 |
| Winona - Lido/ shore to Peachtree (Helena) | 2023-2031 | 1.97 | Multi-Use Trail | $ 64,119 | $ - | $ 51,937 | $ 3,655 | $ 8,528 |

| Increased Service Needs Attributable to Anticipated Development | Timing (year) | Length (km) | Capital Improvement | Gross Capital Cost Estimate (2023$) | Other Deductions | Benefit to Existing Development | Post Period Benefit | Net Capital Cost |
|---|---|---|---|---|---|---|---|---|
| York Road - Olympic to Valley Road | 2023-2031 | 1.70 | Paved Shoulder | $ 609,134 | $ - | $ 91,370 | $ 155,329 | $ 362,435 |
| York Road & York Road at Old Guelph - Valley Road to Highway 6 | 2023-2031 | 2.50 | Multi-Use Trail | $ 1,997,459 | $ - | $ - | $ 599,238 | $ 1,398,221 |
| Acadia - Emperor to End | 2023-2031 | 0.54 | Signed Bike Route | $ 21,732 | $ - | $ 17,603 | $ 1,239 | $ 2,890 |
| Airport Road - Butter to Miles | 2023-2031 | 6.66 | Bike Lane | $ 932,965 | $ 932,965 | $ - | $ - | $ - |
| Alma - Sydenham to Queen | 2023-2031 | 0.09 | Bike Lane | $ 12,302 | $ - | $ 9,965 | $ 701 | $ 1,636 |
| Aquasanta - Dicenzo to Ascoli | 2023-2031 | 0.09 | Signed Bike Route | $ 3,576 | $ - | $ 2,897 | $ 204 | $ 476 |
| Baker - Breadalbane to Dundurn | 2023-2031 | 0.14 | Signed Bike Route | $ 5,681 | $ - | $ 4,602 | $ 324 | $ 756 |
| Baseline - Lockport to North Service Road | 2023-2031 | 2.66 | Bike Lane | $ 372,805 | $ - | $ 55,921 | $ 95,065 | $ 221,819 |
| Bedrock - First Rd W to 300m West of First Rd W | 2023-2031 | 0.33 | Bike Lane | $ 45,816 | $ - | $ 37,111 | $ 2,612 | $ 6,094 |
| Bellagio - Fletcher to Terryberry | 2023-2031 | 1.64 | Bike Lane | $ 229,437 | $ - | $ 185,844 | $ 13,078 | $ 30,515 |
| Binbrook Road - Fletcher to Binhaven | 2023-2031 | 0.94 | Multi-Use Trail | $ 706,274 | $ - | $ 572,082 | $ 40,258 | $ 93,934 |
| Binbrook Road - Southbrook to Boundary | 2023-2031 | 6.02 | Paved Shoulder | $ 1,805,365 | $ - | $ 270,805 | $ 460,368 | $ 1,074,192 |
| Book Road - Shaver to Fiddler's Green | 2023-2031 | 2.50 | Paved Shoulder | $ 751,147 | $ - | $ 112,672 | $ 191,543 | $ 446,933 |
| Book Road - Fiddler's Green to Glancaster | 2023-2031 | 3.42 | Bike Lane | $ 478,291 | $ 417,469 | $ 49,266 | $ 3,467 | $ 8,089 |
| Brantdale - West Fifth Street to Upper James | 2023-2031 | 0.42 | Signed Bike Route | $ 16,894 | $ - | $ 13,684 | $ 963 | $ 2,247 |
| Bridlewood - Governor's to Highland Park Drive | 2023-2031 | 0.59 | Signed Bike Route | $ 23,434 | $ - | $ 18,982 | $ 1,336 | $ 3,117 |
| Brigade - Upper Wellington to Emperor | 2023-2031 | 0.82 | Signed Bike Route | $ 32,712 | $ - | $ 26,497 | $ 1,865 | $ 4,351 |
| Brock - Harvest Road to Highway 8 | 2023-2031 | 0.55 | Paved Shoulder | $ 164,442 | $ - | $ 24,666 | $ 41,933 | $ 97,843 |
| Brock - Safari to Freelton | 2023-2031 | 4.50 | Paved Shoulder | $ 1,351,337 | $ - | $ - | $ 405,401 | $ 945,936 |
| Burke - Great Falls Blvd to McKnight Ave E | 2023-2031 | 0.51 | Bike Lane | $ 71,675 | $ - | $ 58,057 | $ 4,085 | $ 9,533 |
| Butter - Glancaster to Fiddler's Green | 2023-2031 | 2.21 | Bike Lane | $ 309,163 | $ - | $ - | $ 92,749 | $ 216,414 |
| Canada - Locke to Queen | 2023-2031 | 0.41 | Signed Bike Route | $ 16,392 | $ - | $ 13,277 | $ 934 | $ 2,180 |
| Carlisle - Highway 6 to Wildberry Way | 2023-2031 | 2.35 | Paved Shoulder | $ 704,824 | $ - | $ - | $ 211,447 | $ 493,377 |
| Carlisle Trail Loop - Centre Road to Border | 2023-2031 | 3.35 | Paved Shoulder | $ 1,006,151 | $ - | $ 150,923 | $ 256,568 | $ 598,660 |
| Carlson Street - Highland Road to End | 2023-2031 | 0.11 | Signed Bike Route | $ 4,410 | $ - | $ 3,572 | $ 251 | $ 586 |
| Carluke - Glancaster to Shaver | 2023-2031 | 3.53 | Paved Shoulder | $ 1,058,213 | $ - | $ 158,732 | $ 269,844 | $ 629,637 |
| Central - Edgemont to Cochrane | 2023-2031 | 1.54 | Signed Bike Route | $ 61,437 | $ - | $ 49,764 | $ 3,502 | $ 8,171 |
| Chatham Street - Dundurn to Frid | 2023-2031 | 0.27 | Bike Lane | $ 37,418 | $ - | $ 30,308 | $ 2,133 | $ 4,977 |
| Concession 10 West - Foreman to Freelton | 2023-2031 | 9.28 | Signed Bike Route | $ 371,340 | $ - | $ - | $ 111,402 | $ 259,938 |
| Concession 11 E - Centre Road to Freelton | 2023-2031 | 2.65 | Paved Shoulder | $ 794,371 | $ - | $ - | $ 238,311 | $ 556,060 |
| Concession 4 West - Millgrove Sideroad to Highway 6 | 2023-2031 | 1.78 | Paved Shoulder | $ 532,612 | $ - | $ 79,892 | $ 135,816 | $ 316,904 |
| Concession 6 East - Highway 6 to Centre Road | 2023-2031 | 2.79 | Paved Shoulder | $ 836,846 | $ - | $ 125,527 | $ 213,396 | $ 497,924 |
| Concession 7 West - Boundary to Edgewood Road | 2023-2031 | 18.80 | Paved Shoulder | $ 5,640,591 | $ - | $ - | $ 1,692,177 | $ 3,948,414 |
| Concession 8 West - Middletown to Middletown | 2023-2031 | 0.14 | Signed Bike Route | $ 5,787 | $ - | $ 868 | $ 1,476 | $ 3,443 |
| Concession Street - Mountain Park Ave to Mountain Brow Boulevard | 2023-2031 | 0.51 | Bike Lane | $ 71,122 | $ - | $ 57,609 | $ 4,054 | $ 9,459 |
