Technical Appendices

Appendix A

Technical Memo – Summary of Background Databases and Studies

Memo

Date:	Tuesday, July 18, 2023
Project:	City of Richmond Hill Transportation Master Plan Development Charges Background Study
To:	Tong Wang (City of Richmond Hill)
Cc:	Hubert Ng (City of Richmond Hill)
From:	Qingjie Zeng, Keyur Shah (HDR)
Subject:	Technical Memo 1 – Summary of Background Databases and Studies (Draft Final)

1 Introduction

HDR has been retained by the City of Richmond Hill (the City) to conduct a Transportation Master Plan Development Charges (D.C.) Background Study for the year 2023 in accordance with the Development Charges Act (1997, S.O. 1997, C.27) and associated regulations. This study needs to be completed concurrently with and in support of the City's ongoing Transportation Master Plan Update and D.C. By-law Update.

At the commencement of the study, a thorough review of relevant background study reports and databases was undertaken to understand the context of the Transportation Background Study and to identify available information for the technical analysis. This technical memorandum summarizes the list of available data, and background study reports that have been reviewed so far for the Study and also summarizes the application of this information.

2 Review of Background Data

HDR has reviewed relevant background documents, analysis, working files, and data sources made available by the City, as described below.

i. Most-recent Construction Contracts

The unit prices for various construction and infrastructure items extracted from construction contracts were used for three purposes:

- To calculate the roadway benchmark cost, i.e., the curb-to-curb construction cost plus other infrastructure items within the Right-of-Way (ROW). Unit prices for basic construction items were extracted from the contracts, including excavation, asphalt, granular, curb and gutter, storm sewers, etc. The benchmark costs were used to estimate the costs for new road construction, road widening, and re-construction.
- To estimate historical infrastructure values. The unit prices for individual infrastructure items were either extracted from the contracts or confirmed by the City. There include traffic signals, structures, sidewalks, illumination, AT infrastructure, property values, etc. The estimated historical infrastructure values were used for Service Level Analysis (identified as the third methodology for SLA - Historical Infrastructure Value per Capita).
- Both benchmark cost and infrastructure values were used to estimate the capital costs for future improvement projects.

HDR has received and reviewed available City contracts for the last 7-year period (2016 to 2022). Unit prices for various construction items were extracted from these contracts. In order to identify unit prices for some outstanding items, York Region 2022 Designer Estimate Rates and unit prices available from other municipalities were reviewed as supplementary resources. The unit prices derived from various sources have being summarized for the City's review and confirmation.

ii. Historical Traffic Data

Historical traffic data for City's arterial and collector roadways was reviewed based on the Average Daily Traffic (ADT) data received from the City. The ADT data is available for the years 2007 to 2013, 2016 to 2021, and sorted by different roadway segments. The historical traffic counts were used as the Annual Average Daily Traffic (AADT) for Service Level Analysis per the first methodology – Average Vehicles per Lane.

iii. Standards and Specifications Manual

The City's most-recent *Transportation and Roadworks Standards and Specifications Manual* (November 2022) was reviewed to identify the typical road cross-sections.

Other design criteria and specifications were also reviewed, including structural requirements for roads, specifications for on-road bicycle facilities, designated multi-use paths, pavement markings, etc. These design standards

and specifications were used to estimate the benchmark cost and other infrastructure unit costs.

iv. Population and Employment Data

HDR also reviewed the City's 2011, 2016 and 2021 population census data (source: Statistic Canada) and historical employment survey data provided by the Planning Division. The historical population and employment data was used for the Service Level Analysis to derive Lane-kms per Capita and Historical Infrastructure Value per Capita.

v. EAM Database

The City's EAM database includes the latest (2022) and most-complete transportation inventory data. This database contains historical inventory data for active transportation facilities (including bike lanes, the multi-use path within ROW, sidewalks), structures (bridges and culverts), and roadway segments (number of lanes, segment lengths, roadway classifications, curb-to-curb areas, etc.). The historical inventory data extracted from the EAM database forms the basis for Service Level Analyses (i.e., the second and third methodologies of Lane-kms per Capita and Historical Infrastructure Value per Capita, respectively).

vi. TCA Database

The City's TCA database documents transportation assets within the ROW, including roadways (locals, collectors, arterials), illumination, sidewalks, structures, traffic signals, etc. Project managers would only report the completed projects/assets which will be updated in the TCA database when the Council approvals. Therefore, this database does not include the historical increment of infrastructure items; some critical attributes for the assets are also unavailable (e.g., the deck area is not available for structures, and length is not available for roadway segments). The information extracted from this database was used as supplementary information for developing the historical inventory data.

vii. Traffic Signal Inventory

The most-recent traffic signal inventory received from the City indicates that there are a total of 28 traffic signals currently under the City's maintenance and operation, which include 17 full traffic signals, six intersection pedestrian signals (IPS), two mid-block pedestrian signals (MPS), two pedestrian

crossovers (PXOs), and one flashing beacon. The traffic signal data was considered in developing the historical infrastructure values.

viii. Land Values

The land values for different categories (residential, industrial, commercial, etc.) were received from the City and used to estimate the land acquisition cost and ROW property value.

ix. BTE and PPB Methodologies

The Benefit to Existing (BTE) and Post-Period Benefit (PPB) Methodologies used in the 2019 D.C. Study were reviewed along with the City's current approaches and methodologies. HDR developed/updated the BTE and PPB shares based on the most recent unit prices/ benchmark costs and updated local services policies with new roadway types and ROWs.

x. GIS Database

HDR has received City's GIS layers including roadway network, bike paths, bus routes and bus stops, railways, land use types, signs, etc. The information extracted from the GIS layers was used as supplementary information for developing the historical inventory data. Land use information was used to estimate the potential land acquisition cost for future roadway improvement programs and ROW property value.

xi. Off-Road Trails

The existing off-road trail inventory was received from the City. The inventory data includes trail name, surface type, length info, etc. HDR has filtered the data to identify those off-road trails owned or maintained by the City. Based on the available information, the total length of off-road trails is approximately 135 km.

In addition, HDR has reviewed the City's strategic planning study reports and other relevant reports, which include:

- Development Charges Act
- City's OP (on-going update)
- City's TMP (on-going update)
- 2019 and 2021 D.C. Background Studies (City-wide and Area Specific)
- 2009 D.C. Study
- Local Services Policy
- Capital Budget and Forecasts for transportation infrastructure projects

- Other municipalities' recent transportation Background Studies for Development Charges Updates (York Region, Mississauga, Vaughan)

Appendix B

Technical Memo – Service Level Analysis

Memo

Date:	Tuesday, November 07, 2023
Project:	City of Richmond Hill Transportation Master Plan Development Charges Background Study
To:	Tong Wang (City of Richmond Hill)
Cc:	Hubert Ng (City of Richmond Hill)
From:	Qingjie Zeng, Keyur Shah (HDR)
Subject:	Technical Memo 5 – Service Level Analysis (Draft Final3)

1 Introduction

HDR has been retained by the City of Richmond Hill (the City) to conduct a Transportation Master Plan Development Charges (D.C.) Background Study for the year 2023 in accordance with the Development Charges Act (1997, S.O. 1997, C.27) and associated regulations. This study needs to be completed concurrently with and in support of the City's ongoing Transportation Master Plan Update and D.C. By-law Update.

As part of the study, the historical service level (for the past 15-year period) and future (2041) road service levels were assessed to confirm if the proposed improvements are eligible as per D.C. Act. This will be the primary basis for the justification that all future road improvements are predominantly growth-related. This technical memorandum summarizes the service level analysis undertaken using the following three methodologies:

- Average vehicles per lane
- Lane-kms per capita (i.e., the total number of population and employment)
- Historical road infrastructure value per capita

2 Measuring Roads and Road-Related Historical Service Levels

The Development Charges Act, 1997 and associated regulations require that analysis be undertaken to determine the average service level that has been provided over the last 15 years and that the service level that is applied to future growth cannot exceed the 15-year historical average. The following three different types of service level methodologies were utilized for the D.C. Study to provide justification for the proposed road and road-related programs:

- Average vehicles per lane,
- Lane-kms per capita (population + employment), and
- Historical road infrastructure value per capita (incorporates a total value for all road-related infrastructure)

The road service level methodologies (i.e., utilizing average vehicles per lane, and lane-kms per capita) are the most commonly used service level methodologies, which have been used by many municipalities for the transportation background studies completed for the D.C. Update.

2.1 Average Vehicles per Lane

The ‘Average vehicles per lane’ service level measure consists in determining the average daily vehicles per lane for the major road network over the past 15 years. This approach utilizes traffic databases compiled by the City that include daily traffic counts by road segments (at count stations) for ‘collector’ and ‘arterial’ roadways. The historical traffic counts were collected for years from 2008 to 2013, and from 2016 to 2021 (traffic volumes were interpolated for 2014 and 2015 as traffic counts are not available). Traffic counts collected in 2020 and 2021 have been affected by COVID-19 and therefore the traffic counts collected for these two years may lower than 2019 data.

These historical traffic volumes were used along with the road segment lengths and the number of lanes, to calculate the daily vehicle-kms travelled and lane-kms for each road section. The vehicle-kms and lane-kms totals for the City’s ‘collector’ and ‘arterial’ types of road network were used to calculate the average vehicles per lane for each of the analyzed historical years.

The historical average service level was established by averaging the service levels for the past fifteen years. The historical average vehicles per lane is presented in **Table 1**. The detailed vehicle-kms and lane-kms data used to calculate the historical service levels are contained in **Appendix i**.

Table 1: Historical Average Vehicles per Lane (2008-2022)

Year	Lane-kms	Vehicle-kms	Average Vehicles per Lane
2008	224.8	447,605	1,991
2009	237.5	461,429	1,943
2010	245.7	474,665	1,932
2011	245.7	477,310	1,943
2012	245.7	476,271	1,939
2013	248.2	475,295	1,915
2014	248.2	485,199	1,955
2015	252.4	501,816	1,988
2016	262.9	528,171	2,009
2017	280.5	545,863	1,946
2018	280.5	538,581	1,920
2019	280.5	534,113	1,904
2020	280.5	491,557	1,753
2021	280.5	494,540	1,763
2022	280.5	500,443	1,784
Average	**259.6**	**495,524**	**1,909**

2.2 Lane-kms per Capita (Population + Employment)

The second service level measure used to assess the historical service level for the City's road network consists of measuring lane-kms per capita (i.e., the total population and employment). This measure is based on the historical lane-kms estimated using road segment lengths and the number of lanes, and the City's population and employment totals for the respective fifteen years (2008-2022). The historical lane-kms per capita (for 2008-2022) are presented in **Table 2**.

Table 2: Historical Lane-Kms per Capita (2008-2022)

Year	Lane-kms	Population	Employment	Capita (Pop. + Emp.)	Lane-kms per 1,000 Capita
2008	224.8	172,088	65,618	237,706	0.95
2009	237.5	175,497	67,882	243,379	0.98
2010	245.7	179,826	70,146	249,972	0.98
2011	245.7	185,541	72,410	257,951	0.95
2012	245.7	187,558	73,688	261,246	0.94
2013	248.2	190,120	74,966	265,086	0.94
2014	248.2	191,171	76,244	267,415	0.93
2015	252.4	193,063	77,522	270,585	0.93
2016	262.9	195,022	78,800	273,822	0.96
2017	280.5	198,284	80,217	278,501	1.01
2018	280.5	198,982	81,634	280,616	1.00
2019	280.5	200,176	83,051	283,227	0.99
2020	280.5	201,076	84,468	285,544	0.98
2021	280.5	202,022	85,885	287,907	0.97
2022	280.5	207,785	86,799	294,584	0.95
Average	**259.6**	**191,881**	**77,289**	**269,169**	**0.96**

Note: The population data was collected based on City-wide Census data for year 2011, 2016, and 2021, and received from Watson for the other years; the employment data for year 2006, 2011, 2021, and 2023 was received from Watson and interpolated for the other years.

2.3 Historical Infrastructure Value per Capita

An inventory of the City's road and road-related infrastructures for the past fifteen-year period (2008-2022) was compiled to calculate the historical average infrastructure value, since the D.C. Act, 1997 and associated regulations require that the service level to be applied to future growth not exceed the historical average over the last fifteen years. The existing right-of-way (ROW) inventory was developed based on the City's roadway and structure database and included additional infrastructure items and land within the ROW.

The infrastructure items included in the inventory are as follows:

- Roadways (curb-to-curb)
- Structure (Bridges and Culverts)
- Traffic Signals
- Bike Facilities
- Multi-Use Path (MUP) within ROW
- Off-road Trails
- Sidewalks
- Grade Separations
- Roundabouts
- Illumination
- ROW Land

The average historical road infrastructure value per capita is presented in **Table** 3. Details of historical road infrastructure values are presented in **Appendix ii**.

Table 3: Historical Infrastructure Value per Capita (2008-2022)

Year	Road Infrastructure Value ($ Millions)	Capita (Pop. + Emp.)	Road Infrastructure Value per 1,000 Capita ($ Millions)
2008	$4,785,377,857	237,706	$20.13
2009	$5,015,386,121	243,379	$20.61
2010	$5,188,309,357	249,972	$20.76
2011	$5,193,299,556	257,951	$20.13
2012	$5,200,520,705	261,246	$19.91
2013	$5,251,757,785	265,086	$19.81
2014	$5,255,947,584	267,415	$19.65
2015	$5,340,851,444	270,585	$19.74
2016	$5,462,087,903	273,822	$19.95
2017	$5,625,416,229	278,501	$20.20
2018	$5,680,004,204	280,616	$20.24
2019	$5,682,567,026	283,227	$20.06
2020	$5,682,637,174	285,544	$19.90
2021	$5,682,767,174	287,907	$19.74
2022	$5,682,767,174	294,584	$19.29
Average	**$5,381,979,819**	**$269,169**	**$19.99**

3 Service Levels for Future Planning Horizon Year 2041

The future (2041) service level is estimated for the measures of Average Vehicles per Lane, and Lane-kms per Capita. The future service levels were reviewed and compared with the historical service levels, providing needs and justification for the proposed road and road-related programs, without resulting in excess road network capacity.

3.1 Average Vehicles per Lane for Year 2041

The future service level of average vehicles per lane was estimated based on the forecasted vehicle-kms travelled and the total lane-kms derived from the City's travel demand model (York Region Travel Demand Forecast Model based Emme model).

The morning peak hour traffic volumes for both directions of travel were extracted for the collector and arterial road network from the City's travel demand model for the year 2041. The peak-hour traffic volumes from the model were expanded to reflect the daily traffic volumes based on a 24-hour to peak-hour factor. This factor of 10.75 was estimated based on 24-hour ATR counts collected on City roads.

The total lane-kms for the collector and arterial road network were calculated based on the required number of lanes and the length of each road section. The average vehicles per lane for the forecast 2041 and 'Growth Portion Only' were calculated based on the total forecast vehicle-kms travelled and the total future lane-kms as shown in **Table 4**. The detailed vehicle-kms and lane-kms data used to calculate the 2041 service levels are provided in **Appendix iii**.

The 'Growth Portion Only' calculation reflects the growth-related component of the future vehicle-kms and lane-kms as derived from the City's travel demand model.

Table 4: Historical and 2041 Forecast Average Vehicles per Lane

Period	Lane-kms	Vehicle-kms	Average Vehicles per Lane
Historical Service Level	259.6	495,524	1,909
Growth Portion Only*	21.5	445,180	20,706
Future Service Level for 2041	302	945,623	3,133

Note: the 'Growth Portion Only' indicates the difference between 2022 and 2041.

The average vehicles per lane for the 'Growth Portion Only' was calculated based on planned growth occurring between the years 2022 and 2041. The results of the Average Vehicles per Lane service level analysis indicate the following:

- the average vehicles per lane is forecast to increase significantly by 2041;
- the future road network will be more congested in the future planning horizon year (2041) than it has been over the past fifteen years;
- the service level for the 'Growth Portion Only' is forecast to be declined from the historical 15-year average; and,
- the road network service level is forecast to deteriorate over the next 19 years.

3.2 Lane-Kms per Capita for Year 2041

The future lane-kms per capita service level is calculated using the proposed road network improvements, and projected population, and employment for the year 2041. The future lane-kms per capita measure is expressed in terms of 'Forecast 2041' and 'Growth Portion Only'.

The 'Forecast 2041' measure considers 2041 road infrastructure, population, and employment; while the 'Growth Portion Only' measure is estimated based on additional lane-kms expected to serve the population and employment growth from 2022 to 2041. The forecast lane-kms per population and employment service levels are presented in **Table 5**.

Table 5: Historical and 2041 Forecast Lane-Kms per Capita

Period	Lane km	Population	Employment	Capita (Pop. + Emp.)	Lane-kms per 1,000 Capita
Historical Service Level	259.6	191,881	77,289	269,169	0.96
Growth Portion Only*	21.5	70,395	23,101	93,496	0.23
Future Service Level for 2041	302	278,180	109,900	388,080	0.79

Note: the 'Growth Portion Only' indicates the difference between 2022 and 2041.

The lane-kms per capita service level assessment shows that the service level is forecast to decline (decreasing lane-kms per capita) over the next 19 years.

4 Findings of Forecast Service Level Analysis

The results of the historical and forecast year 2041 service level analysis using vehicles per lane (**Table 4**) and lane-kms per capita (**Table 5**) indicate that the service levels are forecast to decline over the next 19 years, as presented in **Table 6**.

Table 6: Road Network Service Level Summary

Period	Average Vehicles per Lane	Lane-kms per 1,000 Capita
Historical Service Level	1,909	0.96
Growth Portion Only*	20,706	0.23
Future Service Level for 2041	3,133	0.79

The service levels for the City's road network are forecast to decline by 64% based on the average vehicles per lane measure, and by 18% based on lane-kms per capita. Therefore, it is concluded that regardless of the service level measure that is used, the City's road infrastructure is forecast to experience deterioration in the service level over the next 19 years with the planned growth in the City.

5 Allowable Funding Envelope

Based on the average service standard for roads and structures, a maximum D.C.-eligible cost of **$1.55 billion** was estimated to meet the future increase in needs for transportation services for roads and road-related infrastructure. The details of the funding envelope are addressed in the D.C. Background Study report prepared by Watson & Associates Economists Ltd.