| Confederation Beach Park - Centennial Parkway to West of Gray | 2023-2031 | 1.98 | Signed Bike Route | $ 79,281 | $ - | $ 64,218 | $ 4,519 | $ 10,544 |
| Cormorant - Trinity to Shaver | 2023-2031 | 2.46 | Bike Lane | $ 344,713 | $ - | $ 279,217 | $ 19,649 | $ 45,847 |
| Culotta - Perrelli to Chudleigh | 2023-2031 | 0.14 | Signed Bike Route | $ 5,564 | $ - | $ 4,507 | $ 317 | $ 740 |
| Dicenzo Dr - Aquasanta Crescent to South Turn on Dicenzo Drive | 2023-2031 | 0.36 | Signed Bike Route | $ 14,232 | $ - | $ 11,528 | $ 811 | $ 1,893 |
| Dicenzo Dr - Upper Wellington to Trieste | 2023-2031 | 0.20 | Signed Bike Route | $ 8,182 | $ - | $ 6,628 | $ 466 | $ 1,088 |

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|---|---|---|---|---|---|---|---|---|
| Dundas St E (Highway 5) - Highway 6 to Boundary | 2023-2031 | 10.21 | Bike Lane | $ 1,428,830 | $ - | $ 1,157,352 | $ 81,443 | $ 190,034 |
| Dundurn - Main to King | 2023-2031 | 0.28 | Bike Lane | $ 39,076 | $ - | $ 31,651 | $ 2,227 | $ 5,197 |
| Edgemont - Montclair to Central | 2023-2031 | 0.18 | Signed Bike Route | $ 7,202 | $ - | $ 5,834 | $ 411 | $ 958 |
| Eighth Road Link - Ridge to Boundary | 2023-2031 | 5.51 | Paved Shoulder | $ 1,651,643 | $ - | $ - | $ 495,493 | $ 1,156,150 |
| Eleventh - Mud to Green Mountain Road | 2023-2031 | 1.11 | Signed Bike Route | $ 44,403 | $ - | $ - | $ 13,321 | $ 31,082 |
| Emerson - Whitney to Main | 2023-2031 | 0.65 | Bike Lane | $ 91,299 | $ - | $ 73,952 | $ 5,204 | $ 12,143 |
| Empress - Upper James to East Sixth Street | 2023-2031 | 0.71 | Signed Bike Route | $ 28,561 | $ - | $ 23,135 | $ 1,628 | $ 3,799 |
| Eugene - Pottruff to Nugent | 2023-2031 | 0.18 | Signed Bike Route | $ 7,020 | $ - | $ 5,687 | $ 400 | $ 934 |
| Fallsview - Harvest Road to Sydenham | 2023-2031 | 2.47 | Signed Bike Route | $ 98,780 | $ - | $ - | $ 29,634 | $ 69,146 |
| Ferguson - Dock Service Road to Burlington | 2023-2031 | 0.28 | Signed Bike Route | $ 11,143 | $ - | $ 9,026 | $ 635 | $ 1,482 |
| Ferguson - Charlton to North of Young | 2023-2031 | 0.26 | Bike Lane | $ 36,563 | $ - | $ 29,616 | $ 2,084 | $ 4,863 |
| Field - Jerseyville Rd W to Governor's Rd | 2023-2031 | 3.88 | Paved Shoulder | $ 1,162,739 | $ - | $ - | $ 348,822 | $ 813,917 |
| Fifty - Ridge to Cokers | 2023-2031 | 1.51 | Paved Shoulder | $ 452,414 | $ - | $ 67,862 | $ 115,366 | $ 269,186 |
| Fifty - Coke to North Service Road | 2023-2031 | 2.24 | Bike Lane | $ 313,978 | $ 110,740 | $ 164,623 | $ 11,585 | $ 27,031 |
| Filman - Wilson St E to End | 2023-2031 | 0.40 | Signed Bike Route | $ 15,969 | $ - | $ - | $ 4,791 | $ 11,178 |
| First Road East - Highland Road to Ridge Road | 2023-2031 | 3.83 | Paved Shoulder | $ 1,148,959 | $ 1,148,959 | $ - | $ - | $ - |
| First Road West - North End to Highbury Drive | 2023-2031 | 0.10 | Bike Lane | $ 14,156 | $ - | $ 11,466 | $ 807 | $ 1,883 |
| Flamborough Puslinch Tlin - Maddaugh Road to Centre | 2023-2031 | 1.81 | Paved Shoulder | $ 542,586 | $ - | $ - | $ 162,776 | $ 379,810 |
| Fleming - North End to York | 2023-2031 | 0.26 | Signed Bike Route | $ 10,268 | $ - | $ - | $ 3,081 | $ 7,188 |
| Fletcher - Rymal to Pinehill | 2023-2031 | 0.32 | Paved Shoulder | $ 96,800 | $ - | $ 78,408 | $ 5,518 | $ 12,874 |
| Foreman - Boundary to Regional Road 97 | 2023-2031 | 3.08 | Signed Bike Route | $ 123,285 | $ - | $ - | $ 36,986 | $ 86,300 |
| Franklin - Parkview to Longwood | 2023-2031 | 0.20 | Signed Bike Route | $ 7,980 | $ - | $ 6,464 | $ 455 | $ 1,061 |
| Frederick - Barton to Roxborough | 2023-2031 | 0.62 | Signed Bike Route | $ 24,851 | $ - | $ 20,130 | $ 1,417 | $ 3,305 |
| Freelton - Concession 11 E to South of Highway 6 | 2023-2031 | 0.38 | Bike Lane | $ 53,503 | $ - | $ - | $ 16,051 | $ 37,452 |
| Fruitland - Highway 8 to North Service Road | 2023-2031 | 2.42 | Bike Lane | $ 339,460 | $ 196,897 | $ 115,476 | $ 8,126 | $ 18,961 |
| Galbraith - Lake Avenue to Galbraith Three-way Intersection | 2023-2031 | 0.52 | Signed Bike Route | $ 20,811 | $ - | $ 16,857 | $ 1,186 | $ 2,768 |
| Garth - Denlow to Fennell | 2023-2031 | 0.14 | Paved Multi-Use Recreational Trail | $ 106,711 | $ - | $ 86,436 | $ 6,083 | $ 14,193 |
| Garth St Extension - 20 Rd W to Dickenson Rd W | 2023-2031 | 1.38 | Bike Lane | $ 192,797 | $ 32,547 | $ 129,802 | $ 9,134 | $ 21,313 |
| Glancaster - Carluke to Airport | 2023-2031 | 1.45 | Bike Lane | $ 202,858 | $ - | $ 30,429 | $ 51,729 | $ 120,701 |
| Glenfern - Kent to Kent | 2023-2031 | 0.04 | Signed Bike Route | $ 1,402 | $ - | $ 1,136 | $ 80 | $ 187 |
| Glover - Watercrest to End | 2023-2031 | 0.11 | Bike Lane | $ 14,756 | $ - | $ 11,952 | $ 841 | $ 1,963 |
| Glow - Parkdale to East of Tate | 2023-2031 | 0.63 | Signed Bike Route | $ 25,311 | $ - | $ 20,502 | $ 1,443 | $ 3,366 |
| Golf Club - Woodburn to Westbrook | 2023-2031 | 2.07 | Signed Bike Route | $ 82,657 | $ - | $ - | $ 24,797 | $ 57,860 |
| Golf Links - Stone Church to Kitty Murray | 2023-2031 | 1.30 | Bike Lane | $ 182,341 | $ - | $ 147,696 | $ 10,393 | $ 24,251 |
| Gordon Drummond - Marston to Nordale | 2023-2031 | 0.04 | Signed Bike Route | $ 1,739 | $ - | $ 1,408 | $ 99 | $ 231 |
| Governors - Binkley to Lynden | 2023-2031 | 10.00 | Paved Shoulder | $ 3,001,131 | $ - | $ 450,170 | $ 765,288 | $ 1,785,673 |
| Graham Ave North - Central to Roxborough | 2023-2031 | 0.78 | Signed Bike Route | $ 31,165 | $ - | $ 25,243 | $ 1,776 | $ 4,145 |
| Greenford - Owen Pl to Cromwell | 2023-2031 | 0.21 | Signed Bike Route | $ 8,209 | $ - | $ 6,649 | $ 468 | $ 1,092 |
| Greenford - Cromwell to Kenora | 2023-2031 | 0.36 | Bike Lane | $ 49,861 | $ - | $ 40,388 | $ 2,842 | $ 6,632 |

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|---|---|---|---|---|---|---|---|---|
| Guise - Leander to Catharine | 2023-2031 | 0.54 | Bike Lane | $ 76,112 | $ - | $ 61,651 | $ 4,338 | $ 10,123 |
| Gunby - Sadielou to Painter | 2023-2031 | 0.50 | Bike Lane | $ 69,518 | $ - | $ 56,310 | $ 3,963 | $ 9,246 |
| Hamilton - Nisbet to Dundas St E | 2023-2031 | 1.21 | Bike Lane | $ 169,250 | $ - | $ 137,092 | $ 9,647 | $ 22,510 |
| Harrison - Kirk to Binbrook Conservation Area Road | 2023-2031 | 1.30 | Paved Multi-Use Recreational Trail | $ 975,138 | $ - | $ 146,271 | $ 248,660 | $ 580,207 |
| Harvest - Sydenham to Brock | 2023-2031 | 3.40 | Paved Shoulder | $ 1,020,108 | $ - | $ 153,016 | $ 260,128 | $ 606,964 |
| Highbury Drive - Highland Road W to Whitedeer | 2023-2031 | 1.04 | Bike Lane | $ 145,424 | $ - | $ 117,793 | $ 8,289 | $ 19,341 |
| Highland Rd E - Upper Red Hill Valley Pkwy to Winterberry | 2023-2031 | 0.94 | Bike Lane | $ 131,512 | $ - | $ 106,525 | $ 7,496 | $ 17,491 |
| Highland Rd E - Upper Centennial Pkwy to E Town Line | 2023-2031 | 10.17 | Paved Shoulder | $ 3,051,099 | $ 3,051,099 | $ - | $ - | $ - |
| Highway 5 West - Dundas St E to Sydenham | 2023-2031 | 3.02 | Paved Shoulder | $ 905,690 | $ - | $ - | $ 271,707 | $ 633,983 |
| Highway 8 (Flam) - Boundary to Brock | 2023-2031 | 22.30 | Paved Shoulder | $ 6,691,317 | $ - | $ - | $ 2,007,395 | $ 4,683,922 |
| Highway 8 (Sc) - King St E to Dewitt | 2023-2031 | 1.38 | Bike Lane | $ 193,404 | $ - | $ 156,657 | $ 11,024 | $ 25,723 |
| Highway 8 (Sc) - Fifty to Boundary | 2023-2031 | 0.81 | Bike Lane | $ 113,390 | $ - | $ - | $ 34,017 | $ 79,373 |
| Holton - King to Delaware | 2023-2031 | 0.57 | Signed Bike Route | $ 22,826 | $ - | $ 18,489 | $ 1,301 | $ 3,036 |
| Holton - King to Wilson | 2023-2031 | 0.18 | Bike Lane | $ 25,738 | $ - | $ 20,848 | $ 1,467 | $ 3,423 |
| Homestead Dr Path - Upper James to 1200m East of Upper James | 2023-2031 | 1.24 | Bike Lane | $ 173,375 | $ - | $ 140,433 | $ 9,882 | $ 23,059 |
| Hughson - Cannon to Hunter | 2023-2031 | 0.81 | Bike Lane | $ 113,938 | $ - | $ 92,290 | $ 6,494 | $ 15,154 |
| Hunt - Christ the King Elementary School Road to Breadalbane | 2023-2031 | 0.57 | Signed Bike Route | $ 22,819 | $ - | $ 18,483 | $ 1,301 | $ 3,035 |
| Hunter - Locke to Queen | 2023-2031 | 0.41 | Signed Bike Route | $ 16,421 | $ - | $ 13,301 | $ 936 | $ 2,184 |
| Inverness - Tanner to East 8th | 2023-2031 | 0.77 | Bike Lane | $ 107,800 | $ - | $ 87,318 | $ 6,145 | $ 14,337 |
| Jackson St W - End to Locke St S | 2023-2031 | 0.38 | Signed Bike Route | $ 15,222 | $ - | $ 12,330 | $ 868 | $ 2,025 |
| Jerseyville Rd W - Boundary to East of Paddy Greens | 2023-2031 | 18.45 | Paved Shoulder | $ 5,533,950 | $ - | $ 830,093 | $ 1,411,157 | $ 3,292,700 |
| Jerseyville Rd W - West of Shaver to Wilson | 2023-2031 | 3.49 | Paved Shoulder | $ 1,046,152 | $ 637,152 | $ 331,290 | $ 23,313 | $ 54,397 |
| John - Guise to Burlington | 2023-2031 | 0.29 | Bike Lane | $ 41,233 | $ - | $ 33,399 | $ 2,350 | $ 5,484 |
| John - Charlton Ave E to St Joseph's | 2023-2031 | 0.16 | Bike Lane | $ 21,829 | $ - | $ 17,682 | $ 1,244 | $ 2,903 |
| Kay Drage Park Link - Hunt to End | 2023-2031 | 0.55 | Signed Bike Route | $ 21,874 | $ - | $ 17,718 | $ 1,247 | $ 2,909 |
| Kay Drage Park Link - Macklin to End | 2023-2031 | 0.14 | Signed Bike Route | $ 5,707 | $ - | $ 4,623 | $ 325 | $ 759 |
| King William - James St N to Catharine St N | 2023-2031 | 0.34 | Signed Bike Route | $ 13,479 | $ - | $ 10,918 | $ 768 | $ 1,793 |
| Kirk - Harrison to Highway 56 | 2023-2031 | 0.98 | Paved Multi-Use Recreational Trail | $ 731,458 | $ - | $ 109,719 | $ 186,522 | $ 435,217 |
| Kirkwall - Regional Road 97 to South of Concession 8 W | 2023-2031 | 2.51 | Signed Bike Route | $ 100,255 | $ - | $ - | $ 30,077 | $ 70,179 |
| Kirkwall - South of Concession 8 W to Woodhill Rd | 2023-2031 | 5.78 | Paved Shoulder | $ 1,735,196 | $ - | $ - | $ 520,559 | $ 1,214,637 |
| Lafarge 2000 (Middletown Rd) - Concession 6 W to Highway 8 | 2023-2031 | 7.91 | Signed Bike Route | $ 316,597 | $ - | $ 47,489 | $ 80,732 | $ 188,375 |