Tech Memo 5

Appendix i

Historical Service Level Analysis

City of Richmond Hill
2023 Development Charges Update Study

15-Year Historical Service Level Analysis

SLRN ID	Street Name	From	To	Length (km)	2008 Lanes	2008 Final ADT	2008 Travelled	2008 Lane KMs	2009 Lanes	2009 Final ADT	2009 Travelled	2009 Lane KMs	2010 Lanes	2010 Final ADT	2010 Travelled	2010 Lane KMs
C2087	19th Avenue	Leslie Street	Highway 404	1.010	0	0	0	0.00	0	0	0	0.00	0	1690	1,707	0.00
C3918	Alpaca Drive	Jefferson Sideroad	Tower Hill Road	0.562	0	0	0	0.00	2	710	399	1.12	2	720	405	1.12
C1258	Ardwold Gate	Bayview Avenue	Strathearn Avenue	0.410	2	930	381	0.82	2	940	385	0.82	2	950	390	0.82
C0267	Avenue Road	Edgar Avenue	Carrville Road	0.532	2	7000	3,723	1.06	2	6890	3,664	1.06	2	7230	3,845	1.06
C0261	Avenue Road	Carrville Road	Weldrick Road W	1.023	2	4470	4,574	2.05	2	4400	4,502	2.05	2	4340	4,441	2.05
C2318	Bantry Avenue	Bayview Avenue	Silver Linden Drive	0.590	2	5600	3,306	1.18	2	5640	3,330	1.18	2	5670	3,347	1.18
C2176	Bantry Avenue	Silver Linden Drive	Melville Street	0.343	2	4870	1,671	0.69	2	4810	1,650	0.69	2	4840	1,661	0.69
C3024	Bantry Avenue	Melville Street	Red Maple Road	0.385	2	5140	1,981	0.77	2	5190	2,000	0.77	2	4510	1,738	0.77
C2616	Bantry Avenue	Red Maple Road	Yonge Street	0.566	2	6070	3,434	1.13	2	5900	3,338	1.13	2	5740	3,247	1.13
C0978	Bernard Avenue	Silverwood Avenue	Viewmark Drive	0.178	2	2440	433	0.36	2	2440	433	0.36	2	2430	431	0.36
C0997	Bernard Avenue	Viewmark Drive	Oldhill Street	0.912	2	1500	1,367	1.82	2	1450	1,322	1.82	2	1390	1,267	1.82
C0859	Bernard Avenue	Oldhill Street	Lorraine Street	0.407	2	1150	468	0.81	2	1090	443	0.81	2	1030	419	0.81
C0967	Bernard Avenue	Lorraine Street	Yorkland Street	0.092	2	2060	189	0.18	2	2060	189	0.18	2	2060	189	0.18
C0965	Bernard Avenue	Yorkland Street	Yonge Street	0.303	4	8040	2,433	1.21	4	7780	2,355	1.21	4	7520	2,276	1.21
C3231	Bethesda Sideroad	Highway 404	Leslie Street	1.179	2	330	389	2.36	2	350	413	2.36	2	380	448	2.36
C2985	Bethesda Sideroad	Leslie Street	Bayview Avenue	1.798	2	250	450	3.60	2	270	486	3.60	2	290	522	3.60
C1998	Blackforest Drive	Yonge Street	Regatta Avenue	0.841	2	1120	942	1.68	2	1050	883	1.68	2	970	816	1.68
C1193	Blackmore Avenue	Valleymede Drive	Bayview Avenue	0.673	2	3530	2,375	1.35	2	3560	2,395	1.35	2	3580	2,408	1.35
C1273	Boake Trail	Strathearn Avenue	Spadina Road	0.551	2	1480	815	1.10	2	1480	815	1.10	2	1490	820	1.10
C1358	Boake Trail	Spadina Road	Delevan Court	1.471	2	2940	4,324	2.94	2	2950	4,338	2.94	2	2960	4,353	2.94
C1673	Boake Trail	Delevan Court	Clarendon Drive	0.171	2	2670	458	0.34	2	2750	471	0.34	2	2830	485	0.34
C1531	Boake Trail	Clarendon Drive	Major Mackenzie Drive East	0.547	2	2660	1,456	1.09	2	2580	1,412	1.09	2	2510	1,374	1.09
C1160	Briggs Avenue	Valleymede Drive	Bantry Avenue	0.643	2	4280	2,752	1.29	2	4230	2,720	1.29	2	4190	2,694	1.29
C1701	Brodie Drive	Staples Avenue	None	0.217	0	0	0	0.00	0	2190	476	0.00	0	0	0	0.00
C1701	Brodie Drive	Vogell Road	Orlando Avenue	0.719	0	0	0	0.00	0	2190	1,575	0.00	0	0	0	0.00
C0953	Brookside Road	Yonge Street	Leyburn Avenue	0.299	2	4900	1,465	0.60	2	5090	1,522	0.60	2	5290	1,582	0.60
C0855	Brookside Road	Leyburn Avenue	Shaftsbury Avenue	0.898	2	3140	2,821	1.80	2	3220	2,893	1.80	2	3310	2,974	1.80
C2668	Canyon Hill Avenue	Yonge Street	Palomino Drive	0.534	2	5410	2,890	1.07	2	5250	2,804	1.07	2	5090	2,719	1.07
C2639	Canyon Hill Avenue	Palomino Drive	Shaftsbury Avenue	0.469	2	4750	2,228	0.94	2	4800	2,251	0.94	2	4840	2,270	0.94
C0785	Canyon Hill Avenue	Shaftsbury Avenue	Whalen Court	0.762	2	2850	2,172	1.52	2	2820	2,149	1.52	2	2800	2,134	1.52
C3179	Canyon Hill Avenue	Whalen Court	Bathurst Street	0.463	2	2330	1,080	0.93	2	2350	1,089	0.93	2	2370	1,098	0.93
C0740	Centre Street East	Yonge Street	Pugsley Avenue	0.483	2	2070	1,000	0.97	2	2060	996	0.97	2	2050	991	0.97
C3228	Centre Street East	Pugsley Avenue	Newkirk Road	0.598	2	2850	1,703	1.20	2	2420	1,446	1.20	2	2630	1,571	1.20
C0751	Centre Street East	Newkirk Road	Sussex Avenue	0.261	2	4230	1,104	0.52	2	4240	1,107	0.52	2	4260	1,112	0.52
C1553	Centre Street East	Sussex Avenue	Bayview Avenue	0.531	2	3420	1,815	1.06	2	3260	1,731	1.06	2	3410	1,810	1.06
C1040	Chalmers Road	Highway 7	Valleymede Drive	0.593	2	2980	1,767	1.19	2	3170	1,880	1.19	2	3370	1,999	1.19
C2899	Clarendon Drive	Boake Trail	Boake Trail	1.139	2	980	1,116	2.28	2	980	1,116	2.28	2	970	1,104	2.28
C1532	Clarendon Drive	Boake Trail	Spadina Road	0.493	2	1750	863	0.99	2	1770	873	0.99	2	1800	888	0.99
C1964	Coon'S Road	Elm Grove Avenue	Humberland Drive	0.411	2	2790	1,146	0.82	2	2620	1,077	0.82	2	2450	1,007	0.82
C3262	Coon'S Road	Humberland Drive	Bloomfield Trail	0.813	2	1050	854	1.63	2	1030	838	1.63	2	1010	822	1.63
C4041	Coon'S Road	Bloomfield Trail	Yonge Street	0.721	2	1580	1,139	1.44	2	1560	1,125	1.44	2	1550	1,118	1.44
C1595	Crosby Avenue	Bayview Avenue	Osiris Drive	0.604	2	4910	2,966	1.21	2	4700	2,839	1.21	2	4500	2,719	1.21
C2929	Crosby Avenue	Osiris Drive	Newkirk Road	0.388	2	5840	2,266	0.78	2	5750	2,231	0.78	2	5650	2,192	0.78
C0737	Crosby Avenue	Newkirk Road	Pugsley Avenue	0.466	2	7000	3,260	0.93	2	6770	3,153	0.93	2	6480	3,018	0.93
C0679	Crosby Avenue	Pugsley Avenue	Yonge Street	0.366	2	6650	2,436	0.73	2	6380	2,337	0.73	2	6110	2,238	0.73
C1868	Devonsleigh Boulevard	19th Avenue	Brookwood Drive	0.973	2	1800	1,752	1.95	2	1800	1,752	1.95	2	1810	1,761	1.95
C1840	Devonsleigh Boulevard	Brookwood Drive	Yonge Street	0.758	2	2300	1,744	1.52	2	2290	1,736	1.52	2	2290	1,736	1.52
C1363	Dewbourne Avenue	Boake Trail	16th Avenue	0.584	2	1930	1,128	1.17	2	1970	1,151	1.17	2	1970	1,151	1.17
C1378	East Beaver Creek Road	Leslie Street	East Wilmot Street	0.895	0	0	0	0.00	0	0	0	0.00	0	7110	6,367	0.00
C1320	East Beaver Creek Road	East Wilmot Street	East Pearce Street	0.477	0	0	0	0.00	0	7540	3,599	0.00	0	0	0	0.00
C1087	East Beaver Creek Road	East Pearce Street	Highway 7	0.535	0	0	0	0.00	0	0	0	0.00	0	14790	7,920	0.00
C1310	East Pearce Street	Leslie Street	East Beaver Creek Road	0.514	2	2700	1,388	1.03	2	2780	1,430	1.03	2	2870	1,476	1.03
C1308	East Wilmot Street	Leslie Street	East Beaver Creek Road	0.522	2	1970	1,029	1.04	2	1990	1,040	1.04	2	2000	1,045	1.04
C0121	Edgar Avenue	Avenue Road	Pearson Avenue S Leg	0.467	2	4020	1,878	0.93	2	3910	1,827	0.93	2	3800	1,776	0.93
C0857	Edward Avenue	Elgin Mills Road East	None	0.737	2	3910	2,883	1.47	2	3620	2,669	1.47	2	3330	2,456	1.47
C1125	Elm Avenue	16th Avenue	Springbrook Drive	0.604	2	1500	906	1.21	2	1460	882	1.21	2	1530	924	1.21
C0864	Enford Road	Elgin Mills Road East	None	1.081	2	3140	3,393	2.16	2	3050	3,296	2.16	2	2950	3,188	2.16
C1447	Essex Avenue	Major Mackenzie Drive East	Palmer Avenue	0.415	2	2560	1,063	0.83	2	2590	1,075	0.83	2	2610	1,083	0.83
C1409	Essex Avenue	Palmer Avenue	Weldrick Road East	0.418	2	2100	879	0.84	2	2100	879	0.84	2	2110	883	0.84
C1650	Farmstead Road	Bayview Avenue	Shirley Drive	1.214	2	2950	3,580	2.43	2	2860	3,471	2.43	2	2760	3,350	2.43
C2248	Frank Endean Road	Bayview Avenue	Redstone Road	0.656	2	680	446	1.31	2	690	453	1.31	2	700	459	1.31
C1657	Frank Endean Road	Redstone Road	Farmstead Road	0.752	2	3660	2,753	1.50	2	3550	2,670	1.50	2	3430	2,580	1.50
C3371	Frank Endean Road	Farmstead Road	Major Mackenzie Drive East	0.498	2	5600	2,787	1.00	2	5700	2,836	1.00	2	5810	2,891	1.00
C0072	Garden Avenue	Hunter'S Point Drive	Pearson Avenue	0.427	2	3730	1,593	0.85	2	3520	1,503	0.85	2	3320	1,418	0.85
C0044	Garden Avenue	Pearson Avenue	Yonge Stree	0.559	2	4790	2,678	1.12	2	4800	2,683	1.12	2	4820	2,694	1.12
C1694	Greenhill Avenue	Leslie Street	Clarendon Drive	0.253	2	2000	506	0.51	2	2070	523	0.51	2	2150	543	0.51
C2602	Greyfriars Avenue	Blackforest Drive	Coon'S Road	0.336	2	3540	1,188	0.67	2	3690	1,239	0.67	2	3840	1,289	0.67
C2630	Hall Street	Wright Street	Mill Street	0.065	2	970	63	0.13	2	930	60	0.13	2	920	60	0.13
C0560	Harding Boulevard West	Yonge Street	Kersey Crescent	0.817	3	5160	4,216	2.45	3	5060	4,135	2.45	3	4960	4,053	2.45
C0539	Harding Boulevard West	Kersey Crescent	Major Mackenzie Drive West	0.349	3	5770	2,012	1.05	3	5790	2,019	1.05	3	5800	2,023	1.05
C3159	Headford Avenue	Boake Trail	Leslie Street	0.326	2	1430	467	0.65	2	1450	473	0.65	2	1470	480	0.65
C2645	High Tech Road	Yonge Street	Red Maple Road	0.579	4	13800	7,996	2.32	4	14210	8,233	2.32	4	14620	8,471	2.32
C3360	High Tech Road	Red Maple Road	Silver Linden Drive	0.690	4	9710	6,701	2.76	4	9910	6,839	2.76	4	10110	6,977	2.76
C2296	High Tech Road	Silver Linden Drive	Bayview Avenue	0.622	4	9340	5,806	2.49	4	9470	5,887	2.49	4	9590	5,962	2.49
C2602	Humberland Drive	Coon'S Road	Red Cardinal Trail	0.262	2	3540	926	0.52	2	3690	966	0.52	2	3840	1,005	0.52
C2136	Humberland Drive	Red Cardinal Trail	Woodhaven Crescent W Leg	0.601	2	2530	1,520	1.20	2	2600	1,562	1.20	2	2680	1,610	1.20
C2139	Humberland Drive	Woodhaven Crescent W Leg	Bathurst Street	0.365	2	2600	948	0.73	2	2780	1,014	0.73	2	2830	1,032	0.73
C0058	Hunter'S Point Drive	Garden Avenue	Highway 7	0.565	2	3260	1,841	1.13	2	3260	1,841	1.13	2	3250	1,835	1.13
C3110	Jefferson Forest Drive	Yonge Street	Hunting Ridges Drive	1.091	2	3210	3,502	2.18	2	2950	3,218	2.18	2	2680	2,924	2.18
C3114	Jefferson Forest Drive	Hunting Ridges Drive	19th Avenue	0.713	2	740	355	0.96	2	750	360	0.96	2	760	542	1.43
C3497	Jefferson Sideroad	Yonge Street	Beech Avenue	0.953	2	5160	4,918	1.91	2	5390	5,137	1.91	2	5620	5,356	1.91
C3725	Jefferson Sideroad	Beech Avenue	Bathurst Street	1.214	2	1710	2,076	2.43	2	1980	2,403	2.43	2	2260	2,743	2.43
C3732	John Birchall Road	Leslie Street	60m south of Bawden Drive	0.230	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C3732	John Birchall Road	Elgin Mills Road East	60m south of Bawden Drive	0.437	0	0	0	0.00	4	6330	2,766	1.75	4	6420	2,806	1.75
C0336	Kersey Crescent	Weldrick Road West	May Avenue	0.511	2	5050	2,580	1.02	2	4970	2,540	1.02	2	4880	2,494	1.02
C0347	Kersey Crescent	May Avenue	Harding Boulevard West	0.597	2	4170	2,491	1.19	2	4210	2,515	1.19	2	4240	2,533	1.19
C3680	Kingshill Road	King Road	Poulias Avenue	0.443	2	2430	1,077	0.89	2	2470	1,095	0.89	2	2500	1,108	0.89
C3397	Kingshill Road	Poulias Avenue	Holtby Street	0.568	2	1590	903	1.14	2	1620	920	1.14	2	1690	960	1.14
C3648	Kingshill Road	Holtby Street	Bathurst Street	0.465	2	1450	674	0.93	2	1510	702	0.93	2	1590	739	0.93
C2217	Lacewood Drive	Gamble Road	Nottingham Drive	0.345	2	900	311	0.69	2	1020	352	0.69	2	630	217	0.69
C0780	Larratt Lane	Shaftsbury Avenue	Canyon Hill Avenue	0.737	2	1510	1,112	1.47	2	1500	1,105	1.47	2	1480	1,090	1.47
C0789	Larratt Lane	Canyon Hill Avenue	Elgin Mills Road West	0.469	2	1840	863	0.94	2	1820	853	0.94	2	1800	844	0.94
C2752	Leyburn Avenue	Brookside Road	Canyon Hill Avenue	0.488	2	1020	498	0.98	2	1090	532	0.98	2	1160	567	0.98
C0675	Mill Street	Hall Street	Trench Street	0.766	2	4130	3,163	1.53	2	3810	2,918	1.53	2	3480	2,665	1.53
C0498	Mill Street	Trench Street	Ellery Drive	0.754	2	4810	3,626	1.51	2	4830	3,641	1.51	2	4630	3,490	1.51
C0419	Mill Street	Ellery Drive	Bathurst Street	0.366	2	4230	1,546	0.73	2	4120	1,506	0.73	2	4010	1,466	0.73
C3939	Milos Road	Bathurst Street	Philips Lake Court	0.585	0	0	0	0.00	2	830	486	1.17	2	840	491	1.17
C3933	Milos Road	Philips Lake Court	Jefferson Sideroad	0.507	2	740	126	0.34	2	750	380	1.01	2	760	385	1.01
C1370	Mural Street	16th Avenue	East Beaver Creek Road	0.859	4	5650	4,854	3.44	4	5540	4,759	3.44	4	5430	4,665	3.44
C0886	Newkirk Road	Elgin Mills Road East	Crosby Avenue	1.123	3	7360	8,268	3.37	3	7260	8,155	3.37	3	7150	8,032	3.37
C0761	Newkirk Road	Crosby Avenue	Centre Street East	0.589	3	9300	5,481	1.77	3	9230	5,440	1.77	3	9210	5,428	1.77
C0584	Newkirk Road	Centre Street East	Major Mackenzie Drive Eas	0.429	4	8960	3,844	1.72	4	9200	3,947	1.72	4	9450	4,054	1.72
C4081	Norman Bethune Avenue	East Beaver Creek Road	230m east of East Beaver Creek Road	0.230	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C4081	Norman Bethune Avenue	230m east of East Beaver Creek Road	Hwy 404	0.164	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C2051	North Lake Road	Bayview Avenue	Wood Rim Drive	0.944	2	2920	2,756	1.89	2	3040	2,869	1.89	2	3170	2,991	1.89
C1984	North Lake Road	Wood Rim Drive	Yonge Street	1.137	2	4160	4,731	2.27	2	4070	4,628	2.27	2	3990	4,537	2.27
C2227	Nottingham Drive	Yonge Street	Lacewood Drive	0.237	2	1140	271	0.47	2	1140	271	0.47	2	1140	271	0.47
C3544	Old Colony Road	Bayview Avenue	Lebovic Drive	0.777	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C2567	Old Colony Road	Lebovic Drive	Yonge Street	1.290	0	3750	4,838	0.00	0	3440	4,438	0.00	0	0	0	0.00
C3756	Orlando Avenue	Leslie Street	Vogell Road	0.626	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C1495	Palmer Avenue	Bayview Avenue	Essex Avenue	0.511	2	1250	639	1.02	2	1250	639	1.02	2	1240	634	1.02
C1961	Parker Avenue	Coon'S Road	King Road	0.743	2	2150	1,597	1.49	2	2320	1,724	1.49	2	2490	1,850	1.49
C0047	Pearson Avenue	Garden Avenue	Westwood Lane	0.592	2	3300	1,955	1.18	2	3320	1,967	1.18	2	3350	1,985	1.18
C0145	Pearson Avenue	Westwood Lane	Edgar Avenue	0.453	2	3690	1,673	0.91	2	3540	1,605	0.91	2	3390	1,537	0.91
C3876	Performance Drive	Leslie Street	None	0.727	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C2232	Princeton Avenue	Leslie Street	Redstone Road	0.567	2	2450	1,388	1.13	2	2480	1,405	1.13	2	2500	1,416	1.13
C3187	Red Cardinal Trail	Humberland Drive	Barberry Crescent	0.551	2	2340	1,289	1.10	2	2420	1,334	1.10	2	2500	1,378	1.10
C2674	Red Cardinal Trail	Barberry Crescent	Bloomington Road	0.839	2	2240	1,880	1.68	2	2270	1,905	1.68	2	2310	1,939	1.68
C0296	Red Maple Road	16th Avenue	Bantry Avenue	1.223	2	5030	6,154	2.45	2	5700	6,973	2.45	2	6380	7,805	2.45
C2643	Red Maple Road	Bantry Avenue	Highway 7	0.880	4	13980	12,309	3.52	4	13500	11,886	3.52	4	13020	11,464	3.52
C3445	Redstone Road	Elgin Mills Road East	Toporowski Avenue	0.567	2	3190	1,809	1.13	2	3220	1,826	1.13	2	3260	1,849	1.13
C2413	Redstone Road	Toporowski Avenue	Princeton Avenue	0.390	2	3220	1,257	0.78	2	2030	793	0.78	2	3110	1,214	0.78
C1774	Redstone Road	Princeton Avenue	Shirley Drive	0.673	2	4610	3,103	1.35	2	4710	3,170	1.35	2	4800	3,231	1.35
C1775	Redstone Road	Shirley Drive	Frank Endean Road	0.481	2	5300	2,552	0.96	2	5600	2,696	0.96	2	5260	2,533	0.96
C1751	Redstone Road	Frank Endean Road	Bayview Avenue	0.375	2	6490	2,433	0.75	2	3710	1,391	0.75	2	4580	1,717	0.75
C0479	Regent Street	Bathurst Street	Ellsworth Avenue	0.818	2	3080	2,519	1.64	2	2980	2,437	1.64	2	2920	2,388	1.64
C0523	Regent Street	Ellsworth Avenue	Oxford Street	0.903	2	2720	2,457	1.81	2	2700	2,439	1.81	2	2680	2,421	1.81
C0800	Regent Street	Oxford Street	Elgin Mills Road West	0.284	2	4490	1,277	0.57	2	4830	1,374	0.57	2	5040	1,433	0.57
C3195	Rollinghill Road	Tower Hill Road	Skywood Drive	0.311	0	0	0	0.00	2	1010	314	0.62	2	1020	317	0.62
C3085	Rollinghill Road	Skywood Drive	Gamble Road	0.980	0	0	0	0.00	2	1680	1,647	1.96	2	1700	1,666	1.96
C3695	Rothbury Road	Gamble Road	Mayan Avenue	0.484	2	1250	537	0.86	2	1600	687	0.86	2	1950	945	0.97
C2931	Rothbury Road	Mayan Avenue	Brookside Road	0.694	2	230	47	0.41	2	410	83	0.41	2	590	338	1.15
C0142	Scott Drive	Pearson Avenue	Yonge Street	0.571	2	1620	924	1.14	2	1640	936	1.14	2	1670	953	1.14
C3612	Selwyn Road	Gamble Road	Hearthside Avenue	0.763	2	2290	1,746	1.53	2	2330	1,777	1.53	2	2360	1,800	1.53
C3851	Selwyn Road	Hearthside Avenue	Tower Hill Road	0.451	2	1240	560	0.90	2	1260	569	0.90	2	1280	578	0.90
C3851	Selwyn Road	Tower Hill Road	Jefferson Sideroad	0.458	2	1240	34	0.06	2	1260	577	0.92	2	1280	586	0.92
C0779	Shaftsbury Avenue	Bathurst Street	Larratt Lane	0.473	2	4880	2,310	0.95	2	4960	2,347	0.95	2	5040	2,385	0.95
C2213	Shaftsbury Avenue	Larratt Lane	Brookside Road	0.606	2	4130	2,504	1.21	2	4160	2,522	1.21	2	4200	2,546	1.21
C0812	Shaftsbury Avenue	Brookside Road	Canyon Hill Avenue	0.496	2	1640	813	0.99	2	2000	992	0.99	2	2360	1,170	0.99
C0801	Shaftsbury Avenue	Canyon Hill Avenue	Elgin Mills Road West	0.498	2	6060	3,016	1.00	2	5940	2,956	1.00	2	5830	2,901	1.00
C2906	Shirley Drive	Elgin Mills Road East	Redstone Road	0.949	2	3370	3,199	1.90	2	3360	3,189	1.90	2	3340	3,170	1.90
C1795	Shirley Drive	Redstone Road	Farmstead Road	0.863	2	4550	3,926	1.73	2	4460	3,848	1.73	2	4380	3,779	1.73

SLRN ID	2011 Lanes	2011 Final ADT	2011 Travelled	2011 Lane KMs	2012 Lanes	2012 Final ADT	2012 Travelled	2012 Lane KMs	2013 Lanes	2013 Final ADT	2013 Travelled	2013 Lane KMs	2014 Lanes	2014 Final ADT	2014 Travelled	2014 Lane KMs	2015 Lanes	2015 Final ADT	2015 Travelled	2015 Lane KMs	2016 Lanes	2016 Final ADT	2016 Travelled	2016 Lane KMs
C2087	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	2	2180	2,202	2.02
C3918	2	730	410	1.12	2	740	416	1.12	2	840	472	1.12	2	930	523	1.12	2	1030	579	1.12	2	1130	635	1.12
C1258	2	970	398	0.82	2	1000	410	0.82	2	1020	418	0.82	2	1040	426	0.82	2	1060	435	0.82	2	1080	443	0.82
C0267	2	7560	4,021	1.06	2	7900	4,202	1.06	2	7780	4,138	1.06	2	7660	4,074	1.06	2	7540	4,010	1.06	2	7420	3,946	1.06
C0261	2	4450	4,553	2.05	2	4570	4,676	2.05	2	4680	4,789	2.05	2	5010	5,126	2.05	2	5340	5,464	2.05	2	5670	5,802	2.05
C2318	2	5710	3,371	1.18	2	5750	3,395	1.18	2	5790	3,418	1.18	2	5830	3,442	1.18	2	5880	3,471	1.18	2	5920	3,495	1.18
C2176	2	4870	1,671	0.69	2	4900	1,681	0.69	2	4950	1,698	0.69	2	5010	1,719	0.69	2	5070	1,740	0.69	2	5130	1,760	0.69
C3024	2	3820	1,472	0.77	2	3140	1,210	0.77	2	3150	1,214	0.77	2	3160	1,218	0.77	2	3170	1,222	0.77	2	3180	1,225	0.77
C2616	2	5920	3,349	1.13	2	6100	3,451	1.13	2	6280	3,553	1.13	2	6460	3,654	1.13	2	6640	3,756	1.13	2	6820	3,858	1.13
C0978	2	2400	426	0.36	2	2360	419	0.36	2	2330	414	0.36	2	2360	419	0.36	2	2390	424	0.36	2	2420	430	0.36
C0997	2	1340	1,222	1.82	2	1290	1,176	1.82	2	1230	1,121	1.82	2	1180	1,076	1.82	2	1120	1,021	1.82	2	1070	975	1.82
C0859	2	1390	565	0.81	2	1440	586	0.81	2	1480	602	0.81	2	1520	618	0.81	2	1570	639	0.81	2	1610	655	0.81
C0967	2	1980	182	0.18	2	1900	175	0.18	2	1820	167	0.18	2	1800	165	0.18	2	1770	163	0.18	2	1750	161	0.18
C0965	4	7150	2,164	1.21	4	6780	2,052	1.21	4	6410	1,940	1.21	4	6290	1,904	1.21	4	6180	1,871	1.21	4	6060	1,834	1.21
C3231	2	390	460	2.36	2	410	483	2.36	2	420	495	2.36	2	430	507	2.36	2	450	531	2.36	2	460	542	2.36
C2985	2	320	575	3.60	2	360	647	3.60	2	410	737	3.60	2	460	827	3.60	2	500	899	3.60	2	550	989	3.60
C1998	2	1060	891	1.68	2	1150	967	1.68	2	1240	1,043	1.68	2	1160	975	1.68	2	1090	917	1.68	2	1010	849	1.68
C1193	2	3580	2,408	1.35	2	3580	2,408	1.35	2	3590	2,415	1.35	2	3590	2,415	1.35	2	3590	2,415	1.35	2	3590	2,415	1.35
C1273	2	1510	831	1.10	2	1540	848	1.10	2	1570	864	1.10	2	1590	875	1.10	2	1620	892	1.10	2	1650	909	1.10
C1358	2	2970	4,368	2.94	2	2980	4,382	2.94	2	2990	4,397	2.94	2	3000	4,412	2.94	2	3010	4,427	2.94	2	3020	4,441	2.94
C1673	2	2910	499	0.34	2	3000	514	0.34	2	3080	528	0.34	2	3160	542	0.34	2	3240	555	0.34	2	3320	569	0.34
C1531	2	2430	1,330	1.09	2	2350	1,286	1.09	2	2280	1,248	1.09	2	2200	1,204	1.09	2	2120	1,160	1.09	2	2040	1,117	1.09
C1160	2	5220	3,356	1.29	2	6250	4,019	1.29	2	7280	4,681	1.29	2	8320	5,350	1.29	2	9350	6,012	1.29	2	10380	6,674	1.29
C1701	0	0	0	0.00	0	150	33	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C1701	0	0	0	0.00	0	150	108	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C0953	2	6380	1,908	0.60	2	7480	2,237	0.60	2	8570	2,563	0.60	2	9670	2,892	0.60	2	10760	3,218	0.60	2	11860	3,547	0.60
C0855	2	3390	3,046	1.80	2	3510	3,154	1.80	2	3620	3,252	1.80	2	3730	3,351	1.80	2	3850	3,459	1.80	2	3960	3,558	1.80
C2668	2	4930	2,633	1.07	2	5300	2,831	1.07	2	5190	2,772	1.07	2	5110	2,730	1.07	2	5040	2,692	1.07	2	4970	2,655	1.07
C2639	2	4890	2,293	0.94	2	4940	2,317	0.94	2	1230	577	0.94	2	1580	741	0.94	2	1930	905	0.94	2	2280	1,069	0.94
C0785	2	2770	2,111	1.52	2	2800	2,134	1.52	2	2830	2,156	1.52	2	2860	2,179	1.52	2	2890	2,202	1.52	2	2920	2,225	1.52
C3179	2	2770	1,284	0.93	2	2800	1,297	0.93	2	2830	1,311	0.93	2	2860	1,325	0.93	2	2890	1,339	0.93	2	2920	1,353	0.93
C0740	2	2040	986	0.97	2	2020	976	0.97	2	2000	967	0.97	2	2190	1,058	0.97	2	2390	1,155	0.97	2	2580	1,247	0.97
C3228	2	2850	1,703	1.20	2	3060	1,828	1.20	2	3090	1,846	1.20	2	3130	1,870	1.20	2	3170	1,894	1.20	2	3200	1,912	1.20
C0751	2	4220	1,102	0.52	2	4180	1,091	0.52	2	4140	1,081	0.52	2	4240	1,107	0.52	2	4350	1,136	0.52	2	4450	1,162	0.52
C1553	2	3560	1,890	1.06	2	3700	1,964	1.06	2	3580	1,900	1.06	2	3450	1,831	1.06	2	3330	1,768	1.06	2	3200	1,699	1.06
C1040	2	3520	2,088	1.19	2	3670	2,177	1.19	2	3820	2,266	1.19	2	3970	2,355	1.19	2	4120	2,443	1.19	2	4270	2,532	1.19
C2899	2	960	1,093	2.28	2	960	1,093	2.28	2	950	1,082	2.28	2	940	1,070	2.28	2	940	1,070	2.28	2	930	1,059	2.28
C1532	2	1860	917	0.99	2	1930	952	0.99	2	2000	986	0.99	2	1930	952	0.99	2	1850	912	0.99	2	1780	878	0.99
C1964	2	2280	937	0.82	2	2300	945	0.82	2	2330	957	0.82	2	2360	970	0.82	2	2390	982	0.82	2	2410	990	0.82
C3262	2	990	805	1.63	2	1000	813	1.63	2	1010	822	1.63	2	1020	830	1.63	2	1030	838	1.63	2	1030	838	1.63
C4041	2	1530	1,103	1.44	2	1510	1,089	1.44	2	1490	1,075	1.44	2	1470	1,060	1.44	2	1460	1,053	1.44	2	1440	1,039	1.44
C1595	2	4760	2,876	1.21	2	5010	3,027	1.21	2	5270	3,184	1.21	2	5520	3,335	1.21	2	5760	3,480	1.21	2	6010	3,631	1.21
C2929	2	5550	2,154	0.78	2	5640	2,188	0.78	2	5730	2,223	0.78	2	5820	2,258	0.78	2	5910	2,293	0.78	2	6000	2,328	0.78
C0737	2	6190	2,882	0.93	2	6520	3,036	0.93	2	6660	3,101	0.93	2	6790	3,162	0.93	2	6920	3,222	0.93	2	7060	3,288	0.93
C0679	2	6670	2,443	0.73	2	7220	2,645	0.73	2	7770	2,846	0.73	2	7940	2,909	0.73	2	8100	2,967	0.73	2	8270	3,030	0.73
C1868	2	1810	1,761	1.95	2	1850	1,800	1.95	2	1890	1,839	1.95	2	1930	1,878	1.95	2	1970	1,917	1.95	2	2000	1,946	1.95
C1840	2	2280	1,728	1.52	2	2470	1,873	1.52	2	2650	2,009	1.52	2	2840	2,153	1.52	2	3030	2,297	1.52	2	3210	2,434	1.52
C1363	2	1970	1,151	1.17	2	1970	1,151	1.17	2	1910	1,116	1.17	2	1860	1,087	1.17	2	1800	1,052	1.17	2	1740	1,017	1.17
C1378	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	4120	3,689	0.00
C1320	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C1087	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	11780	6,308	0.00
C1310	2	2950	1,517	1.03	2	3030	1,558	1.03	2	3120	1,604	1.03	2	3200	1,646	1.03	2	3280	1,687	1.03	2	3370	1,733	1.03
C1308	2	2020	1,055	1.04	2	2030	1,060	1.04	2	2050	1,071	1.04	2	2060	1,076	1.04	2	2080	1,087	1.04	2	2090	1,092	1.04
C0121	2	3840	1,794	0.93	2	3870	1,808	0.93	2	3910	1,827	0.93	2	3850	1,799	0.93	2	3800	1,776	0.93	2	3740	1,748	0.93
C0857	2	3350	2,470	1.47	2	3360	2,478	1.47	2	3380	2,492	1.47	2	3390	2,500	1.47	2	3410	2,515	1.47	2	3430	2,529	1.47
C1125	2	1600	966	1.21	2	1660	1,003	1.21	2	1680	1,015	1.21	2	1700	1,027	1.21	2	1720	1,039	1.21	2	1740	1,051	1.21
C0864	2	2930	3,166	2.16	2	2910	3,145	2.16	2	2880	3,112	2.16	2	3180	3,437	2.16	2	3470	3,750	2.16	2	3770	4,074	2.16
C1447	2	2640	1,096	0.83	2	2670	1,108	0.83	2	2700	1,121	0.83	2	2990	1,241	0.83	2	3290	1,366	0.83	2	3580	1,486	0.83
C1409	2	2140	896	0.84	2	2180	912	0.84	2	2220	929	0.84	2	2250	942	0.84	2	2290	958	0.84	2	2330	975	0.84
C1650	2	2670	3,241	2.43	2	2790	3,386	2.43	2	2920	3,544	2.43	2	3040	3,690	2.43	2	3160	3,835	2.43	2	3290	3,993	2.43
C2248	2	710	466	1.31	2	720	472	1.31	2	730	479	1.31	2	740	486	1.31	2	750	492	1.31	2	760	499	1.31
C1657	2	3320	2,497	1.50	2	3420	2,573	1.50	2	3520	2,648	1.50	2	3610	2,716	1.50	2	3710	2,791	1.50	2	3810	2,866	1.50
C3371	2	5920	2,946	1.00	2	5890	2,931	1.00	2	5870	2,921	1.00	2	5850	2,911	1.00	2	5820	2,896	1.00	2	5800	2,886	1.00
C0072	2	3270	1,396	0.85	2	3220	1,375	0.85	2	3170	1,354	0.85	2	3100	1,324	0.85	2	3040	1,298	0.85	2	2970	1,268	0.85
C0044	2	4750	2,655	1.12	2	4680	2,616	1.12	2	4610	2,577	1.12	2	4590	2,566	1.12	2	4570	2,555	1.12	2	4550	2,543	1.12
C1694	2	2230	564	0.51	2	2240	566	0.51	2	2250	569	0.51	2	2260	571	0.51	2	2270	574	0.51	2	2280	576	0.51
C2602	2	4000	1,343	0.67	2	4150	1,393	0.67	2	4130	1,386	0.67	2	4120	1,383	0.67	2	4100	1,376	0.67	2	4090	1,373	0.67
C2630	2	920	60	0.13	2	910	59	0.13	2	970	63	0.13	2	1040	68	0.13	2	1100	72	0.13	2	1160	75	0.13
C0560	3	4860	3,971	2.45	3	5040	4,118	2.45	3	5220	4,265	2.45	3	5400	4,413	2.45	3	5580	4,560	2.45	3	5760	4,707	2.45
C0539	3	5960	2,078	1.05	3	6110	2,131	1.05	3	6260	2,183	1.05	3	6420	2,239	1.05	3	6570	2,291	1.05	3	6720	2,343	1.05
C3159	2	1490	486	0.65	2	1510	493	0.65	2	1530	499	0.65	2	1550	506	0.65	2	1570	512	0.65	2	1590	519	0.65
C2645	4	15030	8,709	2.32	4	15430	8,940	2.32	4	15840	9,178	2.32	4	16240	9,410	2.32	4	16650	9,647	2.32	4	17050	9,879	2.32
C3360	4	11450	7,902	2.76	4	9910	6,839	2.76	4	10410	7,184	2.76	4	10910	7,529	2.76	4	11420	7,881	2.76	4	11920	8,226	2.76
C2296	4	9720	6,042	2.49	4	9840	6,117	2.49	4	9970	6,198	2.49	4	10100	6,279	2.49	4	10220	6,353	2.49	4	10350	6,434	2.49
C2602	2	4000	1,047	0.52	2	4150	1,086	0.52	2	4130	1,081	0.52	2	4120	1,078	0.52	2	4100	1,073	0.52	2	4090	1,070	0.52
C2136	2	2750	1,652	1.20	2	2820	1,694	1.20	2	2900	1,742	1.20	2	2970	1,784	1.20	2	3040	1,826	1.20	2	3110	1,868	1.20
C2139	2	2880	1,050	0.73	2	2930	1,069	0.73	2	2960	1,079	0.73	2	2990	1,090	0.73	2	3010	1,098	0.73	2	3040	1,109	0.73
C0058	2	3140	1,773	1.13	2	3030	1,711	1.13	2	2920	1,649	1.13	2	3940	2,225	1.13	2	4960	2,801	1.13	2	5970	3,371	1.13
C3110	2	2420	2,640	2.18	2	2390	2,607	2.18	2	2350	2,564	2.18	2	2320	2,531	2.18	2	2280	2,487	2.18	2	2250	2,455	2.18
C3114	2	770	549	1.43	2	910	649	1.43	2	1050	749	1.43	2	1190	849	1.43	2	1330	949	1.43	2	1470	1,048	1.43
C3497	2	5860	5,585	1.91	2	6090	5,804	1.91	2	6320	6,024	1.91	2	6550	6,243	1.91	2	6790	6,471	1.91	2	7020	6,691	1.91
C3725	2	2540	3,083	2.43	2	2820	3,423	2.43	2	3100	3,763	2.43	2	3380	4,103	2.43	2	3660	4,443	2.43	2	3940	4,783	2.43
C3732	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C3732	4	6510	2,845	1.75	4	6600	2,884	1.75	4	6690	2,924	1.75	4	6770	2,958	1.75	4	6860	2,998	1.75	4	6950	3,037	1.75
C0336	2	4790	2,448	1.02	2	4700	2,402	1.02	2	4620	2,361	1.02	2	5510	2,815	1.02	2	6400	3,270	1.02	2	7290	3,725	1.02
C0347	2	4060	2,425	1.19	2	3880	2,318	1.19	2	3700	2,210	1.19	2	4350	2,598	1.19	2	5010	2,993	1.19	2	5660	3,381	1.19
C3680	2	2540	1,126	0.89	2	2570	1,139	0.89	2	2610	1,157	0.89	2	2640	1,170	0.89	2	2670	1,184	0.89	2	2710	1,201	0.89
C3397	2	1760	999	1.14	2	1830	1,039	1.14	2	1900	1,079	1.14	2	1970	1,119	1.14	2	2040	1,158	1.14	2	2110	1,198	1.14
C3648	2	1670	776	0.93	2	1760	818	0.93	2	1840	855	0.93	2	1920	893	0.93	2	2010	934	0.93	2	2090	972	0.93
C2217	2	770	266	0.69	2	920	317	0.69	2	930	321	0.69	2	940	324	0.69	2	950	328	0.69	2	960	331	0.69
C0780	2	1460	1,075	1.47	2	1440	1,061	1.47	2	1430	1,053	1.47	2	1410	1,039	1.47	2	1390	1,024	1.47	2	1380	1,017	1.47
C0789	2	1830	858	0.94	2	1870	877	0.94	2	1910	895	0.94	2	1950	914	0.94	2	1990	933	0.94	2	2030	952	0.94
C2752	2	1220	596	0.98	2	1240	606	0.98	2	1250	610	0.98	2	1270	620	0.98	2	1280	625	0.98	2	1300	635	0.98
C0675	2	3490	2,673	1.53	2	3500	2,681	1.53	2	3500	2,681	1.53	2	3460	2,650	1.53	2	3420	2,620	1.53	2	3370	2,581	1.53
C0498	2	4550	3,430	1.51	2	4480	3,377	1.51	2	4410	3,324	1.51	2	4800	3,618	1.51	2	5180	3,905	1.51	2	5570	4,199	1.51
C0419	2	4080	1,492	0.73	2	4150	1,517	0.73	2	4210	1,539	0.73	2	4470	1,634	0.73	2	4730	1,729	0.73	2	4980	1,821	0.73
C3939	2	850	497	1.17	2	860	503	1.17	2	870	509	1.17	2	880	515	1.17	2	890	521	1.17	2	900	527	1.17
C3933	2	770	390	1.01	2	780	395	1.01	2	790	400	1.01	2	800	406	1.01	2	810	411	1.01	2	820	416	1.01
C1370	4	5580	4,794	3.44	4	5730	4,922	3.44	4	5880	5,051	3.44	4	6030	5,180	3.44	4	6180	5,309	3.44	4	6330	5,438	3.44
C0886	3	7040	7,908	3.37	3	7390	8,301	3.37	3	7740	8,694	3.37	3	8090	9,088	3.37	3	8440	9,481	3.37	3	8790	9,874	3.37
C0761	3	9190	5,416	1.77	3	9180	5,411	1.77	3	9290	5,475	1.77	3	9400	5,540	1.77	3	9510	5,605	1.77	3	9620	5,670	1.77
C0584	4	9700	4,162	1.72	4	9580	4,110	1.72	4	9470	4,063	1.72	4	9360	4,016	1.72	4	9240	3,964	1.72	4	9130	3,917	1.72
C4081	0	0	0	0.00	0	0	0	0.00	4	3160	727	0.92	4	3200	736	0.92	4	3240	745	0.92	4	3290	757	0.92
C4081	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	4	3290	540	0.66
C2051	2	3190	3,010	1.89	2	3220	3,039	1.89	2	3250	3,067	1.89	2	3280	3,095	1.89	2	3300	3,114	1.89	2	3330	3,142	1.89
C1984	2	4060	4,617	2.27	2	4130	4,696	2.27	2	4190	4,765	2.27	2	4260	4,844	2.27	2	4330	4,924	2.27	2	4400	5,004	2.27
C2227	2	1230	292	0.47	2	1320	313	0.47	2	1400	332	0.47	2	1490	354	0.47	2	1580	375	0.47	2	1670	396	0.47
C3544	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	2	3490	2,712	1.55	2	3540	2,751	1.55
C2567	0	3650	4,709	0.00	0	3830	4,941	0.00	0	0	0	0.00	0	0	0	0.00	2	3080	3,974	2.58	2	3120	4,025	2.58
C3756	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	2360	1,477	0.00
C1495	2	1240	634	1.02	2	1240	634	1.02	2	1190	608	1.02	2	1150	588	1.02	2	1100	562	1.02	2	1050	537	1.02
C1961	2	2660	1,976	1.49	2	2810	2,088	1.49	2	2920	2,169	1.49	2	3040	2,259	1.49	2	3150	2,340	1.49	2	3260	2,422	1.49
C0047	2	3330	1,973	1.18	2	3300	1,955	1.18	2	3280	1,943	1.18	2	3400	2,014	1.18	2	3520	2,085	1.18	2	3640	2,156	1.18
C0145	2	3370	1,528	0.91	2	3350	1,519	0.91	2	3330	1,510	0.91	2	3560	1,614	0.91	2	3790	1,719	0.91	2	4020	1,823	0.91
C3876	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	4	440	320	2.91
C2232	2	2530	1,433	1.13	2	2630	1,490	1.13	2	2730	1,547	1.13	2	2830	1,603	1.13	2	2930	1,660	1.13	2	3020	1,711	1.13
C3187	2	2580	1,422	1.10	2	2660	1,466	1.10	2	2750	1,515	1.10	2	2890	1,593	1.10	2	3020	1,664	1.10	2	3160	1,741	1.10
C2674	2	2350	1,972	1.68	2	2380	1,998	1.68	2	2420	2,031	1.68	2	2460	2,065	1.68	2	2490	2,090	1.68	2	2530	2,124	1.68
C0296	2	5970	7,304	2.45	2	6160	7,536	2.45	2	6360	7,781	2.45	2	6550	8,013	2.45	2	6740	8,246	2.45	2	6930	8,478	2.45
C2643	4	12550	11,050	3.52	4	12110	10,662	3.52	4	11680	10,284	3.52	4	11250	9,905	3.52	4	10820	9,527	3.52	4	10380	9,139	3.52
C3445	2	3300	1,872	1.13	2	3340	1,894	1.13	2	3380	1,917	1.13	2	3420	1,940	1.13	2	3460	1,963	1.13	2	3500	1,985	1.13
C2413	2	3320	1,296	0.78	2	3530	1,378	0.78	2	3730	1,457	0.78	2	3940	1,539	0.78	2	4150	1,621	0.78	2	4360	1,703	0.78
C1774	2	4890	3,291	1.35	2	4990	3,359	1.35	2	5080	3,419	1.35	2	5180	3,487	1.35	2	5280	3,554	1.35	2	5370	3,615	1.35
C1775	2	5090	2,451	0.96	2	4910	2,364	0.96	2	4740	2,282	0.96	2	4560	2,196	0.96	2	4390	2,114	0.96	2	4220	2,032	0.96
C1751	2	5460	2,047	0.75	2	5570	2,088	0.75	2	5670	2,126	0.75	2	5780	2,167	0.75	2	5890	2,208	0.75	2	6000	2,249	0.75
C0479	2	2850	2,331	1.64	2	2790	2,282	1.64	2	2790	2,282	1.64	2	2790	2,282	1.64	2	2790	2,282	1.64	2	2800	2,290	1.64
C0523	2	2660	2,403	1.81	2	2640	2,385	1.81	2	2630	2,375	1.81	2	2610	2,357	1.81	2	2590	2,339	1.81	2	2570	2,321	1.81
C0800	2	5260	1,496	0.57	2	5020	1,428	0.57	2	4960	1,411	0.57	2	4890	1,391	0.57	2	4830	1,374	0.57	2	4770	1,357	0.57
C3195	2	1030	321	0.62	2	1050	327	0.62	2	1060	330	0.62	2	1070	333	0.62	2	1090	339	0.62	2	1100	342	0.62
C3085	2	1790	1,754	1.96	2	1870	1,833	1.96	2	1950	1,911	1.96	2	2030	1,990	1.96	2	2110	2,068	1.96	2	2190	2,146	1.96
C3695	2	2300	1,114	0.97	2	2040	988	0.97	2	2040	988	0.97	2	2040	988	0.97	2	2040	988	0.97	2	2030	983	0.97
C2931	2	780	447	1.15	2	960	550	1.15	2	1170	812	1.39	2	1360	944	1.39	2	1550	1,076	1.39	2	1730	1,201	1.39
C0142	2	1690	964	1.14	2	1780	1,016	1.14	2	1860	1,061	1.14	2	1950	1,113	1.14	2	2040	1,164	1.14	2	2130	1,215	1.14
C3612	2	2390	1,822	1.53	2	2420	1,845	1.53	2	2450	1,868	1.53	2	2480	1,891	1.53	2	2510	1,914	1.53	2	2540	1,937	1.53
C3851	2	1300	587	0.90	2	1310	591	0.90	2	1330	600	0.90	2	1350	609	0.90	2	1370	618	0.90	2	1380	623	0.90
C3851	2	1300	595	0.92	2	1310	600	0.92	2	1330	609	0.92	2	1350	618	0.92	2	1370	627	0.92	2	1380	632	0.92
C0779	2	5120	2,423	0.95	2	5200	2,461	0.95	2	5280	2,499	0.95	2	5360	2,537	0.95	2	5440	2,575	0.95	2	5520	2,612	0.95
C2213	2	4160	2,522	1.21	2	4120	2,498	1.21	2	4090	2,479	1.21	2	4100	2,485	1.21	2	4110	2,492	1.21	2	4120	2,498	1.21
C0812	2	2720	1,349	0.99	2	3080	1,527	0.99	2	3440	1,706	0.99	2	3800	1,884	0.99	2	4160	2,063	0.99	2	4520	2,241	0.99
C0801	2	6050	3,011	1.00	2	6280	3,125	1.00	2	6340	3,155	1.00	2	6410	3,190	1.00	2	6470	3,220	1.00	2	6530	3,250	1.00
C2906	2	3330	3,161	1.90	2	3320	3,151	1.90	2	3310	3,142	1.90	2	3290	3,123	1.90	2	3280	3,113	1.90	2	3270	3,104	1.90
C1795	2	4290	3,701	1.73	2	4340	3,745	1.73	2	4390	3,788	1.73	2	4440	3,831	1.73	2	4490	3,874	1.73	2	4550	3,926	1.73