| Lafarge 2000 (Middletown Rd/Binkley Rd) - Highway 8 to Mineral Springs Rd | 2023-2031 | 3.57 | Paved Shoulder | $ 1,071,041 | $ - | $ - | $ 321,312 | $ 749,728 |
| Lamoreaux - Dundurn t N to Strathcona Ave N | 2023-2031 | 0.23 | Signed Bike Route | $ 9,074 | $ - | $ 7,350 | $ 517 | $ 1,207 |
| Leland - Main to North of Ward | 2023-2031 | 0.29 | Signed Bike Route | $ 11,798 | $ - | $ 9,557 | $ 673 | $ 1,569 |
| Lido - Riviera to Winona | 2023-2031 | 0.39 | Signed Bike Route | $ 15,590 | $ - | $ 12,628 | $ 889 | $ 2,073 |
| Livingstone - Sydenham to Queen | 2023-2031 | 0.11 | Bike Lane | $ 15,772 | $ - | $ 12,775 | $ 899 | $ 2,098 |
| Locke - York Blvd to Barton | 2023-2031 | 0.26 | Bike Lane | $ 35,765 | $ - | $ 28,970 | $ 2,039 | $ 4,757 |

| Increased Service Needs Attributable to Anticipated Development | Timing (year) | Length (km) | Capital Improvement | Gross Capital Cost Estimate (2023$) | Other Deductions | Benefit to Existing Development | Post Period Benefit | Net Capital Cost |
|---|---|---|---|---|---|---|---|---|
| Longwood - Main St W to Frid St | 2023-2031 | 0.40 | Bike Lane | $ 55,713 | $ - | $ 45,128 | $ 3,176 | $ 7,410 |
| Lormont - First Rd W to Picardy | 2023-2031 | 0.54 | Bike Lane | $ 75,540 | $ - | $ 61,188 | $ 4,306 | $ 10,047 |
| Macklin St S - King St W to Main St W | 2023-2031 | 0.24 | Signed Bike Route | $ 9,513 | $ - | $ 7,706 | $ 542 | $ 1,265 |
| Maddaugh Road - Gore to Highway 6 | 2023-2031 | 0.95 | Signed Bike Route | $ 37,834 | $ - | $ - | $ 11,350 | $ 26,484 |
| Maddaugh Road - Highway 6 to Flamborough Puslinch Tlin | 2023-2031 | 1.11 | Paved Shoulder | $ 334,364 | $ - | $ - | $ 100,309 | $ 234,055 |
| Maggie Johnson - Tanglewood to Highway 56 | 2023-2031 | 0.23 | Bike Lane | $ 32,107 | $ - | $ 26,007 | $ 1,830 | $ 4,270 |
| Main - Osler to South of Osler | 2023-2031 | 1.52 | Bike Lane | $ 212,336 | $ - | $ 171,992 | $ 12,103 | $ 28,241 |
| Main - Osler to York | 2023-2031 | 0.25 | Bike Lane | $ 34,421 | $ - | $ 27,881 | $ 1,962 | $ 4,578 |
| Main St W - Frid to Dundurn St S | 2023-2031 | 0.27 | Bike Lane | $ 37,206 | $ - | $ 30,137 | $ 2,121 | $ 4,948 |
| Malton - Christine to Upper James | 2023-2031 | 0.34 | Signed Bike Route | $ 13,738 | $ - | $ 11,128 | $ 783 | $ 1,827 |
| Maple/Mountain Ave Extension - Lake Ave S to End | 2023-2031 | 0.40 | Signed Bike Route | $ 15,833 | $ - | $ 12,824 | $ 902 | $ 2,106 |
| Marion - Dromore to King St W | 2023-2031 | 0.34 | Signed Bike Route | $ 13,553 | $ - | $ 10,978 | $ 773 | $ 1,803 |
| Market - Hatt to MacNab | 2023-2031 | 0.09 | Bike Lane | $ 13,000 | $ - | $ 10,530 | $ 741 | $ 1,729 |
| Market - MacNab to Creighton | 2023-2031 | 0.09 | Signed Bike Route | $ 3,608 | $ - | $ 2,922 | $ 206 | $ 480 |
| Mayfair - Creighton to Tally Ho | 2023-2031 | 0.31 | Signed Bike Route | $ 12,397 | $ - | $ 10,041 | $ 707 | $ 1,649 |
| McNeilly/8th Road E - Highway 8 to Ridge Road | 2023-2031 | 1.55 | Signed Bike Route | $ 62,051 | $ - | $ - | $ 18,615 | $ 43,436 |
| Middleton Rd - North of Regional Road 97 to Regional Road 97 | 2023-2031 | 0.44 | Signed Bike Route | $ 17,734 | $ - | $ 2,660 | $ 4,522 | $ 10,551 |
| Middleton Rd - North of Concession 8 W to Safari | 2023-2031 | 2.32 | Signed Bike Route | $ 92,626 | $ - | $ 13,894 | $ 23,620 | $ 55,112 |
| Miles - Rymal Rd E to Boundary | 2023-2031 | 10.88 | Paved Shoulder | $ 3,265,308 | $ 3,265,308 | $ - | $ - | $ - |
| Mill - Dundas St E to Boundary | 2023-2031 | 2.80 | Bike Lane | $ 392,672 | $ - | $ 318,064 | $ 22,382 | $ 52,225 |
| Millgrove Sr - Highway 6 N to Highway 5 W | 2023-2031 | 0.71 | Paved Shoulder | $ 214,008 | $ - | $ 32,101 | $ 54,572 | $ 127,335 |
| Mineral Springs - Binkley to Sulphur Springs | 2023-2031 | 1.27 | Paved Shoulder | $ 381,791 | $ - | $ 57,269 | $ 97,357 | $ 227,166 |
| Mount Albion - Lawrence to South of Glen Castle | 2023-2031 | 1.39 | Bike Lane | $ 194,283 | $ - | $ 157,369 | $ 11,074 | $ 25,840 |
| Mountain Brow - Concession Street to Rendell | 2023-2031 | 0.27 | Bike Lane | $ 37,692 | $ - | $ 30,530 | $ 2,148 | $ 5,013 |
| Mountain Brow Blvd - Mohawk Rd E to Mud | 2023-2031 | 2.14 | Signed Bike Route | $ 85,532 | $ - | $ 69,281 | $ 4,875 | $ 11,376 |
| Mud - Eleventh Road E to Boundary | 2023-2031 | 0.89 | Paved Shoulder | $ 266,629 | $ - | $ - | $ 79,989 | $ 186,640 |
| Napier - Queen St N to Bay St N | 2023-2031 | 0.55 | Signed Bike Route | $ 22,063 | $ - | $ 17,871 | $ 1,258 | $ 2,934 |
| Nisbet - Centre Road to Wimberly | 2023-2031 | 0.97 | Bike Lane | $ 136,363 | $ - | $ 110,454 | $ 7,773 | $ 18,136 |
| Nordale - Gordon Drummond to | 2023-2031 | 0.39 | Signed Bike Route | $ 15,414 | $ - | $ 12,485 | $ 879 | $ 2,050 |
| North Service Road Link (Millen) - North Service Road to Shoreview | 2023-2031 | 0.19 | Bike Lane | $ 26,931 | $ - | $ 21,814 | $ 1,535 | $ 3,582 |
| Nugent - Kentley to Eugene | 2023-2031 | 0.13 | Signed Bike Route | $ 5,181 | $ - | $ 4,197 | $ 295 | $ 689 |
| Old Mud - Paramount to Cedarville | 2023-2031 | 0.39 | Bike Lane | $ 54,469 | $ - | $ 44,120 | $ 3,105 | $ 7,244 |
| Ottawa - Main to Montclair | 2023-2031 | 0.49 | Bike Lane | $ 67,977 | $ - | $ 55,061 | $ 3,875 | $ 9,041 |
| Owen Pl - King St E to Greenford | 2023-2031 | 0.55 | Signed Bike Route | $ 22,046 | $ - | $ 17,857 | $ 1,257 | $ 2,932 |
| Parkdale Ave - Nikola Tesla Blvd to Glow | 2023-2031 | 0.18 | Paved Multi-Use Recreational Trail | $ 138,334 | $ - | $ 112,051 | $ 7,885 | $ 18,398 |
| Pearl - Hunter to Tuckett | 2023-2031 | 0.23 | Signed Bike Route | $ 9,364 | $ - | $ 7,584 | $ 534 | $ 1,245 |
| Peel St S - King St W to Hatt | 2023-2031 | 0.14 | Signed Bike Route | $ 5,774 | $ - | $ 4,677 | $ 329 | $ 768 |
| Perrelli - Culotta to Dundas St E | 2023-2031 | 0.11 | Signed Bike Route | $ 4,267 | $ - | $ 3,456 | $ 243 | $ 568 |
| Picardy - Highland Rd W to Lormont | 2023-2031 | 0.50 | Bike Lane | $ 70,680 | $ - | $ 57,251 | $ 4,029 | $ 9,401 |

| Increased Service Needs Attributable to Anticipated Development | Timing (year) | Length (km) | Capital Improvement | Gross Capital Cost Estimate (2023$) | Other Deductions | Benefit to Existing Development | Post Period Benefit | Net Capital Cost |
|---|---|---|---|---|---|---|---|---|
| Picton - Bay St n to Hughson St N | 2023-2031 | 0.39 | Signed Bike Route | $ 15,603 | $ - | $ 12,639 | $ 889 | $ 2,075 |
| Picton - John St N to Ferguson Ave N | 2023-2031 | 0.42 | Signed Bike Route | $ 16,794 | $ - | $ 13,603 | $ 957 | $ 2,234 |
| Queen - Alma to Livingstone | 2023-2031 | 0.16 | Bike Lane | $ 21,913 | $ - | $ 17,749 | $ 1,249 | $ 2,914 |
| Queen St S - Hunter to Canada | 2023-2031 | 0.08 | Signed Bike Route | $ 3,096 | $ - | $ 2,508 | $ 176 | $ 412 |
| Queensdale - Skyland to Upper Wellington | 2023-2031 | 0.40 | Signed Bike Route | $ 15,854 | $ - | $ 12,842 | $ 904 | $ 2,109 |
| Raymond - Stonehenge to Garner | 2023-2031 | 1.31 | Bike Lane | $ 183,962 | $ - | $ 149,009 | $ 10,486 | $ 24,467 |
| Redmond - Rushdale to Stone Church Rd E | 2023-2031 | 0.20 | Signed Bike Route | $ 8,030 | $ - | $ 6,505 | $ 458 | $ 1,068 |
| Regional Road 20 (Highway 20) - Tapleytown to Woodburn | 2023-2031 | 0.28 | Signed Bike Route | $ 11,371 | $ - | $ 1,706 | $ 2,900 | $ 6,766 |
| Regional Road 97 - Kirkwall to Foreman | 2023-2031 | 0.16 | Paved Shoulder | $ 47,125 | $ - | $ - | $ 14,137 | $ 32,987 |
| Ridge - Dewitt to Boundary | 2023-2031 | 7.05 | Paved Shoulder | $ 2,116,173 | $ - | $ 317,426 | $ 539,624 | $ 1,259,123 |
| Riley - West of Chudleigh to Braeheid | 2023-2031 | 0.21 | Signed Bike Route | $ 8,245 | $ - | $ 6,678 | $ 470 | $ 1,097 |
| Riviera Ridge - Bellavista to Lido | 2023-2031 | 0.12 | Undefined | $ 58,441 | $ - | $ 47,337 | $ 3,331 | $ 7,773 |
| Rock Chapel - Highway 5 W to Service Road East of Sydenham | 2023-2031 | 1.91 | Signed Bike Route | $ 76,420 | $ - | $ 11,463 | $ 19,487 | $ 45,470 |
| Roxborough - Frederick to Graham Ave N | 2023-2031 | 0.05 | Signed Bike Route | $ 2,031 | $ - | $ 1,645 | $ 116 | $ 270 |
| Rushdale - Southpark to Redmond | 2023-2031 | 0.08 | Signed Bike Route | $ 3,149 | $ - | $ 2,551 | $ 180 | $ 419 |
| Rymal - Upper Paradise to Spadara | 2023-2031 | 0.44 | Bike Lane | $ 61,767 | $ - | $ 50,031 | $ 3,521 | $ 8,215 |
| Rymal - Hazelton to West Fifth St | 2023-2031 | 0.77 | Bike Lane | $ 108,451 | $ - | $ 87,845 | $ 6,182 | $ 14,424 |
| Sadielou - Hollybush to End | 2023-2031 | 0.42 | Bike Lane | $ 59,415 | $ - | $ 48,126 | $ 3,387 | $ 7,902 |
| Santorium - Scenic to Redfern | 2023-2031 | 0.11 | Bike Lane | $ 15,366 | $ - | $ 12,446 | $ 876 | $ 2,044 |
| Scenic - Angela to West of Chateau | 2023-2031 | 1.84 | Bike Lane | $ 257,015 | $ - | $ 208,182 | $ 14,650 | $ 34,183 |
| Scenic - Colquhoun to Garth (via Scenic and Denlow) | 2023-2031 | 0.44 | Bike Lane | $ 61,270 | $ - | $ 49,629 | $ 3,492 | $ 8,149 |
| Second St N - King St W to North of Brandow | 2023-2031 | 0.14 | Signed Bike Route | $ 5,695 | $ - | $ 4,613 | $ 325 | $ 757 |
| Shaver - Wilson to Jerseyville Rd W | 2023-2031 | 1.47 | Bike Lane | $ 205,195 | $ - | $ 166,208 | $ 11,696 | $ 27,291 |
| Shaver - Garner to Carluke | 2023-2031 | 6.11 | Paved Shoulder | $ 1,832,582 | $ 221,586 | $ 241,649 | $ 410,804 | $ 958,543 |
| Sheppard - Sovereign to Fleming | 2023-2031 | 0.10 | Signed Bike Route | $ 4,020 | $ - | $ - | $ 1,206 | $ 2,814 |
| Sherman - Delaware to CP Rail Line | 2023-2031 | 0.33 | Signed Bike Route | $ 13,221 | $ - | $ 10,709 | $ 754 | $ 1,758 |
| Skinner - Dundas St E to East of McKnight Ave E | 2023-2031 | 1.39 | Bike Lane | $ 195,086 | $ - | $ 158,019 | $ 11,120 | $ 25,946 |
| South Bend - W Second St to Terrace | 2023-2031 | 0.42 | Signed Bike Route | $ 16,631 | $ - | $ 13,471 | $ 948 | $ 2,212 |
| South St W - Oglivie to Osler | 2023-2031 | 0.70 | Signed Bike Route | $ 28,124 | $ - | $ 22,780 | $ 1,603 | $ 3,740 |