SLRN ID	2017 Lanes	2017 Final ADT	2017 Travelled	2017 Lane KMs	2018 Lanes	2018 Final ADT	2018 Travelled	2018 Lane KMs	2019 Lanes	2019 Final ADT	2019 Travelled	2019 Lane KMs	2020 Lanes	2020 Final ADT	2020 Travelled	2020 Lane KMs	2021 Lanes	2021 Final ADT	2021 Travelled	2021 Lane KMs	2022 Lanes	2022 Final ADT	2022 Travelled	2022 Lane KMs
C2087	2	2200	2,222	2.02	2	2230	2,252	2.02	2	2260	2,282	2.02	2	2280	2,303	2.02	2	2310	2,333	2.02	2	2340	2,363	2.02
C3918	2	1140	641	1.12	2	1160	652	1.12	2	1170	658	1.12	2	1180	663	1.12	2	1200	674	1.12	2	1210	680	1.12
C1258	2	1110	455	0.82	2	1140	467	0.82	2	1170	480	0.82	2	1180	484	0.82	2	1190	488	0.82	2	1200	492	0.82
C0267	2	7300	3,883	1.06	2	7190	3,824	1.06	2	7070	3,760	1.06	2	6950	3,696	1.06	2	7030	3,739	1.06	2	7110	3,781	1.06
C0261	2	5850	5,986	2.05	2	6040	6,180	2.05	2	6230	6,375	2.05	2	4370	4,471	2.05	2	4190	4,287	2.05	2	4240	4,338	2.05
C2318	2	5960	3,519	1.18	2	5750	3,395	1.18	2	5530	3,265	1.18	2	5320	3,141	1.18	2	5380	3,176	1.18	2	5440	3,212	1.18
C2176	2	5190	1,781	0.69	2	5250	1,801	0.69	2	5310	1,822	0.69	2	5370	1,842	0.69	2	5420	1,860	0.69	2	5490	1,884	0.69
C3024	2	3190	1,229	0.77	2	3200	1,233	0.77	2	3210	1,237	0.77	2	3230	1,245	0.77	2	3240	1,249	0.77	2	3280	1,264	0.77
C2616	2	6770	3,830	1.13	2	6720	3,801	1.13	2	6660	3,767	1.13	2	6740	3,813	1.13	2	6820	3,858	1.13	2	6900	3,903	1.13
C0978	2	2440	433	0.36	2	2470	439	0.36	2	2500	444	0.36	2	2530	449	0.36	2	2560	455	0.36	2	2590	460	0.36
C0997	2	1020	930	1.82	2	960	875	1.82	2	910	830	1.82	2	860	784	1.82	2	870	793	1.82	2	880	802	1.82
C0859	2	1650	671	0.81	2	1670	679	0.81	2	1690	687	0.81	2	1710	696	0.81	2	1730	704	0.81	2	1750	712	0.81
C0967	2	1770	163	0.18	2	1790	165	0.18	2	1810	166	0.18	2	1840	169	0.18	2	1860	171	0.18	2	1880	173	0.18
C0965	4	5860	1,774	1.21	4	5670	1,716	1.21	4	5480	1,659	1.21	4	5280	1,598	1.21	4	5090	1,541	1.21	4	5150	1,559	1.21
C3231	2	500	590	2.36	2	540	637	2.36	2	580	684	2.36	2	500	590	2.36	2	500	590	2.36	2	510	601	2.36
C2985	2	420	755	3.60	2	540	971	3.60	2	650	1,169	3.60	2	760	1,367	3.60	2	770	1,385	3.60	2	780	1,403	3.60
C1998	2	1050	883	1.68	2	1090	917	1.68	2	1130	950	1.68	2	820	690	1.68	2	980	824	1.68	2	990	833	1.68
C1193	2	3830	2,577	1.35	2	4060	2,731	1.35	2	4300	2,893	1.35	2	2210	1,487	1.35	2	2100	1,413	1.35	2	2130	1,433	1.35
C1273	2	1630	898	1.10	2	1610	886	1.10	2	1590	875	1.10	2	1410	776	1.10	2	1230	677	1.10	2	1240	683	1.10
C1358	2	3030	4,456	2.94	2	2940	4,324	2.94	2	2850	4,191	2.94	2	2760	4,059	2.94	2	2670	3,927	2.94	2	2700	3,971	2.94
C1673	2	3400	583	0.34	2	3440	590	0.34	2	3480	596	0.34	2	3520	603	0.34	2	3560	610	0.34	2	3600	617	0.34
C1531	2	1970	1,078	1.09	2	1890	1,035	1.09	2	1810	991	1.09	2	1740	952	1.09	2	1760	963	1.09	2	1780	974	1.09
C1160	2	7430	4,777	1.29	2	4490	2,887	1.29	2	5930	3,813	1.29	2	2800	1,800	1.29	2	3130	2,013	1.29	2	3170	2,038	1.29
C1701	2	0	0	0.43	2	0	0	0.43	2	0	0	0.43	2	0	0	0.43	2	0	0	0.43	2	0	0	0.43
C1701	2	0	0	1.44	2	0	0	1.44	2	0	0	1.44	2	0	0	1.44	2	0	0	1.44	2	0	0	1.44
C0953	2	9730	2,910	0.60	2	7610	2,276	0.60	2	5490	1,642	0.60	2	3370	1,008	0.60	2	3410	1,020	0.60	2	3450	1,032	0.60
C0855	2	4080	3,666	1.80	2	4120	3,702	1.80	2	4170	3,747	1.80	2	4220	3,791	1.80	2	4270	3,836	1.80	2	4320	3,881	1.80
C2668	2	4890	2,612	1.07	2	4820	2,575	1.07	2	4750	2,537	1.07	2	4670	2,495	1.07	2	4600	2,457	1.07	2	4660	2,489	1.07
C2639	2	2630	1,233	0.94	2	2990	1,402	0.94	2	3340	1,566	0.94	2	3690	1,731	0.94	2	3740	1,754	0.94	2	3780	1,773	0.94
C0785	2	2950	2,248	1.52	2	2860	2,179	1.52	2	2760	2,103	1.52	2	2670	2,035	1.52	2	2580	1,966	1.52	2	2610	1,989	1.52
C3179	2	2950	1,367	0.93	2	2740	1,270	0.93	2	2540	1,177	0.93	2	2330	1,080	0.93	2	2120	982	0.93	2	2150	996	0.93
C0740	2	2700	1,305	0.97	2	2820	1,363	0.97	2	2940	1,421	0.97	2	2670	1,290	0.97	2	2410	1,165	0.97	2	2440	1,179	0.97
C3228	2	3240	1,936	1.20	2	3280	1,960	1.20	2	3310	1,978	1.20	2	3350	2,002	1.20	2	3390	2,026	1.20	2	3430	2,049	1.20
C0751	2	4510	1,177	0.52	2	4560	1,190	0.52	2	4610	1,203	0.52	2	4670	1,219	0.52	2	4720	1,232	0.52	2	4780	1,248	0.52
C1553	2	3070	1,630	1.06	2	2950	1,566	1.06	2	2820	1,497	1.06	2	2700	1,433	1.06	2	2500	1,327	1.06	2	2530	1,343	1.06
C1040	2	3960	2,349	1.19	2	3660	2,171	1.19	2	3350	1,987	1.19	2	3040	1,803	1.19	2	2740	1,625	1.19	2	2770	1,643	1.19
C2899	2	920	1,048	2.28	2	920	1,048	2.28	2	910	1,036	2.28	2	910	1,036	2.28	2	920	1,048	2.28	2	930	1,059	2.28
C1532	2	1710	843	0.99	2	1640	809	0.99	2	1570	774	0.99	2	1490	735	0.99	2	1420	700	0.99	2	1440	710	0.99
C1964	2	2440	1,003	0.82	2	2470	1,015	0.82	2	2490	1,023	0.82	2	2520	1,036	0.82	2	2550	1,048	0.82	2	2580	1,060	0.82
C3262	2	1040	846	1.63	2	1050	854	1.63	2	1060	862	1.63	2	1070	870	1.63	2	1340	1,090	1.63	2	1360	1,106	1.63
C4041	2	1530	1,103	1.44	2	1620	1,168	1.44	2	1710	1,233	1.44	2	1710	1,233	1.44	2	1710	1,233	1.44	2	1730	1,248	1.44
C1595	2	5380	3,250	1.21	2	4750	2,870	1.21	2	4120	2,489	1.21	2	3500	2,114	1.21	2	4510	2,725	1.21	2	4560	2,755	1.21
C2929	2	6090	2,363	0.78	2	5750	2,231	0.78	2	5410	2,099	0.78	2	5070	1,967	0.78	2	4730	1,835	0.78	2	4790	1,859	0.78
C0737	2	7190	3,348	0.93	2	6680	3,111	0.93	2	6170	2,873	0.93	2	5650	2,631	0.93	2	5140	2,394	0.93	2	5200	2,421	0.93
C0679	2	8330	3,052	0.73	2	8390	3,074	0.73	2	8450	3,096	0.73	2	8550	3,132	0.73	2	8660	3,173	0.73	2	8760	3,209	0.73
C1868	2	2040	1,985	1.95	2	1940	1,888	1.95	2	1840	1,791	1.95	2	1740	1,693	1.95	2	1760	1,713	1.95	2	1780	1,732	1.95
C1840	2	3400	2,578	1.52	2	2940	2,229	1.52	2	2470	1,873	1.52	2	2010	1,524	1.52	2	1540	1,167	1.52	2	1560	1,183	1.52
C1363	2	1680	982	1.17	2	1620	946	1.17	2	1560	911	1.17	2	1500	876	1.17	2	1630	952	1.17	2	1650	964	1.17
C1378	4	4170	3,734	3.58	4	4220	3,779	3.58	4	4270	3,824	3.58	4	4320	3,868	3.58	4	4370	3,913	3.58	4	4420	3,958	3.58
C1320	4	5110	2,439	1.91	4	5170	2,468	1.91	4	5240	2,501	1.91	4	5300	2,530	1.91	4	5360	2,559	1.91	4	5420	2,587	1.91
C1087	4	11920	6,383	2.14	4	12070	6,463	2.14	4	12210	6,538	2.14	4	12350	6,613	2.14	4	12490	6,688	2.14	4	12640	6,769	2.14
C1310	2	3450	1,774	1.03	2	4030	2,072	1.03	2	4600	2,365	1.03	2	5180	2,664	1.03	2	5760	2,962	1.03	2	5830	2,998	1.03
C1308	2	2110	1,102	1.04	2	2010	1,050	1.04	2	1910	998	1.04	2	1820	951	1.04	2	1720	899	1.04	2	1740	909	1.04
C0121	2	3690	1,724	0.93	2	3630	1,696	0.93	2	3580	1,673	0.93	2	3530	1,649	0.93	2	3570	1,668	0.93	2	3610	1,687	0.93
C0857	2	3160	2,330	1.47	2	2900	2,139	1.47	2	2640	1,947	1.47	2	2380	1,755	1.47	2	2400	1,770	1.47	2	2430	1,792	1.47
C1125	2	1760	1,063	1.21	2	1780	1,075	1.21	2	1800	1,087	1.21	2	1820	1,099	1.21	2	1840	1,111	1.21	2	1860	1,123	1.21
C0864	2	4310	4,658	2.16	2	4850	5,241	2.16	2	5400	5,836	2.16	2	3600	3,890	2.16	2	3640	3,934	2.16	2	3680	3,977	2.16
C1447	2	3620	1,503	0.83	2	3650	1,515	0.83	2	3680	1,528	0.83	2	3720	1,544	0.83	2	3770	1,565	0.83	2	3820	1,586	0.83
C1409	2	2360	988	0.84	2	2190	916	0.84	2	2020	845	0.84	2	1850	774	0.84	2	1670	699	0.84	2	1690	707	0.84
C1650	2	3410	4,139	2.43	2	2850	3,459	2.43	2	2290	2,779	2.43	2	1720	2,088	2.43	2	1740	2,112	2.43	2	1760	2,136	2.43
C2248	2	770	505	1.31	2	780	512	1.31	2	790	518	1.31	2	800	525	1.31	2	810	532	1.31	2	820	538	1.31
C1657	2	3930	2,956	1.50	2	4050	3,047	1.50	2	4170	3,137	1.50	2	2210	1,662	1.50	2	2230	1,677	1.50	2	2260	1,700	1.50
C3371	2	5780	2,876	1.00	2	5050	2,513	1.00	2	4330	2,155	1.00	2	3600	1,791	1.00	2	3640	1,811	1.00	2	3680	1,831	1.00
C0072	2	3150	1,345	0.85	2	3320	1,418	0.85	2	3490	1,490	0.85	2	3050	1,302	0.85	2	2600	1,110	0.85	2	2630	1,123	0.85
C0044	2	4870	2,722	1.12	2	5190	2,901	1.12	2	5500	3,074	1.12	2	4480	2,504	1.12	2	4530	2,532	1.12	2	4580	2,560	1.12
C1694	2	2290	579	0.51	2	2020	511	0.51	2	1750	442	0.51	2	1470	372	0.51	2	2370	599	0.51	2	2400	607	0.51
C2602	2	4070	1,366	0.67	2	4060	1,363	0.67	2	4040	1,356	0.67	2	4030	1,353	0.67	2	4010	1,346	0.67	2	4060	1,363	0.67
C2630	2	1180	77	0.13	2	1190	77	0.13	2	1200	78	0.13	2	1220	79	0.13	2	1230	80	0.13	2	1240	81	0.13
C0560	3	5940	4,854	2.45	3	5310	4,339	2.45	3	4680	3,824	2.45	3	4050	3,309	2.45	3	4090	3,342	2.45	3	4140	3,383	2.45
C0539	3	7110	2,479	1.05	3	7490	2,612	1.05	3	7880	2,748	1.05	3	6800	2,371	1.05	3	5730	1,998	1.05	3	5800	2,023	1.05
C3159	2	1610	525	0.65	2	1630	532	0.65	2	1650	538	0.65	2	1670	545	0.65	2	1690	551	0.65	2	1710	558	0.65
C2645	4	17460	10,116	2.32	4	17670	10,238	2.32	4	17880	10,360	2.32	4	18090	10,482	2.32	4	18300	10,603	2.32	4	18520	10,731	2.32
C3360	4	12420	8,571	2.76	4	10970	7,570	2.76	4	9520	6,570	2.76	4	8070	5,569	2.76	4	7290	5,031	2.76	4	7380	5,093	2.76
C2296	4	10470	6,509	2.49	4	10600	6,589	2.49	4	10720	6,664	2.49	4	10850	6,745	2.49	4	10980	6,826	2.49	4	11110	6,906	2.49
C2602	2	4070	1,065	0.52	2	4060	1,063	0.52	2	4040	1,057	0.52	2	4030	1,055	0.52	2	4010	1,049	0.52	2	4060	1,063	0.52
C2136	2	3150	1,892	1.20	2	3190	1,916	1.20	2	3230	1,940	1.20	2	3260	1,959	1.20	2	3300	1,983	1.20	2	3340	2,007	1.20
C2139	2	2870	1,047	0.73	2	2700	985	0.73	2	2530	923	0.73	2	2360	861	0.73	2	2810	1,025	0.73	2	2840	1,036	0.73
C0058	2	2940	1,660	1.13	2	3050	1,722	1.13	2	3170	1,790	1.13	2	2910	1,643	1.13	2	2940	1,660	1.13	2	2980	1,683	1.13
C3110	2	2220	2,422	2.18	2	2180	2,378	2.18	2	2150	2,346	2.18	2	2120	2,313	2.18	2	2140	2,335	2.18	2	2170	2,367	2.18
C3114	2	1490	1,063	1.43	2	1510	1,077	1.43	2	1530	1,091	1.43	2	1550	1,105	1.43	2	1570	1,120	1.43	2	1590	1,134	1.43
C3497	2	7250	6,910	1.91	2	6650	6,338	1.91	2	6040	5,757	1.91	2	5440	5,185	1.91	2	6660	6,348	1.91	2	6740	6,424	1.91
C3725	2	4220	5,122	2.43	2	4500	5,462	2.43	2	4770	5,790	2.43	2	5050	6,130	2.43	2	5330	6,470	2.43	2	5390	6,543	2.43
C3732	4	7040	1,623	0.92	4	7130	1,643	0.92	4	7220	1,664	0.92	4	7310	1,685	0.92	4	7400	1,706	0.92	4	7490	1,726	0.92
C3732	4	7040	3,076	1.75	4	7130	3,116	1.75	4	7220	3,155	1.75	4	7310	3,194	1.75	4	7400	3,234	1.75	4	7490	3,273	1.75
C0336	2	7400	3,781	1.02	2	7520	3,843	1.02	2	7630	3,899	1.02	2	5750	2,938	1.02	2	3860	1,972	1.02	2	3910	1,998	1.02
C0347	2	5740	3,429	1.19	2	5820	3,476	1.19	2	5900	3,524	1.19	2	4820	2,879	1.19	2	3740	2,234	1.19	2	3780	2,258	1.19
C3680	2	2740	1,215	0.89	2	2780	1,232	0.89	2	2810	1,246	0.89	2	2850	1,263	0.89	2	2880	1,277	0.89	2	2910	1,290	0.89
C3397	2	2180	1,238	1.14	2	2250	1,278	1.14	2	2320	1,317	1.14	2	2390	1,357	1.14	2	2460	1,397	1.14	2	2490	1,414	1.14
C3648	2	2130	990	0.93	2	2170	1,009	0.93	2	2210	1,027	0.93	2	1470	683	0.93	2	1490	693	0.93	2	1510	702	0.93
C2217	2	970	335	0.69	2	990	342	0.69	2	1000	345	0.69	2	1010	349	0.69	2	1020	352	0.69	2	1030	355	0.69
C0780	2	1360	1,002	1.47	2	1130	832	1.47	2	900	663	1.47	2	680	501	1.47	2	690	508	1.47	2	700	516	1.47
C0789	2	2060	966	0.94	2	2100	984	0.94	2	2130	999	0.94	2	1910	895	0.94	2	1690	792	0.94	2	1710	802	0.94
C2752	2	1310	640	0.98	2	1330	650	0.98	2	1340	654	0.98	2	1360	664	0.98	2	1370	669	0.98	2	1390	679	0.98
C0675	2	3330	2,551	1.53	2	3280	2,512	1.53	2	3240	2,482	1.53	2	3200	2,451	1.53	2	3230	2,474	1.53	2	3270	2,505	1.53
C0498	2	5880	4,433	1.51	2	6200	4,674	1.51	2	6510	4,907	1.51	2	4570	3,445	1.51	2	4730	3,566	1.51	2	4790	3,611	1.51
C0419	2	5520	2,018	0.73	2	6050	2,212	0.73	2	6580	2,406	0.73	2	6660	2,435	0.73	2	6740	2,464	0.73	2	6820	2,493	0.73
C3939	2	920	538	1.17	2	930	544	1.17	2	940	550	1.17	2	950	556	1.17	2	960	562	1.17	2	970	567	1.17
C3933	2	830	421	1.01	2	840	426	1.01	2	850	431	1.01	2	870	441	1.01	2	880	446	1.01	2	890	451	1.01
C1370	4	5590	4,802	3.44	4	4850	4,166	3.44	4	4110	3,531	3.44	4	3370	2,895	3.44	4	3410	2,929	3.44	4	3450	2,964	3.44
C0886	3	9140	10,267	3.37	3	7970	8,953	3.37	3	6810	7,650	3.37	3	5640	6,335	3.37	3	7640	8,582	3.37	3	7730	8,683	3.37
C0761	3	9730	5,735	1.77	3	9840	5,800	1.77	3	9950	5,864	1.77	3	10060	5,929	1.77	3	10170	5,994	1.77	3	10290	6,065	1.77
C0584	4	9020	3,870	1.72	4	10410	4,466	1.72	4	11800	5,063	1.72	4	13190	5,659	1.72	4	14580	6,255	1.72	4	14750	6,328	1.72
C4081	4	3330	766	0.92	4	3370	775	0.92	4	3410	784	0.92	4	3450	794	0.92	4	3490	803	0.92	4	3530	812	0.92
C4081	4	3330	546	0.66	4	3370	553	0.66	4	3410	559	0.66	4	3450	566	0.66	4	3490	572	0.66	4	3530	579	0.66
C2051	2	3690	3,482	1.89	2	4060	3,831	1.89	2	4420	4,171	1.89	2	3700	3,492	1.89	2	2970	2,803	1.89	2	3010	2,840	1.89
C1984	2	4710	5,356	2.27	2	5020	5,709	2.27	2	5340	6,072	2.27	2	4590	5,220	2.27	2	3850	4,378	2.27	2	3900	4,435	2.27
C2227	2	1760	418	0.47	2	1780	422	0.47	2	1800	427	0.47	2	1820	432	0.47	2	1840	437	0.47	2	1860	441	0.47
C3544	2	3890	3,023	1.55	2	4250	3,303	1.55	2	4610	3,583	1.55	2	4060	3,155	1.55	2	3500	2,720	1.55	2	3540	2,751	1.55
C2567	2	3160	4,077	2.58	2	3200	4,129	2.58	2	3240	4,180	2.58	2	3280	4,232	2.58	2	3950	5,096	2.58	2	4000	5,161	2.58
C3756	3	3340	2,091	1.88	3	4320	2,704	1.88	3	5300	3,318	1.88	3	1830	1,146	1.88	3	1850	1,158	1.88	3	1870	1,171	1.88
C1495	2	1000	511	1.02	2	960	491	1.02	2	910	465	1.02	2	860	440	1.02	2	870	445	1.02	2	880	450	1.02
C1961	2	3380	2,511	1.49	2	3380	2,511	1.49	2	3390	2,519	1.49	2	3390	2,519	1.49	2	3400	2,526	1.49	2	3440	2,556	1.49
C0047	2	3950	2,340	1.18	2	4260	2,524	1.18	2	4570	2,707	1.18	2	3600	2,133	1.18	2	3640	2,156	1.18	2	3680	2,180	1.18
C0145	2	4220	1,914	0.91	2	4420	2,004	0.91	2	4610	2,090	0.91	2	4670	2,118	0.91	2	4720	2,140	0.91	2	4780	2,167	0.91
C3876	4	440	320	2.91	4	450	327	2.91	4	460	334	2.91	4	460	334	2.91	4	470	342	2.91	4	480	349	2.91
C2232	2	3120	1,768	1.13	2	3160	1,790	1.13	2	3200	1,813	1.13	2	3240	1,836	1.13	2	3270	1,853	1.13	2	3310	1,875	1.13
C3187	2	2510	1,383	1.10	2	2540	1,400	1.10	2	2570	1,416	1.10	2	2600	1,433	1.10	2	2630	1,449	1.10	2	2660	1,466	1.10
C2674	2	2570	2,157	1.68	2	2600	2,182	1.68	2	2960	2,484	1.68	2	3330	2,795	1.68	2	3690	3,097	1.68	2	3730	3,131	1.68
C0296	2	7500	9,175	2.45	2	8070	9,873	2.45	2	8640	10,570	2.45	2	8740	10,692	2.45	2	8840	10,815	2.45	2	8950	10,949	2.45
C2643	4	9950	8,761	3.52	4	9740	8,576	3.52	4	9540	8,400	3.52	4	9330	8,215	3.52	4	9120	8,030	3.52	4	9230	8,127	3.52
C3445	2	3540	2,008	1.13	2	3390	1,923	1.13	2	3240	1,838	1.13	2	3090	1,753	1.13	2	2940	1,668	1.13	2	2980	1,690	1.13
C2413	2	4340	1,695	0.78	2	4320	1,687	0.78	2	4300	1,679	0.78	2	4350	1,699	0.78	2	4400	1,718	0.78	2	4450	1,738	0.78
C1774	2	5470	3,682	1.35	2	4980	3,352	1.35	2	4490	3,022	1.35	2	4000	2,692	1.35	2	4040	2,719	1.35	2	4090	2,753	1.35
C1775	2	4040	1,945	0.96	2	3870	1,863	0.96	2	3690	1,777	0.96	2	3520	1,695	0.96	2	3340	1,608	0.96	2	3380	1,627	0.96
C1751	2	6100	2,287	0.75	2	6180	2,317	0.75	2	6250	2,343	0.75	2	6320	2,369	0.75	2	6400	2,399	0.75	2	6480	2,429	0.75
C0479	2	2800	2,290	1.64	2	2800	2,290	1.64	2	2800	2,290	1.64	2	2800	2,290	1.64	2	2830	2,314	1.64	2	2860	2,339	1.64
C0523	2	2560	2,312	1.81	2	2540	2,294	1.81	2	2520	2,276	1.81	2	2500	2,258	1.81	2	2480	2,240	1.81	2	2510	2,267	1.81
C0800	2	4710	1,340	0.57	2	4650	1,323	0.57	2	4590	1,305	0.57	2	4530	1,288	0.57	2	4470	1,271	0.57	2	4520	1,286	0.57
C3195	2	1120	349	0.62	2	1130	352	0.62	2	1430	445	0.62	2	1740	542	0.62	2	2050	638	0.62	2	2070	644	0.62
C3085	2	2270	2,225	1.96	2	2190	2,146	1.96	2	2120	2,078	1.96	2	2040	1,999	1.96	2	1960	1,921	1.96	2	1980	1,941	1.96
C3695	2	2520	1,221	0.97	2	3000	1,453	0.97	2	2720	1,318	0.97	2	2430	1,177	0.97	2	2150	1,042	0.97	2	2180	1,056	0.97
C2931	2	1920	1,333	1.39	2	1670	1,160	1.39	2	1420	986	1.39	2	1160	806	1.39	2	1180	819	1.39	2	1190	826	1.39
C0142	2	2220	1,267	1.14	2	2010	1,147	1.14	2	1810	1,033	1.14	2	1610	919	1.14	2	1630	930	1.14	2	1650	941	1.14
C3612	2	2570	1,960	1.53	2	2330	1,777	1.53	2	2090	1,594	1.53	2	1850	1,411	1.53	2	1870	1,426	1.53	2	1890	1,441	1.53
C3851	2	1400	632	0.90	2	1420	641	0.90	2	1440	650	0.90	2	1460	659	0.90	2	1470	664	0.90	2	1490	673	0.90
C3851	2	1400	641	0.92	2	1420	650	0.92	2	1440	659	0.92	2	1460	668	0.92	2	1470	673	0.92	2	1490	682	0.92
C0779	2	5600	2,650	0.95	2	5380	2,546	0.95	2	5170	2,447	0.95	2	4960	2,347	0.95	2	4740	2,243	0.95	2	4800	2,272	0.95
C2213	2	4380	2,655	1.21	2	4650	2,819	1.21	2	4920	2,983	1.21	2	3330	2,019	1.21	2	3360	2,037	1.21	2	3400	2,061	1.21
C0812	2	4720	2,340	0.99	2	4920	2,439	0.99	2	5130	2,543	0.99	2	5190	2,573	0.99	2	5250	2,603	0.99	2	5310	2,633	0.99
C0801	2	7010	3,489	1.00	2	7490	3,728	1.00	2	7970	3,966	1.00	2	5270	2,623	1.00	2	5330	2,653	1.00	2	5390	2,682	1.00
C2906	2	3260	3,094	1.90	2	3160	3,000	1.90	2	3070	2,914	1.90	2	2970	2,819	1.90	2	2880	2,734	1.90	2	2910	2,762	1.90
C1795	2	4600	3,969	1.73	2	4650	4,012	1.73	2	4700	4,055	1.73	2	4750	4,098	1.73	2	4800	4,142	1.73	2	4860	4,193	1.73