| Southcote - Garner to Airport | 2023-2031 | 2.80 | Bike Lane | $ 392,445 | $ 30,380 | $ 293,273 | $ 20,638 | $ 48,155 |
| Southpark - Rushdale Park Trail to Rushdale Dr | 2023-2031 | 0.25 | Signed Bike Route | $ 10,003 | $ - | $ 8,103 | $ 570 | $ 1,330 |
| St Joseph's - John St S to End | 2023-2031 | 0.29 | Signed Bike Route | $ 11,537 | $ - | $ 9,345 | $ 658 | $ 1,534 |
| Sulphur Springs - Lover's to Mineral Springs Rd | 2023-2031 | 1.47 | Paved Shoulder | $ 439,812 | $ - | $ 65,972 | $ 112,152 | $ 261,688 |
| Sulphur Springs - Lover's to Wilson St E | 2023-2031 | 1.05 | Signed Bike Route | $ 42,059 | $ - | $ 34,068 | $ 2,397 | $ 5,594 |
| Sunnyridge - Wilson St W to Jerseyville Rd W | 2023-2031 | 2.83 | Paved Shoulder | $ 850,184 | $ - | $ - | $ 255,055 | $ 595,129 |
| Sydenham/Queen/Livingstone/Alma - Hatt to Romar Dr | 2023-2031 | 1.86 | Bike Lane | $ 261,019 | $ - | $ 39,153 | $ 66,560 | $ 155,306 |
| Talbot - Melvin to Barton St E | 2023-2031 | 0.19 | Signed Bike Route | $ 7,639 | $ - | $ 6,187 | $ 435 | $ 1,016 |
| Tally Ho - Mayfair to Overfield | 2023-2031 | 0.22 | Signed Bike Route | $ 8,624 | $ - | $ 6,985 | $ 492 | $ 1,147 |
| Tanner - Iverness to End | 2023-2031 | 0.05 | Signed Bike Route | $ 1,926 | $ - | $ 1,560 | $ 110 | $ 256 |
| Tapleytown Rd - Highway 20 E to Highland Rd E | 2023-2031 | 0.83 | Signed Bike Route | $ 33,328 | $ - | $ 4,999 | $ 8,499 | $ 19,830 |

| Increased Service Needs Attributable to Anticipated Development | Timing (year) | Length (km) | Capital Improvement | Gross Capital Cost Estimate (2023$) | Other Deductions | Benefit to Existing Development | Post Period Benefit | Net Capital Cost |
|---|---|---|---|---|---|---|---|---|
| Terryberry - Private Rd to Rymal Rd | 2023-2031 | 0.20 | Bike Lane | $ 28,032 | $ - | $ 22,706 | $ 1,598 | $ 3,728 |
| Tradewind - Wilson St W to Cormorant | 2023-2031 | 0.70 | Bike Lane | $ 98,586 | $ - | $ 79,855 | $ 5,619 | $ 13,112 |
| Twenty Rd - Southcote to West of Nebo | 2023-2031 | 9.36 | Bike Lane | $ 1,310,636 | $ 1,310,636 | $ - | $ - | $ - |
| Upper Ottawa - Killbride to Mountain Brow Boulevard | 2023-2031 | 5.22 | Bike Lane | $ 731,426 | $ - | $ 592,455 | $ 41,691 | $ 97,280 |
| Upper Sherman - Macassa to Limeridge Rd E | 2023-2031 | 1.65 | Bike Lane | $ 231,607 | $ - | $ 187,601 | $ 13,202 | $ 30,804 |
| Upper Wellington - S Bend Rd E to Stone Church Rd E | 2023-2031 | 2.40 | Bike Lane | $ 336,154 | $ 145,193 | $ 154,679 | $ 10,885 | $ 25,398 |
| W 18th St - Bendamere to End | 2023-2031 | 0.17 | Signed Bike Route | $ 6,741 | $ - | $ 5,460 | $ 384 | $ 897 |
| W 5th St - Brantdale to Governors Blvd | 2023-2031 | 0.62 | Multi-Use Trail | $ 465,956 | $ - | $ 377,424 | $ 26,559 | $ 61,972 |
| W 5th St - Governors Blvd to Marlowe | 2023-2031 | 1.13 | Bike Lane | $ 158,200 | $ - | $ 128,142 | $ 9,017 | $ 21,041 |
| Westbrook - End to Golf Club Rd | 2023-2031 | 0.86 | Signed Bike Route | $ 34,368 | $ - | $ - | $ 10,310 | $ 24,057 |
| White Church Rd E - Trinity Church Rd to Upper James | 2023-2031 | 6.57 | Paved Shoulder | $ 1,972,066 | $ 1,972,066 | $ - | $ - | $ - |
| Whitedeer - Highbury to Rymal Rd E | 2023-2031 | 0.35 | Bike Lane | $ 48,561 | $ - | $ 39,334 | $ 2,768 | $ 6,459 |
| Wilson in Ancaster - Fiddler's Green to Boundary | 2023-2031 | 10.77 | Cycle Track | $ 5,385,075 | $ - | $ - | $ 1,615,523 | $ 3,769,553 |
| Wimberly - Parkside to Nisbet | 2023-2031 | 0.33 | Bike Lane | $ 45,976 | $ - | $ 37,240 | $ 2,621 | $ 6,115 |
| Windwood Dr - Bradley to Southbrook Dr | 2023-2031 | 0.70 | Bike Lane | $ 97,549 | $ - | $ 79,015 | $ 5,560 | $ 12,974 |
| Woodbine Crescent - Jones to Dundurn St N | 2023-2031 | 0.22 | Signed Bike Route | $ 8,891 | $ - | $ 7,202 | $ 507 | $ 1,182 |
| Woodburn - Binbrook Rd E to Highway 20 E | 2023-2031 | 7.56 | Signed Bike Route | $ 302,206 | $ - | $ 45,331 | $ 77,063 | $ 179,813 |
| Woodhill Rd - Governor's to 800m south of Highway 8 | 2023-2031 | 7.05 | Signed Bike Route | $ 282,125 | $ - | $ - | $ 84,638 | $ 197,488 |
| Woodhill Rd - Highway 8 to 800m south of Highway 8 | 2023-2031 | 1.04 | Paved Shoulder | $ 313,044 | $ - | $ - | $ 93,913 | $ 219,131 |
| Woodward Ave - Beach Blvd to 100m south of Beach Blvd | 2023-2031 | 0.10 | Bike Lane | $ 14,099 | $ - | $ 11,420 | $ 804 | $ 1,875 |
| York - Olympic to Baldwin | 2023-2031 | 2.33 | Bike Lane | $ 326,172 | $ - | $ 264,199 | $ 18,592 | $ 43,381 |
| York Road Valley Community Centre Park Hydro Corridor Trail - York to Highway 6 | 2023-2031 | 4.15 | Paved Multi-Use Recreational Trail | $ 3,109,472 | $ - | $ 466,421 | $ 792,915 | $ 1,850,136 |
| Highway 6 - Concession 10 W to Freelton | 2023-2031 | 0.39 | Paved Multi-Use Recreational Trail | $ 293,059 | $ - | $ - | $ 87,918 | $ 205,141 |
| Highway 6 N - Carlisle to Edgewood Road | 2023-2031 | 0.55 | Paved Multi-Use Recreational Trail | $ 414,118 | $ - | $ - | $ 124,235 | $ 289,883 |