15-Year Historical Service Level Analysis

					2008				2009				2010			
SLRN ID	Street Name	From	To	Length (km)	Lanes	Final ADT	Travelled	Lane KMs	Lanes	Final ADT	Travelled	Lane KMs	Lanes	Final ADT	Travelled	Lane KMs
C2454	Shirley Drive	Farmstead Road	Major Mackenzie Drive East	0.395	2	4970	1,963	0.79	2	4920	1,943	0.79	2	4880	1,928	0.79
C2179	Silver Linden Drive	Red Maple Road	Bantry Avenue	1.103	2	1010	1,114	2.21	2	1010	1,114	2.21	2	1020	1,125	2.21
C2288	Silver Linden Drive	Bantry Avenue	High Tech Road	0.442	2	3010	1,329	0.88	2	2980	1,316	0.88	2	2950	1,303	0.88
C3223	Silver Linden Drive	High Tech Road	Highway 7	0.379	4	3630	1,375	1.51	4	3850	1,458	1.51	4	4070	1,541	1.51
C3596	Silver Maple Road	Jefferson Sideroad	Birchbark Court	0.448	0	0	0	0.00	0	0	0	0.00	2	1450	649	0.90
C3637	Silver Maple Road	Birchbark Court	Yonge Street	0.775	0	0	0	0.00	0	0	0	0.00	2	2570	1,992	1.55
C0975	Silverwood Avenue	Yonge Street	Bernard Avenue	0.350	2	3530	1,236	0.70	2	3610	1,264	0.70	2	3700	1,295	0.70
C3244	Snively Street	Bayview Avenue	Worthington Avenue	0.700	0	840	588	0.00	0	980	686	0.00	0	0	0	0.00
C1519	Spadina Road	Major Mackenzie Drive	Weldrick Road East	0.743	2	4580	3,402	1.49	2	4740	3,521	1.49	2	4890	3,633	1.49
C1513	Spadina Road	Weldrick Road East	Boake Trail	0.872	2	4660	4,064	1.74	2	4610	4,021	1.74	2	4570	3,986	1.74
C1348	Spadina Road	Boake Trail	16th Avenue	0.466	2	6470	3,016	0.93	2	6540	3,049	0.93	2	6620	3,086	0.93
C1148	Springbrook Drive	Bayview Avenue	Elm Avenue	0.789	2	2510	1,981	1.58	2	2520	1,989	1.58	2	2540	2,005	1.58
C2936	Staples Avenue	Leslie Street	Vogell Road	0.625	2	760	475	1.25	2	1030	644	1.25	2	1290	806	1.25
C1248	Strathearn Avenue	Valleymede Drive	16th Avenue	0.333	2	3110	1,037	0.67	2	3160	1,054	0.67	2	3020	1,007	0.67
C1229	Strathearn Avenue	16th Avenue	Ardwold Gate	0.719	2	3420	2,458	1.44	2	3360	2,415	1.44	2	3290	2,365	1.44
C1503	Strathearn Avenue	Ardwold Gate	Weldrick Road East	0.615	2	1720	1,058	1.23	2	1690	1,040	1.23	2	1670	1,028	1.23
C1499	Strathearn Avenue	Weldrick Road East	Palmer Avenue	0.439	2	1320	579	0.88	2	1320	579	0.88	2	1320	579	0.88
C1528	Strathearn Avenue	Palmer Avenue	Spadina Road	0.438	2	1370	600	0.88	2	1420	621	0.88	2	1460	639	0.88
C2090	Subrisco Avenue	Bayview Avenue	Woodriver Street	0.330	2	660	218	0.66	2	680	224	0.66	2	700	231	0.66
C2416	Toporowski Avenue	Leslie Street	Redstone Road	0.468	2	2880	1,349	0.94	2	2880	1,349	0.94	2	2890	1,353	0.94
C3200	Tower Hill Road	Yonge Street	Mockingbird Drive	0.783	0	0	0	0.00	2	4910	3,842	1.57	2	4980	3,897	1.57
C3197	Tower Hill Road	Mockingbird Drive	Rollinghill Road	0.408	0	0	0	0.00	2	4020	1,642	0.82	2	4070	1,662	0.82
C3091	Tower Hill Road	Rollinghill Road	Alpaca Drive	0.383	0	0	0	0.00	2	3110	1,192	0.77	2	3150	1,207	0.77
C3564	Tower Hill Road	Alpaca Drive	Bathurst Street	0.701	0	0	0	0.00	2	2190	1,536	1.40	2	2210	1,550	1.40
C0471	Trench Street	Mill Street	Centre Street West	0.305	2	5080	1,552	0.61	2	5060	1,545	0.61	2	5030	1,536	0.61
C0535	Trench Street	Centre Street West	Major Mackenzie Dr	0.525	2	8010	4,207	1.05	2	7730	4,060	1.05	2	7460	3,918	1.05
C3880	Ultimate Drive	Via Renzo Drive	None	0.356	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C1082	Valleymede Drive	Highway 7	Chalmers Road	0.930	2	6220	5,787	1.86	2	6070	5,648	1.86	2	5920	5,508	1.86
C1062	Valleymede Drive	Chalmers Road	Briggs Avenue	0.468	2	5730	2,684	0.94	2	6050	2,833	0.94	2	6380	2,988	0.94
C1169	Valleymede Drive	Briggs Avenue	Blackmore Avenue	0.387	2	5860	2,268	0.77	2	5840	2,260	0.77	2	6140	2,377	0.77
C1207	Valleymede Drive	Blackmore Avenue	Strathearn Avenue	0.350	2	5950	2,082	0.70	2	5920	2,072	0.70	2	6250	2,187	0.70
C1146	Valleymede Drive	Strathearn Avenue	16th Avenue	0.738	2	5110	3,771	1.48	2	4840	3,572	1.48	2	5120	3,779	1.48
C3728	Via Renzo Drive	Leslie Street	Performance Drive	0.750	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C3728	Via Renzo Drive	Performance Drive	Major Mackenzie Drive East	0.677	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C1380	Vogell Road	16th Avenue	Brodie Drive	0.218	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C1380	Vogell Road	Brodie Drive	Orlando Avenue	0.836	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C1380	Vogell Road	Staples Avenue	None	0.303	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C0368	Weldrick Road East	Yonge Street	Pagehurst Court	0.573	2	7350	4,211	1.15	2	7510	4,302	1.15	2	7680	4,400	1.15
C0402	Weldrick Road East	Pagehurst Court	Essex Avenue	0.844	2	8650	7,297	1.69	2	8580	7,238	1.69	2	8880	7,491	1.69
C1426	Weldrick Road East	Essex Avenue	Bayview Avenue	0.669	2	6510	4,353	1.34	2	7010	4,688	1.34	2	7520	5,029	1.34
C1438	Weldrick Road East	Bayview Avenue	Strathearn Avenue	0.277	2	5270	1,460	0.55	2	5300	1,469	0.55	2	5330	1,477	0.55
C1502	Weldrick Road East	Strathearn Avenue	Spadina Road	0.714	2	3410	2,434	1.43	2	3420	2,441	1.43	2	3430	2,448	1.43
C0263	Weldrick Road West	Yonge Street	Kersey Crescent	0.870	2	6290	5,470	1.74	2	6400	5,565	1.74	2	6510	5,661	1.74
C0160	Weldrick Road West	Kersey Crescent	Walmer Road	0.584	2	5560	3,248	1.17	2	5840	3,412	1.17	2	6130	3,581	1.17
C0199	Weldrick Road West	Walmer Road	Bathurst Street	0.694	2	5620	3,901	1.39	2	5370	3,727	1.39	2	5690	3,949	1.39
C1284	West Beaver Creek Road	Leslie Street	Granton Drive	0.200	4	6920	1,387	0.80	4	6550	1,313	0.80	4	6190	1,240	0.80
C1284	West Beaver Creek Road	Granton Drive	West Wilmot Street	0.824	3	6920	5,701	2.47	3	6550	5,396	2.47	3	6190	5,099	2.47
C1282	West Beaver Creek Road	West Wilmot Street	West Pearce Street	0.651	3	7300	4,750	1.95	3	6780	4,412	1.95	3	6620	4,308	1.95
C1085	West Beaver Creek Road	West Pearce Street	Highway 7	0.472	4	10470	4,942	1.89	4	10380	4,899	1.89	4	10290	4,857	1.89
C1312	West Pearce Street	Leslie Street	West Beaver Creek Road	0.358	2	2910	1,042	0.72	2	3000	1,074	0.72	2	3090	1,106	0.72
C1283	West Wilmot Street	Leslie Street	West Beaver Creek Road	0.687	2	2920	2,006	1.37	2	2870	1,971	1.37	2	2810	1,930	1.37
C3164	William F. Bell Parkway	Leslie Street	Hartney Drive	0.170	2	3890	662	0.34	2	3950	672	0.34	2	4000	680	0.34
C2522	Wood Rim Drive	Worthington Avenue	North Lake Road	0.667	2	1120	747	1.33	2	1130	754	1.33	2	1140	761	1.33
C0980	Woodriver Street	Bayview Avenue	Subrisco Avenue	0.782	2	1790	1,400	1.56	2	1830	1,432	1.56	2	1830	1,432	1.56
C2027	Worthington Avenue	Yonge Street	Lorridge Street	0.719	0	2170	1,561	0.00	0	0	0	0.00	2	2480	1,783	1.44
C2535	Worthington Avenue	Lorridge Street	Wood Rim Drive	0.437	0	1980	866	0.00	0	0	0	0.00	2	1580	691	0.87
C3364	Worthington Avenue	Wood Rim Drive	40m north of Litchi Court	0.383	0	0	0	0.00	0	0	0	0.00	2	790	270	0.68
C3364	Worthington Avenue	40m north of Litchi Court	Snively Street	0.196	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C3296	Worthington Avenue	Snively Street	Bloomington Road	0.696	0	900	626	0.00	0	0	0	0.00	2	1500	1,043	1.39
C0678	Wright Street	Yonge Street	Hall Street	0.259	2	3180	824	0.52	2	3010	780	0.52	2	2840	736	0.52
C0861	Yonge Street	Elgin Mills Road	Oxford Street	0.319	4	30190	9,644	1.28	4	29230	9,337	1.28	4	28270	9,030	1.28
C0728	Yonge Street	Oxford Street	Levendale Road	0.463	4	25230	11,677	1.85	4	25390	11,751	1.85	4	25560	11,829	1.85
C0690	Yonge Street	Levendale Road	Crosby Avenue	0.289	4	30100	8,710	1.16	4	29330	8,487	1.16	4	28550	8,261	1.16
C0690	Yonge Street	Crosby Avenue	Wright Street	0.244	4	30100	7,357	0.98	4	29330	7,169	0.98	4	28550	6,978	0.98
C0690	Yonge Street	Wright Street	Centre Street East	0.232	4	30100	6,986	0.93	4	29330	6,807	0.93	4	28550	6,626	0.93
C0620	Yonge Street	Centre Street East	Major Mackenzie Drive East	0.524	4	22430	11,754	2.10	4	21770	11,408	2.10	4	21510	11,272	2.10
C0976	Yorkland Street	Devonsleigh Boulevard	Bernard Avenue	0.707	2	4880	3,451	1.41	2	4700	3,324	1.41	2	4530	3,204	1.41
C0976	Yorkland Street	Bernard Avenue	Squire Drive	0.359	2	4880	1,753	0.72	2	4700	1,688	0.72	2	4530	1,627	0.72
C0976	Yorkland Street	Squire Drive	Bernard Avenue	0.112	2	4880	548	0.22	2	4700	528	0.22	2	4530	509	0.22
C0883	Yorkland Street	Bernard Avenue	Elgin Mills Road East	0.577	4	10040	5,793	2.31	4	9980	5,758	2.31	4	9920	5,724	2.31