| White Church Rd W Loop - White Church Rd W East of Carluke to White Church Road W West of Highway 6 | 2023-2031 | 2.24 | Paved Multi-Use Recreational Trail | $ 1,683,731 | $ - | $ - | $ 505,119 | $ 1,178,611 |
| Carlisle Road - Highway 6 to Milborough Townline | 2023-2031 | 5.85 | Paved Shoulder | $ 1,756,268 | $ - | $ 263,440 | $ 447,848 | $ 1,044,980 |
| Concession 5 West - Highway 6N to Moffatt Road | 2023-2031 | 3.01 | Paved Shoulder | $ 904,289 | $ - | $ 135,643 | $ 230,594 | $ 538,052 |
| Mosaic Dr - Parkside Dr to Highway 6 | 2023-2031 | 1.90 | Multi-Use Trail | $ 1,425,000 | $ - | $ 1,154,250 | $ 81,225 | $ 189,525 |
| **Total** | | | | **$ 1,739,029,473** | **$ 222,658,680** | **$ 284,964,017** | **$ 469,725,246** | **$ 761,681,530** |

| Increased Service Needs Attributable to Anticipated Development | Timing (year) | Length (km) | Capital Improvement | Gross Capital Cost Estimate (2023$) | Other Deductions | Benefit to Existing Development | Post Period Benefit | Net Capital Cost |
|---|---|---|---|---|---|---|---|---|
| **Post-2041 Road Projects** | | | | | | | | |
| **AEGD** | | | | | | | | |
| Book Road - Highway 6 to Fiddlers Green Road | Post 2041 | 0.99 | 2r-5u | $ 10,769,800 | $ - | $ - | $ 10,769,800 | $ - |
| Collector 5W - Collector 7N to Collector 2N | Post 2041 | 0.74 | 3u | $ 7,183,646 | $ - | $ - | $ 7,183,646 | $ - |
| Collector 2W - Garner Road to Dickenson Road Extension | Post 2041 | 2.16 | 4u | $ 23,130,538 | $ - | $ - | $ 23,130,538 | $ - |
| Collector 5N - Collector 8W to Fiddler's Green | Post 2041 | 0.83 | 2r | $ 5,474,417 | $ - | $ - | $ 5,474,417 | $ - |
| Twenty Road West Extension - Glancaster Road to Collector 2W | Post 2041 | 1.06 | 2u | $ 8,286,718 | $ - | $ - | $ 8,286,718 | $ - |
| Collector Road 6E - Collector 6N to Twenty Road West | Post 2041 | 0.70 | 3u | $ 6,780,294 | $ - | $ - | $ 6,780,294 | $ - |
| Fiddler's Green Road - Garner Road to Book Road | Post 2041 | 1.97 | 2r-5u | $ 20,827,238 | $ - | $ - | $ 20,827,238 | $ - |
| Airport Service Road - Glancaster Road to Airport Road | Post 2041 | 1.78 | 3u | $ 17,237,062 | $ - | $ - | $ 17,237,062 | $ - |
| Collector 10N - Smith Road to Collector 1W | Post 2041 | 1.47 | 3u | $ 14,278,176 | $ - | $ - | $ 14,278,176 | $ - |
| **Elfrida** | | | | | | | | |
| Upper Centennial Parkway - Mud Street to Highway 20 | Post 2041 | 2.00 | 4r-5u | $ 22,580,042 | $ - | $ - | $ 22,580,042 | $ - |
| Upper Centennial Parkway - Mud Street to Green Mountain Road | Post 2041 | 1.00 | 4r-4u | $ 10,579,044 | $ - | $ - | $ 10,579,044 | $ - |
| **Stoney Creek** | | | | | | | | |
| Arvin Avenue - Jones Road to 366m west of Glover Road | Post 2041 | 0.55 | 2i | $ 4,960,650 | $ - | $ - | $ 4,960,650 | $ - |
| **Waterdown** | | | | | | | | |
| North Waterdown Drive - Clappison Avenue Extension to Highway 6 North | Post 2041 | 0.82 | 3u | $ 8,008,407 | $ - | $ - | $ 8,008,407 | $ - |
| **White Church Area** | | | | | | | | |
| Mud Street - Red Hill Valley Parkway to Upper Centennial Parkway | Post 2041 | 3.62 | 4r-6r | $ 61,138,512 | $ - | $ - | $ 61,138,512 | $ - |
| Airport Access Route - Upper Red Hill Valley Parkway to Highway 6 South | Post 2041 | 10.92 | 2r | $ 71,603,945 | $ 71,603,945 | $ - | $ - | $ - |
| **Former Urban Boundary Expansion Area Road Projects** | | | | | | | | |
| **AEGD** | | | | | | | | |
| Collector Road 1E - Collector 6N to Twenty Road West | Post 2041 | 0.73 | 3u | $ 7,066,475 | $ 7,066,475 | $ - | $ - | $ - |
| **Elfrida** | | | | | | | | |
| Regional Road 56 - Dalgliesh Trail to Golf Club Road | Post 2041 | 1.44 | 2r-5u | $ 15,741,403 | $ 15,741,403 | $ - | $ - | $ - |
| First Road East - Highway 20 to Mud Street | Post 2041 | 1.97 | 2r-3u | $ 15,089,596 | $ 15,089,596 | $ - | $ - | $ - |
| First Road East - Highway 20 to Golf Club Road | Post 2041 | 2.08 | 3u | $ 20,239,244 | $ 20,239,244 | $ - | $ - | $ - |
| Arterial N-S - Bellagio Avenue to Golf Club Road | Post 2041 | 1.88 | 4u | $ 20,100,545 | $ 20,100,545 | $ - | $ - | $ - |
| Dickenson Extension - Trinity Church to Golf Club Road | Post 2041 | 0.65 | 2u | $ 5,177,733 | $ 5,177,733 | $ - | $ - | $ - |
| Twenty Road - Upper Red Hill Valley Parkway to Hendershot Road | Post 2041 | 5.60 | 4u | $ 59,897,756 | $ 59,897,756 | $ - | $ - | $ - |
| Highway 20 - 500m east of Upper Centennial to Hendershot Road | Post 2041 | 1.17 | 2r-4u | $ 11,653,263 | $ 11,653,263 | $ - | $ - | $ - |
| Fletcher Road - 500m south of Rymal Road to Golf Club Road | Post 2041 | 1.60 | 2r-3u | $ 12,245,236 | $ 12,245,236 | $ - | $ - | $ - |
| Golf Club Road - Trinity Church Road to Hendershot Road | Post 2041 | 5.33 | 2r-3u | $ 40,967,481 | $ 40,967,481 | $ - | $ - | $ - |
| Hendershot Road - Highway 20 to Golf Club Road | Post 2041 | 2.09 | 2r-3u | $ 16,011,393 | $ 16,011,393 | $ - | $ - | $ - |