		2011				2012				2013				2014			
SLRN ID	From	Lanes	Final ADT	Travelled	Lane KMs	Lanes	Final ADT	Travelled	Lane KMs	Lanes	Final ADT	Travelled	Lane KMs	Lanes	Final ADT	Travelled	Lane KMs
C2454	Farmstead Road	2	4840	1,912	0.79	2	4930	1,947	0.79	2	5020	1,983	0.79	2	5110	2,018	0.79
C2179	Red Maple Road	2	1020	1,125	2.21	2	1020	1,125	2.21	2	1030	1,136	2.21	2	1030	1,136	2.21
C2288	Bantry Avenue	2	2920	1,290	0.88	2	2960	1,307	0.88	2	2990	1,321	0.88	2	3030	1,338	0.88
C3223	High Tech Road	4	4290	1,624	1.51	4	4510	1,708	1.51	4	5390	2,041	1.51	4	6280	2,378	1.51
C3596	Jefferson Sideroad	2	1510	676	0.90	2	1580	707	0.90	2	1650	739	0.90	2	1720	770	0.90
C3637	Birchbark Court	2	2600	2,015	1.55	2	2640	2,046	1.55	2	2670	2,069	1.55	2	2710	2,100	1.55
C0975	Yonge Street	2	3730	1,306	0.70	2	3750	1,313	0.70	2	3780	1,323	0.70	2	3740	1,309	0.70
C3244	Bayview Avenue	0	0	0	0.00	0	1030	721	0.00	2	1020	714	1.40	2	1000	700	1.40
C1519	Major Mackenzie Drive	2	4910	3,647	1.49	2	4920	3,655	1.49	2	4940	3,670	1.49	2	4960	3,685	1.49
C1513	Weldrick Road East	2	4530	3,951	1.74	2	4500	3,925	1.74	2	4470	3,899	1.74	2	4430	3,864	1.74
C1348	Boake Trail	2	6690	3,118	0.93	2	6510	3,035	0.93	2	6330	2,951	0.93	2	6150	2,867	0.93
C1148	Bayview Avenue	2	2560	2,021	1.58	2	2570	2,029	1.58	2	2590	2,044	1.58	2	2610	2,060	1.58
C2936	Leslie Street	2	1550	969	1.25	2	1820	1,137	1.25	2	2080	1,300	1.25	2	2340	1,462	1.25
C1248	Valleymede Drive	2	3130	1,044	0.67	2	3240	1,080	0.67	2	3070	1,024	0.67	2	3260	1,087	0.67
C1229	16th Avenue	2	3160	2,271	1.44	2	3020	2,171	1.44	2	2880	2,070	1.44	2	3100	2,228	1.44
C1503	Ardwold Gate	2	1650	1,015	1.23	2	1630	1,003	1.23	2	1610	991	1.23	2	1670	1,028	1.23
C1499	Weldrick Road East	2	1360	597	0.88	2	1410	619	0.88	2	1460	641	0.88	2	1470	645	0.88
C1528	Palmer Avenue	2	1510	661	0.88	2	1560	683	0.88	2	1610	705	0.88	2	1660	726	0.88
C2090	Bayview Avenue	2	720	237	0.66	2	620	204	0.66	2	510	168	0.66	2	580	191	0.66
C2416	Leslie Street	2	2860	1,339	0.94	2	2840	1,330	0.94	2	2820	1,321	0.94	2	2800	1,311	0.94
C3200	Yonge Street	2	5040	3,944	1.57	2	5100	3,991	1.57	2	5170	4,046	1.57	2	5230	4,093	1.57
C3197	Mockingbird Drive	2	4120	1,683	0.82	2	4170	1,703	0.82	2	4200	1,715	0.82	2	4230	1,727	0.82
C3091	Rollinghill Road	2	3730	1,429	0.77	2	4310	1,651	0.77	2	4330	1,659	0.77	2	4350	1,667	0.77
C3564	Alpaca Drive	2	2460	1,725	1.40	2	2710	1,900	1.40	2	2950	2,069	1.40	2	3200	2,244	1.40
C0471	Mill Street	2	5010	1,530	0.61	2	5070	1,549	0.61	2	5130	1,567	0.61	2	5190	1,585	0.61
C0535	Centre Street West	2	8210	4,312	1.05	2	8960	4,706	1.05	2	9710	5,100	1.05	2	10460	5,494	1.05
C3880	Via Renzo Drive	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C1082	Highway 7	2	5770	5,369	1.86	2	5620	5,229	1.86	2	5820	5,415	1.86	2	6030	5,610	1.86
C1062	Chalmers Road	2	6320	2,960	0.94	2	6260	2,932	0.94	2	6200	2,904	0.94	2	6130	2,871	0.94
C1169	Briggs Avenue	2	6430	2,489	0.77	2	6730	2,605	0.77	2	6570	2,543	0.77	2	6420	2,485	0.77
C1207	Blackmore Avenue	2	6580	2,303	0.70	2	6900	2,415	0.70	2	6990	2,446	0.70	2	7070	2,474	0.70
C1146	Strathearn Avenue	2	5280	3,897	1.48	2	5440	4,015	1.48	2	5600	4,133	1.48	2	5840	4,310	1.48
C3728	Leslie Street	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C3728	Performance Drive	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C1380	16th Avenue	0	5730	1,250	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C1380	Brodie Drive	0	5730	4,789	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C1380	Staples Avenue	0	5730	1,736	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C0368	Yonge Street	2	8040	4,606	1.15	2	8410	4,818	1.15	2	8770	5,024	1.15	2	9140	5,236	1.15
C0402	Pagehurst Court	2	9170	7,736	1.69	2	9470	7,989	1.69	2	9180	7,745	1.69	2	8890	7,500	1.69
C1426	Essex Avenue	2	8020	5,363	1.34	2	7570	5,062	1.34	2	7130	4,768	1.34	2	7470	4,995	1.34
C1438	Bayview Avenue	2	5360	1,485	0.55	2	5340	1,480	0.55	2	5320	1,474	0.55	2	5310	1,471	0.55
C1502	Strathearn Avenue	2	3570	2,548	1.43	2	3720	2,655	1.43	2	3870	2,762	1.43	2	3740	2,670	1.43
C0263	Yonge Street	2	6940	6,035	1.74	2	7370	6,409	1.74	2	6630	5,765	1.74	2	6690	5,817	1.74
C0160	Kersey Crescent	2	6410	3,745	1.17	2	6610	3,861	1.17	2	6800	3,972	1.17	2	7000	4,089	1.17
C0199	Walmer Road	2	6010	4,171	1.39	2	6330	4,393	1.39	2	6630	4,602	1.39	2	7410	5,143	1.39
C1284	Leslie Street	4	6390	1,281	0.80	4	6590	1,321	0.80	4	6790	1,361	0.80	4	6990	1,401	0.80
C1284	Granton Drive	3	6390	5,264	2.47	3	6590	5,429	2.47	3	6790	5,594	2.47	3	6990	5,758	2.47
C1282	West Wilmot Street	3	6450	4,197	1.95	3	6280	4,087	1.95	3	6110	3,976	1.95	3	5940	3,865	1.95
C1085	West Pearce Street	4	10170	4,800	1.89	4	10050	4,743	1.89	4	9930	4,687	1.89	4	9810	4,630	1.89
C1312	Leslie Street	2	3180	1,138	0.72	2	3270	1,171	0.72	2	3360	1,203	0.72	2	3450	1,235	0.72
C1283	Leslie Street	2	2750	1,889	1.37	2	2690	1,848	1.37	2	2630	1,806	1.37	2	2570	1,765	1.37
C3164	Leslie Street	2	4060	691	0.34	2	4110	699	0.34	2	4170	709	0.34	2	4220	718	0.34
C2522	Worthington Avenue	2	1160	774	1.33	2	1170	781	1.33	2	1190	794	1.33	2	1210	807	1.33
C0980	Bayview Avenue	2	1830	1,432	1.56	2	1830	1,432	1.56	2	1770	1,385	1.56	2	1710	1,338	1.56
C2027	Yonge Street	2	2630	1,891	1.44	2	2780	1,999	1.44	2	2940	2,114	1.44	2	2900	2,086	1.44
C2535	Lorridge Street	2	1600	700	0.87	2	1620	708	0.87	2	1640	717	0.87	2	1660	726	0.87
C3364	Wood Rim Drive	2	800	274	0.68	2	810	277	0.68	2	820	280	0.68	2	830	284	0.68
C3364	40m north of Litchi Court	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
C3296	Snively Street	2	1510	1,050	1.39	2	1530	1,064	1.39	2	1550	1,078	1.39	2	1530	1,064	1.39
C0678	Yonge Street	2	2820	731	0.52	2	2800	725	0.52	2	2780	720	0.52	2	2940	762	0.52
C0861	Elgin Mills Road	4	27310	8,724	1.28	4	26350	8,417	1.28	4	25390	8,110	1.28	4	24430	7,804	1.28
C0728	Oxford Street	4	25720	11,903	1.85	4	25880	11,978	1.85	4	26050	12,056	1.85	4	26210	12,130	1.85
C0690	Levendale Road	4	27780	8,038	1.16	4	27000	7,813	1.16	4	26230	7,590	1.16	4	25450	7,364	1.16
C0690	Crosby Avenue	4	27780	6,790	0.98	4	27000	6,599	0.98	4	26230	6,411	0.98	4	25450	6,220	0.98
C0690	Wright Street	4	27780	6,448	0.93	4	27000	6,267	0.93	4	26230	6,088	0.93	4	25450	5,907	0.93
C0620	Centre Street East	4	21520	11,277	2.10	4	21530	11,282	2.10	4	21540	11,287	2.10	4	21550	11,293	2.10
C0976	Devonsleigh Boulevard	2	4390	3,105	1.41	2	4240	2,999	1.41	2	4100	2,900	1.41	2	4150	2,935	1.41
C0976	Bernard Avenue	2	4390	1,577	0.72	2	4240	1,523	0.72	2	4100	1,473	0.72	2	4150	1,491	0.72
C0976	Squire Drive	2	4390	493	0.22	2	4240	476	0.22	2	4100	461	0.22	2	4150	466	0.22
C0883	Bernard Avenue	4	9970	5,753	2.31	4	10030	5,787	2.31	4	10090	5,822	2.31	4	10150	5,857	2.31

		2015				2016				2017				2018			
SLRN ID	From	Lanes	Final ADT	Travelled	Lane KMs	Lanes	Final ADT	Travelled	Lane KMs	Lanes	Final ADT	Travelled	Lane KMs	Lanes	Final ADT	Travelled	Lane KMs
C2454	Farmstead Road	2	5200	2,054	0.79	2	5290	2,089	0.79	2	5720	2,259	0.79	2	6150	2,429	0.79
C2179	Red Maple Road	2	1040	1,147	2.21	2	1040	1,147	2.21	2	1040	1,147	2.21	2	1050	1,158	2.21
C2288	Bantry Avenue	2	3060	1,351	0.88	2	3100	1,369	0.88	2	3130	1,382	0.88	2	3170	1,400	0.88
C3223	High Tech Road	4	7160	2,711	1.51	4	8040	3,044	1.51	4	7870	2,980	1.51	4	7690	2,912	1.51
C3596	Jefferson Sideroad	2	1790	801	0.90	2	1860	833	0.90	2	1930	864	0.90	2	2000	896	0.90
C3637	Birchbark Court	2	2740	2,123	1.55	2	2780	2,154	1.55	2	2820	2,185	1.55	2	2850	2,209	1.55
C0975	Yonge Street	2	3700	1,295	0.70	2	3670	1,285	0.70	2	3630	1,271	0.70	2	3590	1,257	0.70
C3244	Bayview Avenue	2	980	686	1.40	2	970	679	1.40	2	950	665	1.40	2	930	651	1.40
C1519	Major Mackenzie Drive	2	4970	3,692	1.49	2	4990	3,707	1.49	2	5650	4,197	1.49	2	6300	4,680	1.49
C1513	Weldrick Road East	2	4400	3,837	1.74	2	4370	3,811	1.74	2	4420	3,855	1.74	2	4470	3,899	1.74
C1348	Boake Trail	2	5970	2,783	0.93	2	5790	2,699	0.93	2	5610	2,615	0.93	2	4950	2,307	0.93
C1148	Bayview Avenue	2	2630	2,076	1.58	2	2640	2,084	1.58	2	2660	2,100	1.58	2	2380	1,879	1.58
C2936	Leslie Street	2	2610	1,631	1.25	2	2870	1,793	1.25	2	2660	1,662	1.25	2	2450	1,531	1.25
C1248	Valleymede Drive	2	3450	1,150	0.67	2	3640	1,214	0.67	2	4080	1,361	0.67	2	4510	1,504	0.67
C1229	16th Avenue	2	3320	2,386	1.44	2	3540	2,544	1.44	2	3610	2,595	1.44	2	3690	2,652	1.44
C1503	Ardwold Gate	2	1720	1,058	1.23	2	1780	1,095	1.23	2	1840	1,132	1.23	2	1890	1,163	1.23
C1499	Weldrick Road East	2	1490	654	0.88	2	1510	662	0.88	2	1530	671	0.88	2	1540	676	0.88
C1528	Palmer Avenue	2	1700	744	0.88	2	1750	766	0.88	2	1800	788	0.88	2	1850	810	0.88
C2090	Bayview Avenue	2	650	214	0.66	2	720	237	0.66	2	780	257	0.66	2	790	260	0.66
C2416	Leslie Street	2	2780	1,302	0.94	2	2760	1,292	0.94	2	2740	1,283	0.94	2	2560	1,199	0.94
C3200	Yonge Street	2	5300	4,148	1.57	2	5360	4,195	1.57	2	5160	4,038	1.57	2	5220	4,085	1.57
C3197	Mockingbird Drive	2	4260	1,740	0.82	2	4290	1,752	0.82	2	4320	1,764	0.82	2	4350	1,776	0.82
C3091	Rollinghill Road	2	4370	1,674	0.77	2	4390	1,682	0.77	2	4410	1,690	0.77	2	4430	1,697	0.77
C3564	Alpaca Drive	2	3440	2,412	1.40	2	3690	2,588	1.40	2	3940	2,763	1.40	2	3920	2,749	1.40
C0471	Mill Street	2	5250	1,604	0.61	2	5310	1,622	0.61	2	5370	1,640	0.61	2	5430	1,658	0.61
C0535	Centre Street West	2	11210	5,888	1.05	2	11970	6,287	1.05	2	12070	6,339	1.05	2	12170	6,392	1.05
C3880	Via Renzo Drive	0	0	0	0.00	2	470	167	0.71	2	480	171	0.71	2	480	171	0.71
C1082	Highway 7	2	6240	5,806	1.86	2	6440	5,992	1.86	2	5980	5,564	1.86	2	5520	5,136	1.86
C1062	Chalmers Road	2	6070	2,843	0.94	2	6010	2,815	0.94	2	5950	2,787	0.94	2	5890	2,759	0.94
C1169	Briggs Avenue	2	6260	2,423	0.77	2	6100	2,361	0.77	2	5950	2,303	0.77	2	5790	2,241	0.77
C1207	Blackmore Avenue	2	7150	2,502	0.70	2	7230	2,530	0.70	2	7320	2,562	0.70	2	7400	2,590	0.70
C1146	Strathearn Avenue	2	6080	4,487	1.48	2	6320	4,664	1.48	2	6180	4,561	1.48	2	6040	4,457	1.48
C3728	Leslie Street	0	0	0	0.00	2	1140	855	1.50	2	1150	862	1.50	2	1170	877	1.50
C3728	Performance Drive	0	0	0	0.00	4	1140	772	2.71	4	1150	778	2.71	4	1170	792	2.71
C1380	16th Avenue	0	0	0	0.00	0	0	0	0.00	4	9250	2,018	0.87	4	8380	1,828	0.87
C1380	Brodie Drive	0	0	0	0.00	0	0	0	0.00	4	9250	7,731	3.34	4	8380	7,004	3.34
C1380	Staples Avenue	0	0	0	0.00	0	0	0	0.00	2	9250	2,802	0.61	2	8380	2,538	0.61
C0368	Yonge Street	2	9500	5,442	1.15	2	9870	5,654	1.15	2	9770	5,597	1.15	2	9670	5,540	1.15
C0402	Pagehurst Court	2	8600	7,255	1.69	2	8310	7,011	1.69	2	8010	6,757	1.69	2	7720	6,513	1.69
C1426	Essex Avenue	2	7810	5,223	1.34	2	8150	5,450	1.34	2	8490	5,677	1.34	2	7870	5,263	1.34
C1438	Bayview Avenue	2	5290	1,466	0.55	2	5270	1,460	0.55	2	5260	1,457	0.55	2	5320	1,474	0.55
C1502	Strathearn Avenue	2	3620	2,584	1.43	2	3500	2,498	1.43	2	3930	2,805	1.43	2	4350	3,105	1.43
C0263	Yonge Street	2	6750	5,870	1.74	2	6810	5,922	1.74	2	7240	6,296	1.74	2	7660	6,661	1.74
C0160	Kersey Crescent	2	7190	4,200	1.17	2	7390	4,317	1.17	2	7580	4,428	1.17	2	6960	4,066	1.17
C0199	Walmer Road	2	8200	5,691	1.39	2	8980	6,233	1.39	2	9770	6,781	1.39	2	10550	7,322	1.39
C1284	Leslie Street	4	7190	1,441	0.80	4	7400	1,483	0.80	4	7310	1,465	0.80	4	7220	1,447	0.80
C1284	Granton Drive	3	7190	5,923	2.47	3	7400	6,096	2.47	3	7310	6,022	2.47	3	7220	5,948	2.47
C1282	West Wilmot Street	3	5780	3,761	1.95	3	5610	3,651	1.95	3	5440	3,540	1.95	3	5270	3,429	1.95
C1085	West Pearce Street	4	9690	4,573	1.89	4	9580	4,521	1.89	4	9690	4,573	1.89	4	9810	4,630	1.89
C1312	Leslie Street	2	3540	1,267	0.72	2	3630	1,299	0.72	2	3720	1,332	0.72	2	3320	1,188	0.72
C1283	Leslie Street	2	2510	1,724	1.37	2	2460	1,690	1.37	2	2400	1,648	1.37	2	2430	1,669	1.37
C3164	Leslie Street	2	4280	728	0.34	2	4330	736	0.34	2	4390	747	0.34	2	4440	755	0.34
C2522	Worthington Avenue	2	1220	814	1.33	2	1240	827	1.33	2	1260	841	1.33	2	1250	834	1.33
C0980	Bayview Avenue	2	1650	1,291	1.56	2	1600	1,252	1.56	2	1540	1,205	1.56	2	1480	1,158	1.56
C2027	Yonge Street	2	2870	2,064	1.44	2	2840	2,042	1.44	2	2850	2,050	1.44	2	3000	2,157	1.44
C2535	Lorridge Street	2	1690	739	0.87	2	1710	748	0.87	2	1730	757	0.87	2	1750	765	0.87
C3364	Wood Rim Drive	2	840	287	0.68	2	850	291	0.68	2	860	329	0.77	2	870	333	0.77
C3364	40m north of Litchi Court	0	0	0	0.00	0	0	0	0.00	2	860	169	0.39	2	870	170	0.39
C3296	Snively Street	2	1500	1,043	1.39	2	1470	1,023	1.39	2	1450	1,009	1.39	2	1420	988	1.39
C0678	Yonge Street	2	3090	801	0.52	2	3250	842	0.52	2	3320	860	0.52	2	3390	878	0.52
C0861	Elgin Mills Road	4	23470	7,497	1.28	4	22510	7,190	1.28	4	21540	6,881	1.28	4	20580	6,574	1.28
C0728	Oxford Street	4	26370	12,204	1.85	4	26540	12,283	1.85	4	26310	12,177	1.85	4	26090	12,075	1.85
C0690	Levendale Road	4	24680	7,141	1.16	4	23900	6,916	1.16	4	23130	6,693	1.16	4	22350	6,467	1.16
C0690	Crosby Avenue	4	24680	6,032	0.98	4	23900	5,842	0.98	4	23130	5,653	0.98	4	22350	5,463	0.98
C0690	Wright Street	4	24680	5,728	0.93	4	23900	5,547	0.93	4	23130	5,368	0.93	4	22350	5,187	0.93
C0620	Centre Street East	4	21560	11,298	2.10	4	21570	11,303	2.10	4	19960	10,459	2.10	4	18340	9,611	2.10
C0976	Devonsleigh Boulevard	2	4200	2,970	1.41	2	4250	3,006	1.41	2	3650	2,581	1.41	2	3440	2,433	1.41
C0976	Bernard Avenue	2	4200	1,509	0.72	2	4250	1,527	0.72	2	3650	1,311	0.72	2	3440	1,236	0.72
C0976	Squire Drive	2	4200	472	0.22	2	4250	477	0.22	2	3650	410	0.22	2	3440	386	0.22
C0883	Bernard Avenue	4	10200	5,885	2.31	4	10260	5,920	2.31	4	10380	5,989	2.31	4	10510	6,064	2.31

		2019				2020				2021				2022			
SLRN ID	From	Lanes	Final ADT	Travelled	Lane KMs	Lanes	Final ADT	Travelled	Lane KMs	Lanes	Final ADT	Travelled	Lane KMs	Lanes	Final ADT	Travelled	Lane KMs
C2454	Farmstead Road	2	6580	2,599	0.79	2	6650	2,627	0.79	2	6730	2,658	0.79	2	6810	2,690	0.79
C2179	Red Maple Road	2	1050	1,158	2.21	2	1060	1,169	2.21	2	1010	1,114	2.21	2	1020	1,125	2.21
C2288	Bantry Avenue	2	3200	1,413	0.88	2	3240	1,431	0.88	2	3270	1,444	0.88	2	3310	1,462	0.88
C3223	High Tech Road	4	7520	2,848	1.51	4	5870	2,223	1.51	4	4220	1,598	1.51	4	4270	1,617	1.51
C3596	Jefferson Sideroad	2	2070	927	0.90	2	2140	958	0.90	2	2210	990	0.90	2	2240	1,003	0.90
C3637	Birchbark Court	2	2890	2,240	1.55	2	2920	2,263	1.55	2	2960	2,294	1.55	2	3000	2,325	1.55
C0975	Yonge Street	2	3550	1,243	0.70	2	3510	1,229	0.70	2	3470	1,215	0.70	2	3510	1,229	0.70
C3244	Bayview Avenue	2	920	644	1.40	2	900	630	1.40	2	910	637	1.40	2	920	644	1.40
C1519	Major Mackenzie Drive	2	6960	5,170	1.49	2	3610	2,682	1.49	2	3650	2,711	1.49	2	3690	2,741	1.49
C1513	Weldrick Road East	2	4530	3,951	1.74	2	4580	3,994	1.74	2	4630	4,038	1.74	2	4690	4,090	1.74
C1348	Boake Trail	2	4280	1,995	0.93	2	3610	1,683	0.93	2	4290	2,000	0.93	2	4340	2,023	0.93
C1148	Bayview Avenue	2	2100	1,658	1.58	2	1820	1,437	1.58	2	1840	1,452	1.58	2	1860	1,468	1.58
C2936	Leslie Street	2	2240	1,400	1.25	2	2030	1,269	1.25	2	1820	1,137	1.25	2	1840	1,150	1.25
C1248	Valleymede Drive	2	4510	1,504	0.67	2	2460	820	0.67	2	2490	830	0.67	2	2520	840	0.67
C1229	16th Avenue	2	3770	2,710	1.44	2	3810	2,738	1.44	2	3860	2,774	1.44	2	3910	2,810	1.44
C1503	Ardwold Gate	2	1950	1,200	1.23	2	2010	1,237	1.23	2	2070	1,274	1.23	2	2090	1,286	1.23
C1499	Weldrick Road East	2	1560	684	0.88	2	1580	693	0.88	2	1600	702	0.88	2	1620	711	0.88
C1528	Palmer Avenue	2	1900	831	0.88	2	1940	849	0.88	2	1990	871	0.88	2	2010	880	0.88
C2090	Bayview Avenue	2	800	264	0.66	2	810	267	0.66	2	820	270	0.66	2	830	274	0.66
C2416	Leslie Street	2	2380	1,115	0.94	2	2210	1,035	0.94	2	2230	1,044	0.94	2	2260	1,058	0.94
C3200	Yonge Street	2	5290	4,140	1.57	2	5350	4,187	1.57	2	5410	4,234	1.57	2	5470	4,281	1.57
C3197	Mockingbird Drive	2	4380	1,789	0.82	2	4410	1,801	0.82	2	4440	1,813	0.82	2	4490	1,834	0.82
C3091	Rollinghill Road	2	4450	1,705	0.77	2	4460	1,709	0.77	2	4480	1,717	0.77	2	4530	1,736	0.77
C3564	Alpaca Drive	2	3900	2,735	1.40	2	3880	2,721	1.40	2	3860	2,707	1.40	2	3910	2,742	1.40
C0471	Mill Street	2	5490	1,677	0.61	2	5550	1,695	0.61	2	5610	1,713	0.61	2	5680	1,735	0.61
C0535	Centre Street West	2	12270	6,444	1.05	2	6200	3,256	1.05	2	6270	3,293	1.05	2	6350	3,335	1.05
C3880	Via Renzo Drive	2	490	175	0.71	2	490	175	0.71	2	500	178	0.71	2	510	182	0.71
C1082	Highway 7	2	5060	4,708	1.86	2	4600	4,280	1.86	2	4650	4,326	1.86	2	4710	4,382	1.86
C1062	Chalmers Road	2	5820	2,726	0.94	2	5760	2,698	0.94	2	5700	2,670	0.94	2	5770	2,702	0.94
C1169	Briggs Avenue	2	5630	2,179	0.77	2	5470	2,117	0.77	2	5320	2,059	0.77	2	5380	2,082	0.77
C1207	Blackmore Avenue	2	7480	2,618	0.70	2	7570	2,649	0.70	2	7650	2,677	0.70	2	7740	2,709	0.70
C1146	Strathearn Avenue	2	5910	4,362	1.48	2	5770	4,258	1.48	2	5630	4,155	1.48	2	5700	4,207	1.48
C3728	Leslie Street	2	1180	885	1.50	2	1200	900	1.50	2	1210	907	1.50	2	1220	915	1.50
C3728	Performance Drive	4	1180	799	2.71	4	1200	812	2.71	4	1210	819	2.71	4	1220	826	2.71
C1380	16th Avenue	4	7510	1,638	0.87	4	6640	1,448	0.87	4	5770	1,259	0.87	4	5840	1,274	0.87
C1380	Brodie Drive	4	7510	6,277	3.34	4	6640	5,550	3.34	4	5770	4,823	3.34	4	5840	4,881	3.34
C1380	Staples Avenue	2	7510	2,275	0.61	2	6640	2,011	0.61	2	5770	1,748	0.61	2	5840	1,769	0.61
C0368	Yonge Street	2	9570	5,482	1.15	2	9480	5,431	1.15	2	9380	5,374	1.15	2	9490	5,437	1.15
C0402	Pagehurst Court	2	7430	6,268	1.69	2	7140	6,024	1.69	2	9240	7,795	1.69	2	9350	7,888	1.69
C1426	Essex Avenue	2	7260	4,855	1.34	2	6640	4,440	1.34	2	6720	4,494	1.34	2	6800	4,547	1.34
C1438	Bayview Avenue	2	5380	1,491	0.55	2	5450	1,510	0.55	2	5510	1,527	0.55	2	5580	1,546	0.55
C1502	Strathearn Avenue	2	4780	3,412	1.43	2	3830	2,734	1.43	2	2870	2,049	1.43	2	2900	2,070	1.43
C0263	Yonge Street	2	8080	7,026	1.74	2	7400	6,435	1.74	2	6720	5,844	1.74	2	6800	5,913	1.74
C0160	Kersey Crescent	2	6330	3,698	1.17	2	5700	3,330	1.17	2	5770	3,371	1.17	2	5840	3,412	1.17
C0199	Walmer Road	2	11340	7,871	1.39	2	12120	8,412	1.39	2	12910	8,960	1.39	2	13060	9,065	1.39
C1284	Leslie Street	4	7130	1,429	0.80	4	6090	1,220	0.80	4	5060	1,014	0.80	4	5120	1,026	0.80
C1284	Granton Drive	3	7130	5,874	2.47	3	6090	5,017	2.47	3	5060	4,168	2.47	3	5120	4,218	2.47
C1282	West Wilmot Street	3	5110	3,325	1.95	3	4940	3,215	1.95	3	5000	3,254	1.95	3	5060	3,293	1.95
C1085	West Pearce Street	4	9920	4,682	1.89	4	10040	4,739	1.89	4	10150	4,790	1.89	4	10270	4,847	1.89
C1312	Leslie Street	2	2910	1,042	0.72	2	2510	899	0.72	2	2540	909	0.72	2	2570	920	0.72
C1283	Leslie Street	2	2450	1,683	1.37	2	2480	1,703	1.37	2	2510	1,724	1.37	2	2540	1,745	1.37
C3164	Leslie Street	2	4500	765	0.34	2	4550	774	0.34	2	4610	784	0.34	2	4670	794	0.34
C2522	Worthington Avenue	2	1240	827	1.33	2	1230	821	1.33	2	1240	827	1.33	2	1250	834	1.33
C0980	Bayview Avenue	2	1420	1,111	1.56	2	1360	1,064	1.56	2	1380	1,080	1.56	2	1400	1,095	1.56
C2027	Yonge Street	2	3150	2,265	1.44	2	2640	1,899	1.44	2	2670	1,920	1.44	2	2700	1,942	1.44
C2535	Lorridge Street	2	2090	914	0.87	2	2440	1,067	0.87	2	2790	1,220	0.87	2	2820	1,233	0.87
C3364	Wood Rim Drive	2	880	337	0.77	2	890	341	0.77	2	900	345	0.77	2	910	349	0.77
C3364	40m north of Litchi Court	2	880	172	0.39	2	890	174	0.39	2	900	176	0.39	2	910	178	0.39
C3296	Snively Street	2	1400	974	1.39	2	1370	953	1.39	2	1390	967	1.39	2	1410	981	1.39
C0678	Yonge Street	2	3460	896	0.52	2	3500	907	0.52	2	3540	917	0.52	2	3580	927	0.52
C0861	Elgin Mills Road	4	19620	6,267	1.28	4	18660	5,961	1.28	4	17700	5,654	1.28	4	17910	5,721	1.28
C0728	Oxford Street	4	25870	11,973	1.85	4	25650	11,871	1.85	4	25430	11,769	1.85	4	25740	11,913	1.85
C0690	Levendale Road	4	21580	6,244	1.16	4	20800	6,019	1.16	4	20030	5,796	1.16	4	20270	5,865	1.16
C0690	Crosby Avenue	4	21580	5,275	0.98	4	20800	5,084	0.98	4	20030	4,896	0.98	4	20270	4,954	0.98
C0690	Wright Street	4	21580	5,009	0.93	4	20800	4,828	0.93	4	20030	4,649	0.93	4	20270	4,705	0.93
C0620	Centre Street East	4	16730	8,767	2.10	4	15110	7,918	2.10	4	21060	11,036	2.10	4	21310	11,167	2.10
C0976	Devonsleigh Boulevard	2	3230	2,284	1.41	2	3020	2,136	1.41	2	2810	1,987	1.41	2	2840	2,009	1.41
C0976	Bernard Avenue	2	3230	1,160	0.72	2	3020	1,085	0.72	2	2810	1,009	0.72	2	2840	1,020	0.72
C0976	Squire Drive	2	3230	363	0.22	2	3020	339	0.22	2	2810	316	0.22	2	2840	319	0.22
C0883	Bernard Avenue	4	10630	6,134	2.31	4	10750	6,203	2.31	4	10880	6,278	2.31	4	11010	6,353	2.31

	Average		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
		Totals:	447,605 224.81	461,429 237.52	474,665 245.67	477,310 245.67	476,271 245.67	475,295 248.24	485,199 248.24	501,816 252.37	528,171 262.87	545,863 280.48	538,581 280.48	534,113 280.48	491,557 280.48	494,540 280.48	500,443 280.48
Vehicles/Lane:	1891.45	veh./lane:	1991.00	1942.67	1932.10	1942.87	1938.64	1914.69	1954.59	1988.41	2009.21	1946.20	1920.24	1904.31	1752.59	1763.22	1784.27
		Population:	172,088 224.81	175,497 237.52	179,826 245.67	185,541 245.67	187,558 245.67	190,120 248.24	191,171 248.24	193,063 252.37	195,022 262.87	198,284 280.48	198,982 280.48	200,176 280.48	201,076 280.48	202,022 280.48	207,785 280.48
Population/LaneKm:	731.68	pop./lanekm:	765.47	738.86	731.97	755.24	763.45	765.88	770.12	765.00	741.88	706.96	709.44	713.70	716.91	720.28	740.83
		Employment:	65,618 224.81	67,882 237.52	70,146 245.67	72,410 245.67	73,688 245.67	74,966 248.24	76,244 248.24	77,522 252.37	78,800 262.87	80,217 280.48	81,634 280.48	83,051 280.48	84,468 280.48	85,885 280.48	86,799 280.48
Employment/LaneKm:	300.45	emp./lanekm:	291.88	285.79	285.53	294.74	299.94	302.00	307.14	307.18	299.76	286.00	291.06	296.11	301.16	306.21	309.47
		Combined:	237,706 224.81	243,379 237.52	249,972 245.67	257,951 245.67	261,246 245.67	265,086 248.24	267,415 248.24	270,585 252.37	273,822 262.87	278,501 280.48	280,616 280.48	283,227 280.48	285,544 280.48	287,907 280.48	294,584 280.48
Combined/LaneKm:	1032.14	comb./lanekm:	1057.34	1024.65	1017.50	1049.98	1063.39	1067.88	1077.26	1072.17	1041.65	992.96	1000.50	1009.81	1018.07	1026.50	1050.30

# LANES	2008 CTL KMS	2008 LANE KMS	2009 CTL KMS	2009 LANE KMS	2010 CTL KMS	2010 LANE KMS	2011 CTL KMS	2011 LANE KMS	2012 CTL KMS	2012 LANE KMS	2013 CTL KMS	2013 LANE KMS	2014 CTL KMS	2014 LANE KMS	2015 CTL KMS	2015 LANE KMS
2	89.8	179.5	95.2	190.5	99.3	198.6	99.3	198.6	99.3	198.6	100.1	200.3	100.1	200.3	102.2	204.4
3	4.4	13.1	4.4	13.1	4.4	13.1	4.4	13.1	4.4	13.1	4.4	13.1	4.4	13.1	4.4	13.1
4	8.1	32.3	8.5	34.0	8.5	34.0	8.5	34.0	8.5	34.0	8.7	34.9	8.7	34.9	8.7	34.9
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	**102.2**	**224.8**	**108.1**	**237.5**	**112.2**	**245.7**	**112.2**	**245.7**	**112.2**	**245.7**	**113.2**	**248.2**	**113.2**	**248.2**	**115.3**	**252.4**

# LANES	2016 CTL KMS	2016 LANE KMS	2017 CTL KMS	2017 LANE KMS	2018 CTL KMS	2018 LANE KMS	2019 CTL KMS	2019 LANE KMS	2020 CTL KMS	2020 LANE KMS	2021 CTL KMS	2021 LANE KMS	2022 CTL KMS	2022 LANE KMS
2	104.3	208.6	105.8	211.6	105.8	211.6	105.8	211.6	105.8	211.6	105.8	211.6	105.8	211.6
3	4.4	13.1	5.0	14.9	5.0	14.9	5.0	14.9	5.0	14.9	5.0	14.9	5.0	14.9
4	10.3	41.2	13.5	54.0	13.5	54.0	13.5	54.0	13.5	54.0	13.5	54.0	13.5	54.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	**119.0**	**262.9**	**124.3**	**280.5**	**124.3**	**280.5**	**124.3**	**280.5**	**124.3**	**280.5**	**124.3**	**280.5**	**124.3**	**280.48**

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Appendix ii

Historical Infrastructure Inventory

City of Richmond Hill
2023 Development Charges Update Study

Summary of Historical Infrastructure Values

Year	Road Network (incl. land cost)	Structures-Bridge	Structures-Culvert	Traffic Signals	Bike Facilities	MUP within ROW	Off-Road Trail	Sidewalks	Grade Separation	Roundabout	Illumination	Total Value (2023 $)	Capita (population+ employment)	Road Infrastructure Value per 1000 Capita ($ Millions)
2008	$3,930,992,125	$75,116,995	$127,083,341	$9,358,180	$2,706,991	$0	$110,850,012	$266,037,213	$120,000,000	$43,939,000	$99,294,000	$4,785,377,857	237,706	$20.13
2009	$4,156,768,493	$75,116,995	$127,083,341	$9,358,180	$2,710,624	$0	$110,850,012	$270,265,476	$120,000,000	$43,939,000	$99,294,000	$5,015,386,121	243,379	$20.61
2010	$4,314,124,885	$83,567,952	$127,083,341	$9,358,180	$2,712,488	$0	$110,850,012	$277,379,499	$120,000,000	$43,939,000	$99,294,000	$5,188,309,357	249,972	$20.76
2011	$4,314,124,885	$83,567,952	$127,083,341	$9,358,180	$2,712,488	$0	$110,850,012	$282,369,698	$120,000,000	$43,939,000	$99,294,000	$5,193,299,556	257,951	$20.13
2012	$4,314,124,885	$83,567,952	$127,083,341	$9,358,180	$2,718,546	$0	$110,850,012	$289,584,789	$120,000,000	$43,939,000	$99,294,000	$5,200,520,705	261,246	$19.91
2013	$4,354,559,666	$83,567,952	$127,083,341	$9,358,180	$2,828,213	$0	$110,850,012	$294,000,421	$120,000,000	$50,216,000	$99,294,000	$5,251,757,785	265,086	$19.81
2014	$4,354,559,666	$83,567,952	$127,083,341	$9,358,180	$2,834,053	$0	$110,850,012	$298,184,380	$120,000,000	$50,216,000	$99,294,000	$5,255,947,584	267,415	$19.65
2015	$4,434,403,287	$83,567,952	$127,083,341	$9,878,180	$2,841,901	$0	$110,850,012	$302,716,772	$120,000,000	$50,216,000	$99,294,000	$5,340,851,444	270,585	$19.74
2016	$4,549,554,036	$83,567,952	$127,083,341	$9,878,180	$2,846,076	$1,844,503	$110,850,012	$306,953,803	$120,000,000	$50,216,000	$99,294,000	$5,462,087,903	273,822	$19.95
2017	$4,710,474,539	$83,567,952	$127,083,341	$9,878,180	$2,846,076	$3,218,105	$110,850,012	$307,988,025	$120,000,000	$50,216,000	$99,294,000	$5,625,416,229	278,501	$20.20
2018	$4,710,474,539	$132,410,429	$127,083,341	$10,131,680	$2,846,076	$4,734,280	$110,850,012	$311,963,847	$120,000,000	$50,216,000	$99,294,000	$5,680,004,204	280,616	$20.24
2019	$4,710,474,539	$132,410,429	$127,083,341	$10,131,680	$2,846,076	$6,007,672	$110,850,012	$313,253,278	$120,000,000	$50,216,000	$99,294,000	$5,682,567,026	283,227	$20.06
2020	$4,710,474,539	$132,410,429	$127,083,341	$10,131,680	$2,846,076	$6,007,672	$110,850,012	$313,323,426	$120,000,000	$50,216,000	$99,294,000	$5,682,637,174	285,544	$19.90
2021	$4,710,474,539	$132,410,429	$127,083,341	$10,261,680	$2,846,076	$6,007,672	$110,850,012	$313,323,426	$120,000,000	$50,216,000	$99,294,000	$5,682,767,174	287,907	$19.74
2022	$4,710,474,539	$132,410,429	$127,083,341	$10,261,680	$2,846,076	$6,007,672	$110,850,012	$313,323,426	$120,000,000	$50,216,000	$99,294,000	$5,682,767,174	294,584	$19.29
											Average	**$5,381,979,819**	**$269,169**	**$19.99**

City of Richmond Hill
2023 Development Charges Update Study
2008 Infrastructure Value

Road Network		
Length (km)	Arterial	7.216
	4-Lane Collector	4.030
	2-Lane Collector	82.347
	Industrial Collector	8.591
	Total	102.185
2023 Value	Arterial	$ 39,003,091
	4-Lane Collector	$ 21,781,020
	2-Lane Collector	$ 359,157,618
	Industrial Collector	$ 48,854,194
	Total	$ 468,795,922
2023 Property Value		$ 2,993,400,280
2023 Total Value		$ 3,930,992,125

Structures		
Bridge	No.	16
	Deck Area (m^2)	6019.0
	2023 Value $	$ 75,116,995
Culvert	No.	45
	Deck Area (m^2)	8146.4
	2023 Value $	$ 127,083,341

Traffic Signals		
Item Number	Full Traffic Signal	16
	Intersection Pedestrian Signal (IPS)	5
	Mid-Block Pedestrian Signal (MPS)	2
	Pedestrian Crossover	1
	Flashing Beacons	1
	Total	25
2023 Value	Full Traffic Signal	$ 8,320,000
	Intersection Pedestrian Signal (IPS)	$ 650,000
	Mid-Block Pedestrian Signal (MPS)	$ 260,000
	Pedestrian Crossover	$ 123,500
	Flashing Beacons	$ 4,680
	Total	$ 9,358,180

Bike Facilities	
Length (km)	145.721
2023 Value	$ 2,706,991

MUP within ROW	
Length (km)	0.000
2023 Value	$0

Off-Road Trail	
Length (km)	135.348
2023 Value	$ 110,850,012

Sidewalks	
Length (km)	576.462
2023 Value	$ 266,037,213

Grade Separation	
Item Number	2
2023 Value	$ 120,000,000

Roundabout	
Item Number	7
2023 Value	$ 43,939,000

Illumination	
Item Number	6,700
2023 Value	$ 99,294,000

Total Infrastructure Value $ 4,785,377,857

City of Richmond Hill
2023 Development Charges Update Study
2009 Infrastructure Value

Road Network		
Length (km)	Arterial	7.216
	4-Lane Collector	4.030
	2-Lane Collector	87.812
	Industrial Collector	9.028
	Total	108.087
2023 Value	Arterial	$ 39,003,091
	4-Lane Collector	$ 21,781,020
	2-Lane Collector	$ 382,993,216
	Industrial Collector	$ 51,339,151
	Total	$ 495,116,477
2023 Property Value		$ 3,166,535,540
2023 Total Value		$ 4,156,768,493