| Highland Road - Upper Centennial Parkway to Second Road East | Post 2041 | 1.67 | 2r-3u | $ 12,799,081 | $ 12,799,081 | $ - | $ - | $ - |
| Mud Street - Upper Centennial Parkway to Second Road East | Post 2041 | 1.67 | 2r-2u | $ 13,833,585 | $ 13,833,585 | $ - | $ - | $ - |

| Increased Service Needs Attributable to Anticipated Development | Timing (year) | Length (km) | Capital Improvement | Gross Capital Cost Estimate (2023$) | Other Deductions | Benefit to Existing Development | Post Period Benefit | Net Capital Cost |
|---|---|---|---|---|---|---|---|---|
| Second Road East - Highway 20 to Mud Street | Post 2041 | 1.94 | 2r-3u | $ 14,841,511 | $ 14,841,511 | $ - | $ - | $ - |
| Trinity Church Road - Hydro Corridor (470m south of Rymal Road) to Golf Club Road | Post 2041 | 1.60 | 2r-3u | $ 12,642,066 | $ 12,642,066 | $ - | $ - | $ - |
| **Twenty Road East** | | | | | | | | |
| Upper Wentworth Street - End to Twenty Road | Post 2041 | 0.74 | 4u | $ 7,937,327 | $ 7,937,327 | $ - | $ - | $ - |
| Upper Sherman Avenue - End to Twenty Road | Post 2041 | 0.75 | 4u | $ 8,078,090 | $ 8,078,090 | $ - | $ - | $ - |
| Upper Gage Avenue - End to Twenty Road | Post 2041 | 0.73 | 4u | $ 7,832,103 | $ 7,832,103 | $ - | $ - | $ - |
| Miles Road - Rymal Road to Dickenson Road | Post 2041 | 2.66 | 2r-4u | $ 25,003,996 | $ 25,003,996 | $ - | $ - | $ - |
| East-West Collector - Upper Wentworth Street to Upper Ottawa Street | Post 2041 | 2.52 | 3u | $ 24,456,044 | $ 24,456,044 | $ - | $ - | $ - |
| Twenty Road East - Upper James Street to Dartnall Road | Post 2041 | 5.76 | 2r-4u | $ 54,652,726 | $ 54,652,726 | $ - | $ - | $ - |
| Dickenson Road East - Upper James Street to 350 meters west of Nebo Road | Post 2041 | 4.24 | 2r-2u | $ 37,922,121 | $ - | $ - | $ 37,922,121 | $ - |
| **White Church Area** | | | | | | | | |
| White Church Road - Upper James Street to Miles Road | Post 2041 | 2.88 | 2r-4u | $ 27,000,420 | $ 27,000,420 | $ - | $ - | $ - |
| Airport Road - Upper James Street to Miles Road | Post 2041 | 2.75 | 2r-4u | $ 25,766,424 | $ 25,766,424 | $ - | $ - | $ - |
| Ferris Road Extension - White Church Road to Airport Road | Post 2041 | 1.34 | 2u | $ 10,252,044 | $ 10,252,044 | $ - | $ - | $ - |
| Miles Road - Dickenson Road to White Church Road | Post 2041 | 4.13 | 2r-4u | $ 38,893,556 | $ 38,893,556 | $ - | $ - | $ - |
| Highway 20 - Hendershot Road to Hamilton boundary | Post 2041 | 4.57 | 2r-4u | $ 45,465,162 | $ - | $ - | $ 45,465,162 | $ - |
| Fletcher Road - McWatters Street to Golf Club Road | Post 2041 | 3.60 | 2r-2u | $ 30,171,056 | $ - | $ - | $ 30,171,056 | $ - |
| **Total** | | | | **$ 914,575,925** | **$ 579,783,042** | **$ -** | **$ 334,792,883** | **$ -** |

| Increased Service Needs Attributable to Anticipated Development 2019-2031 | Timing (year) | Gross Capital Cost Estimate (2023$) | Benefit to Existing Development | Post Period Benefit | Grants, Subsidies and Other Contributions Attributable to New | Net Capital Cost |
|---|---|---|---|---|---|---|
| New Peak Hour 30' Bus (2) | 2033-2035 | $ 1,329,504 | $ - | $ 1,329,504 | $ - | $ - |
| New Peak Hour 40' Bus (48) | 2023-2032 | $ 45,852,096 | $ 38,928,430 | $ 1,031,672 | $ - | $ 5,891,994 |
| New Peak Hour 40' Bus (16) | 2033-2035 | $ 15,284,032 | $ - | $ 15,284,032 | $ - | $ - |
| New Peak Hour 60' Bus (8) | 2023-2032 | $ 9,863,616 | $ 8,374,210 | $ 221,931 | $ - | $ 1,267,475 |
| New Peak Hour 60' Bus (2) | 2033-2035 | $ 2,465,904 | $ - | $ 2,465,904 | $ - | $ - |
| New Spare 40' Bus (12) | 2023-2032 | $ 11,463,024 | $ 9,732,107 | $ 257,918 | $ - | $ 1,472,999 |
| New Spare 40' Bus (3) | 2033-2035 | $ 2,865,756 | $ - | $ 2,865,756 | $ - | $ - |
| New 40' to 60' Upgrades (37) | 2023-2032 | $ 10,274,900 | $ 8,723,390 | $ 231,185 | $ - | $ 1,320,325 |
| Facility: Service Truck | 2023-2032 | $ 129,998 | $ 100,878 | $ - | $ - | $ 29,120 |
| Facility: Stock Room Vehicle | 2023-2032 | $ 65,000 | $ 50,440 | $ - | $ - | $ 14,560 |
| Facility: Garage Equipment Repair Walk Behind Forklift | 2023-2032 | $ 184,200 | $ 142,939 | $ 12,341 | $ - | $ 28,919 |
| Facility: Garage Forklift | 2023-2032 | $ 106,700 | $ 82,799 | $ 7,149 | $ - | $ 16,752 |
| Facility: Garage Tow Mobile | 2023-2032 | $ 62,100 | $ 48,190 | $ 4,161 | $ - | $ 9,750 |
| Facility: Garage Equipment Repair Express Van Vehicles | 2023-2032 | $ 173,000 | $ 134,248 | $ - | $ - | $ 38,752 |
| Accessible Supervisory Vehicles (Specialized Transit) | 2023-2032 | $ 612,000 | $ 462,060 | $ - | $ - | $ 149,940 |
| Transit & Maintenance Storage Facility | 2023-2026 | $ 396,000,000 | $ 165,349,200 | $ 26,625,000 | $ 183,000,000 | $ 21,025,800 |
| **Total** | | **$ 496,731,830** | **$ 232,128,891** | **$ 50,336,554** | **$ 183,000,000** | **$ 31,266,385** |

Arcadis Canada Inc.

7th Floor 55 St. Clair Ave. West
Toronto, Ontario M4V 2Y7
Canada
Phone: 416 596 1930
www.arcadis.com