Structures		
Bridge	No.	16
	Deck Area (m^2)	6019.0
	2023 Value $	$ 75,116,995
Culvert	No.	45
	Deck Area (m^2)	8146.4
	2023 Value $	$ 127,083,341

Traffic Signals		
Item Number	Full Traffic Signal	16
	Intersection Pedestrian Signal (IPS)	5
	Mid-Block Pedestrian Signal (MPS)	2
	Pedestrian Crossover	1
	Flashing Beacons	1
	Total	25
2023 Value	Full Traffic Signal	$ 8,320,000
	Intersection Pedestrian Signal (IPS)	$ 650,000
	Mid-Block Pedestrian Signal (MPS)	$ 260,000
	Pedestrian Crossover	$ 123,500
	Flashing Beacons	$ 4,680
	Total	$ 9,358,180

Bike Facilities	
Length (km)	146.356
2023 Value	$ 2,710,624

MUP within ROW	
Length (km)	0.000
2023 Value	$0

Off-Road Trail	
Length (km)	135.348
2023 Value	$ 110,850,012

Sidewalks	
Length (km)	585.624
2023 Value	$ 270,265,476

Grade Separation	
Item Number	2
2023 Value	$ 120,000,000

Roundabout	
Item Number	7
2023 Value	$ 43,939,000

Illumination	
Item Number	6,700
2023 Value	$ 99,294,000

Total Infrastructure Value $ 5,015,386,121

City of Richmond Hill
2023 Development Charges Update Study
2010 Infrastructure Value

Road Network		
Length (km)	Arterial	7.216
	4-Lane Collector	4.030
	2-Lane Collector	91.886
	Industrial Collector	9.028
	Total	112.161
2023 Value	Arterial	$ 39,003,091
	4-Lane Collector	$ 21,781,020
	2-Lane Collector	$ 400,761,967
	Industrial Collector	$ 51,339,151
	Total	$ 512,885,228
2023 Property Value		$ 3,288,354,430
2023 Total Value		$ 4,314,124,885

Structures		
Bridge	No.	17
	Deck Area (m^2)	6696.2
	2023 Value $	$ 83,567,952
Culvert	No.	45
	Deck Area (m^2)	8146.4
	2023 Value $	$ 127,083,341

Traffic Signals		
Item Number	Full Traffic Signal	16
	Intersection Pedestrian Signal (IPS)	5
	Mid-Block Pedestrian Signal (MPS)	2
	Pedestrian Crossover	1
	Flashing Beacons	1
	Total	25
2023 Value	Full Traffic Signal	$ 8,320,000
	Intersection Pedestrian Signal (IPS)	$ 650,000
	Mid-Block Pedestrian Signal (MPS)	$ 260,000
	Pedestrian Crossover	$ 123,500
	Flashing Beacons	$ 4,680
	Total	$ 9,358,180

Bike Facilities	
Length (km)	146.682
2023 Value	$ 2,712,488

MUP within ROW	
Length (km)	0.000
2023 Value	$0

Off-Road Trail	
Length (km)	135.348
2023 Value	$ 110,850,012

Sidewalks	
Length (km)	601.039
2023 Value	$ 277,379,499

Grade Separation	
Item Number	2
2023 Value	$ 120,000,000

Roundabout	
Item Number	7
2023 Value	$ 43,939,000

Illumination	
Item Number	6,700
2023 Value	$ 99,294,000

Total Infrastructure Value $ 5,188,309,357

City of Richmond Hill
2023 Development Charges Update Study
2011 Infrastructure Value

Road Network		
Length (km)	Arterial	7.216
	4-Lane Collector	4.030
	2-Lane Collector	91.886
	Industrial Collector	9.028
	Total	112.161
2023 Value	Arterial	$ 39,003,091
	4-Lane Collector	$ 21,781,020
	2-Lane Collector	$ 400,761,967
	Industrial Collector	$ 51,339,151
	Total	$ 512,885,228
2023 Property Value		$ 3,288,354,430
2023 Total Value		$ 4,314,124,885

Structures		
Bridge	No.	17
	Deck Area (m^2)	6696.2
	2023 Value $	$ 83,567,952
Culvert	No.	45
	Deck Area (m^2)	8146.4
	2023 Value $	$ 127,083,341

Traffic Signals		
Item Number	Full Traffic Signal	16
	Intersection Pedestrian Signal (IPS)	5
	Mid-Block Pedestrian Signal (MPS)	2
	Pedestrian Crossover	1
	Flashing Beacons	1
	Total	25
2023 Value	Full Traffic Signal	$ 8,320,000
	Intersection Pedestrian Signal (IPS)	$ 650,000
	Mid-Block Pedestrian Signal (MPS)	$ 260,000
	Pedestrian Crossover	$ 123,500
	Flashing Beacons	$ 4,680
	Total	$ 9,358,180

Bike Facilities	
Length (km)	146.682
2023 Value	$ 2,712,488

MUP within ROW	
Length (km)	0.000
2023 Value	$0

Off-Road Trail	
Length (km)	135.348
2023 Value	$ 110,850,012

Sidewalks	
Length (km)	611.852
2023 Value	$ 282,369,698

Grade Separation	
Item Number	2
2023 Value	$ 120,000,000

Roundabout	
Item Number	7
2023 Value	$ 43,939,000

Illumination	
Item Number	6,700
2023 Value	$ 99,294,000

Total Infrastructure Value $ 5,193,299,556

City of Richmond Hill
2023 Development Charges Update Study
2012 Infrastructure Value

Road Network		
Length (km)	Arterial	7.216
	4-Lane Collector	4.030
	2-Lane Collector	91.886
	Industrial Collector	9.028
	Total	112.161
2023 Value	Arterial	$ 39,003,091
	4-Lane Collector	$ 21,781,020
	2-Lane Collector	$ 400,761,967
	Industrial Collector	$ 51,339,151
	Total	$ 512,885,228
2023 Property Value		$ 3,288,354,430
2023 Total Value		$ 4,314,124,885

Structures		
Bridge	No.	17
	Deck Area (m^2)	6696.2
	2023 Value $	$ 83,567,952
Culvert	No.	45
	Deck Area (m^2)	8146.4
	2023 Value $	$ 127,083,341

Traffic Signals		
Item Number	Full Traffic Signal	16
	Intersection Pedestrian Signal (IPS)	5
	Mid-Block Pedestrian Signal (MPS)	2
	Pedestrian Crossover	1
	Flashing Beacons	1
	Total	25
2023 Value	Full Traffic Signal	$ 8,320,000
	Intersection Pedestrian Signal (IPS)	$ 650,000
	Mid-Block Pedestrian Signal (MPS)	$ 260,000
	Pedestrian Crossover	$ 123,500
	Flashing Beacons	$ 4,680
	Total	$ 9,358,180

Bike Facilities	
Length (km)	147.741
2023 Value	$ 2,718,546

MUP within ROW	
Length (km)	0.000
2023 Value	$0

Off-Road Trail	
Length (km)	135.348
2023 Value	$ 110,850,012

Sidewalks	
Length (km)	627.486
2023 Value	$ 289,584,789

Grade Separation	
Item Number	2
2023 Value	$ 120,000,000

Roundabout	
Item Number	7
2023 Value	$ 43,939,000

Illumination	
Item Number	6,700
2023 Value	$ 99,294,000

Total Infrastructure Value $ 5,200,520,705

City of Richmond Hill
2023 Development Charges Update Study
2013 Infrastructure Value

Road Network		
Length (km)	Arterial	7.216
	4-Lane Collector	4.260
	2-Lane Collector	92.707
	Industrial Collector	9.028
	Total	113.212
2023 Value	Arterial	$ 39,003,091
	4-Lane Collector	$ 23,024,124
	2-Lane Collector	$ 404,342,758
	Industrial Collector	$ 51,339,151
	Total	$ 517,709,123
2023 Property Value		$ 3,319,141,420
2023 Total Value		$ 4,354,559,666

Structures		
Bridge	No.	17
	Deck Area (m^2)	6696.2
	2023 Value $	$ 83,567,952
Culvert	No.	45
	Deck Area (m^2)	8146.4
	2023 Value $	$ 127,083,341

Traffic Signals		
Item Number	Full Traffic Signal	16
	Intersection Pedestrian Signal (IPS)	5
	Mid-Block Pedestrian Signal (MPS)	2
	Pedestrian Crossover	1
	Flashing Beacons	1
	Total	25
2023 Value	Full Traffic Signal	$ 8,320,000
	Intersection Pedestrian Signal (IPS)	$ 650,000
	Mid-Block Pedestrian Signal (MPS)	$ 260,000
	Pedestrian Crossover	$ 123,500
	Flashing Beacons	$ 4,680
	Total	$ 9,358,180

Bike Facilities	
Length (km)	149.154
2023 Value	$ 2,828,213

MUP within ROW	
Length (km)	0.000
2023 Value	$0

Off-Road Trail	
Length (km)	135.348
2023 Value	$ 110,850,012

Sidewalks	
Length (km)	637.054
2023 Value	$ 294,000,421

Grade Separation	
Item Number	2
2023 Value	$ 120,000,000

Roundabout	
Item Number	8
2023 Value	$ 50,216,000

Illumination	
Item Number	6,700
2023 Value	$ 99,294,000

Total Infrastructure Value $ 5,251,757,785

City of Richmond Hill
2023 Development Charges Update Study
2014 Infrastructure Value

Road Network		
Length (km)	Arterial	7.216
	4-Lane Collector	4.260
	2-Lane Collector	92.707
	Industrial Collector	9.028
	Total	113.212
2023 Value	Arterial	$ 39,003,091
	4-Lane Collector	$ 23,024,124
	2-Lane Collector	$ 404,342,758
	Industrial Collector	$ 51,339,151
	Total	$ 517,709,123
2023 Property Value		$ 3,319,141,420
2023 Total Value		$ 4,354,559,666

Structures		
Bridge	No.	17
	Deck Area (m^2)	6696.2
	2023 Value $	$ 83,567,952
Culvert	No.	45
	Deck Area (m^2)	8146.4
	2023 Value $	$ 127,083,341

Traffic Signals		
Item Number	Full Traffic Signal	16
	Intersection Pedestrian Signal (IPS)	5
	Mid-Block Pedestrian Signal (MPS)	2
	Pedestrian Crossover	1
	Flashing Beacons	1
	Total	25
2023 Value	Full Traffic Signal	$ 8,320,000
	Intersection Pedestrian Signal (IPS)	$ 650,000
	Mid-Block Pedestrian Signal (MPS)	$ 260,000
	Pedestrian Crossover	$ 123,500
	Flashing Beacons	$ 4,680
	Total	$ 9,358,180

Bike Facilities	
Length (km)	150.175
2023 Value	$ 2,834,053

MUP within ROW	
Length (km)	0.000
2023 Value	$0

Off-Road Trail	
Length (km)	135.348
2023 Value	$ 110,850,012

Sidewalks	
Length (km)	646.120
2023 Value	$ 298,184,380

Grade Separation	
Item Number	2
2023 Value	$ 120,000,000

Roundabout	
Item Number	8
2023 Value	$ 50,216,000

Illumination	
Item Number	6,700
2023 Value	$ 99,294,000

Total Infrastructure Value $ 5,255,947,584

City of Richmond Hill
2023 Development Charges Update Study
2015 Infrastructure Value

Road Network		
Length (km)	Arterial	7.216
	4-Lane Collector	4.260
	2-Lane Collector	94.774
	Industrial Collector	9.028
	Total	115.279
2023 Value	Arterial	$ 39,003,091
	4-Lane Collector	$ 23,024,124
	2-Lane Collector	$ 413,357,979
	Industrial Collector	$ 51,339,151
	Total	$ 526,724,344
2023 Property Value		$ 3,380,954,600
2023 Total Value		$ 4,434,403,287

Structures		
Bridge	No.	17
	Deck Area (m^2)	6696.2
	2023 Value $	$ 83,567,952
Culvert	No.	45
	Deck Area (m^2)	8146.4
	2023 Value $	$ 127,083,341

Traffic Signals		
Item Number	Full Traffic Signal	17
	Intersection Pedestrian Signal (IPS)	5
	Mid-Block Pedestrian Signal (MPS)	2
	Pedestrian Crossover	1
	Flashing Beacons	1
	Total	26
2023 Value	Full Traffic Signal	$ 8,840,000
	Intersection Pedestrian Signal (IPS)	$ 650,000
	Mid-Block Pedestrian Signal (MPS)	$ 260,000
	Pedestrian Crossover	$ 123,500
	Flashing Beacons	$ 4,680
	Total	$ 9,878,180

Bike Facilities	
Length (km)	151.547
2023 Value	$ 2,841,901

MUP within ROW	
Length (km)	0.000
2023 Value	$0

Off-Road Trail	
Length (km)	135.348
2023 Value	$ 110,850,012

Sidewalks	
Length (km)	655.941
2023 Value	$ 302,716,772

Grade Separation	
Item Number	2
2023 Value	$ 120,000,000

Roundabout	
Item Number	8
2023 Value	$ 50,216,000

Illumination	
Item Number	6,700
2023 Value	$ 99,294,000

Total Infrastructure Value $ 5,340,851,444

City of Richmond Hill
2023 Development Charges Update Study
2016 Infrastructure Value

Road Network		
Length (km)	Arterial	8.226
	4-Lane Collector	4.424
	2-Lane Collector	94.774
	Industrial Collector	11.538
	Total	118.963
2023 Value	Arterial	$ 44,461,939
	4-Lane Collector	$ 23,910,511
	2-Lane Collector	$ 413,357,979
	Industrial Collector	$ 65,612,015
	Total	$ 547,342,443
2023 Property Value		$ 3,454,869,150
2023 Total Value		$ 4,549,554,036

Structures		
Bridge	No.	17
	Deck Area (m^2)	6696.2
	2023 Value $	$ 83,567,952
Culvert	No.	45
	Deck Area (m^2)	8146.4
	2023 Value $	$ 127,083,341

Traffic Signals		
Item Number	Full Traffic Signal	17
	Intersection Pedestrian Signal (IPS)	5
	Mid-Block Pedestrian Signal (MPS)	2
	Pedestrian Crossover	1
	Flashing Beacons	1
	Total	26
2023 Value	Full Traffic Signal	$ 8,840,000
	Intersection Pedestrian Signal (IPS)	$ 650,000
	Mid-Block Pedestrian Signal (MPS)	$ 260,000
	Pedestrian Crossover	$ 123,500
	Flashing Beacons	$ 4,680
	Total	$ 9,878,180

Bike Facilities	
Length (km)	152.277
2023 Value	$ 2,846,076

MUP within ROW	
Length (km)	2.264
2023 Value	$1,844,503

Off-Road Trail	
Length (km)	135.348
2023 Value	$ 110,850,012

Sidewalks	
Length (km)	665.122
2023 Value	$ 306,953,803

Grade Separation	
Item Number	2
2023 Value	$ 120,000,000

Roundabout	
Item Number	8
2023 Value	$ 50,216,000

Illumination	
Item Number	6,700
2023 Value	$ 99,294,000

Total Infrastructure Value $ 5,462,087,903

City of Richmond Hill
2023 Development Charges Update Study
2017 Infrastructure Value

Road Network		
Length (km)	Arterial	8.226
	4-Lane Collector	4.424
	2-Lane Collector	95.011
	Industrial Collector	16.596
	Total	124.258
2023 Value	Arterial	$ 44,461,939
	4-Lane Collector	$ 23,910,511
	2-Lane Collector	$ 414,391,654
	Industrial Collector	$ 94,373,826
	Total	$ 577,137,929
2023 Property Value		$ 3,556,198,680
2023 Total Value		$ 4,710,474,539

Structures		
Bridge	No.	17
	Deck Area (m^2)	6696.2
	2023 Value $	$ 83,567,952
Culvert	No.	45
	Deck Area (m^2)	8146.4
	2023 Value $	$ 127,083,341

Traffic Signals		
Item Number	Full Traffic Signal	17
	Intersection Pedestrian Signal (IPS)	5
	Mid-Block Pedestrian Signal (MPS)	2
	Pedestrian Crossover	1
	Flashing Beacons	1
	Total	26
2023 Value	Full Traffic Signal	$ 8,840,000
	Intersection Pedestrian Signal (IPS)	$ 650,000
	Mid-Block Pedestrian Signal (MPS)	$ 260,000
	Pedestrian Crossover	$ 123,500
	Flashing Beacons	$ 4,680
	Total	$ 9,878,180

Bike Facilities	
Length (km)	152.277
2023 Value	$ 2,846,076

MUP within ROW	
Length (km)	3.950
2023 Value	$3,218,105

Off-Road Trail	
Length (km)	135.348
2023 Value	$ 110,850,012

Sidewalks	
Length (km)	667.363
2023 Value	$ 307,988,025

Grade Separation	
Item Number	2
2023 Value	$ 120,000,000

Roundabout	
Item Number	8
2023 Value	$ 50,216,000

Illumination	
Item Number	6,700
2023 Value	$ 99,294,000

Total Infrastructure Value $ 5,625,416,229

City of Richmond Hill
2023 Development Charges Update Study
2018 Infrastructure Value

Road Network		
Length (km)	Arterial	8.226
	4-Lane Collector	4.424
	2-Lane Collector	95.011
	Industrial Collector	16.596
	Total	124.258
2023 Value	Arterial	$ 44,461,939
	4-Lane Collector	$ 23,910,511
	2-Lane Collector	$ 414,391,654
	Industrial Collector	$ 94,373,826
	Total	$ 577,137,929
2023 Property Value		$ 3,556,198,680
2023 Total Value		$ 4,710,474,539

Structures		
Bridge	No.	19
	Deck Area (m^2)	10609.8
	2023 Value $	$ 132,410,429
Culvert	No.	45
	Deck Area (m^2)	8146.4
	2023 Value $	$ 127,083,341

Traffic Signals		
Item Number	Full Traffic Signal	17
	Intersection Pedestrian Signal (IPS)	6
	Mid-Block Pedestrian Signal (MPS)	2
	Pedestrian Crossover	2
	Flashing Beacons	1
	Total	28
2023 Value	Full Traffic Signal	$ 8,840,000
	Intersection Pedestrian Signal (IPS)	$ 780,000
	Mid-Block Pedestrian Signal (MPS)	$ 260,000
	Pedestrian Crossover	$ 247,000
	Flashing Beacons	$ 4,680
	Total	$ 10,131,680

Bike Facilities	
Length (km)	152.277
2023 Value	$ 2,846,076

MUP within ROW	
Length (km)	5.811
2023 Value	$4,734,280

Off-Road Trail	
Length (km)	135.348
2023 Value	$ 110,850,012

Sidewalks	
Length (km)	675.978
2023 Value	$ 311,963,847

Grade Separation	
Item Number	2
2023 Value	$ 120,000,000

Roundabout	
Item Number	8
2023 Value	$ 50,216,000

Illumination	
Item Number	6,700
2023 Value	$ 99,294,000

Total Infrastructure Value $ 5,680,004,204

City of Richmond Hill
2023 Development Charges Update Study
2019 Infrastructure Value

Road Network		
Length (km)	Arterial	8.226
	4-Lane Collector	4.424
	2-Lane Collector	95.011
	Industrial Collector	16.596
	Total	124.258
2023 Value	Arterial	$ 44,461,939
	4-Lane Collector	$ 23,910,511
	2-Lane Collector	$ 414,391,654
	Industrial Collector	$ 94,373,826
	Total	$ 577,137,929
2023 Property Value		$ 3,556,198,680
2023 Total Value		$ 4,710,474,539

Structures		
Bridge	No.	19
	Deck Area (m^2)	10609.8
	2023 Value $	$ 132,410,429
Culvert	No.	45
	Deck Area (m^2)	8146.4
	2023 Value $	$ 127,083,341

Traffic Signals		
Item Number	Full Traffic Signal	17
	Intersection Pedestrian Signal (IPS)	6
	Mid-Block Pedestrian Signal (MPS)	2
	Pedestrian Crossover	2
	Flashing Beacons	1
	Total	28
2023 Value	Full Traffic Signal	$ 8,840,000
	Intersection Pedestrian Signal (IPS)	$ 780,000
	Mid-Block Pedestrian Signal (MPS)	$ 260,000
	Pedestrian Crossover	$ 247,000
	Flashing Beacons	$ 4,680
	Total	$ 10,131,680

Bike Facilities	
Length (km)	152.277
2023 Value	$ 2,846,076

MUP within ROW	
Length (km)	7.374
2023 Value	$6,007,672

Off-Road Trail	
Length (km)	135.348
2023 Value	$ 110,850,012

Sidewalks	
Length (km)	678.772
2023 Value	$ 313,253,278

Grade Separation	
Item Number	2
2023 Value	$ 120,000,000

Roundabout	
Item Number	8
2023 Value	$ 50,216,000

Illumination	
Item Number	6,700
2023 Value	$ 99,294,000

Total Infrastructure Value $ 5,682,567,026

City of Richmond Hill
2023 Development Charges Update Study
2020 Infrastructure Value

Road Network		
Length (km)	Arterial	8.226
	4-Lane Collector	4.424
	2-Lane Collector	95.011
	Industrial Collector	16.596
	Total	124.258
2023 Value	Arterial	$ 44,461,939
	4-Lane Collector	$ 23,910,511
	2-Lane Collector	$ 414,391,654
	Industrial Collector	$ 94,373,826
	Total	$ 577,137,929
2023 Property Value		$ 3,556,198,680
2023 Total Value		$ 4,710,474,539

Structures		
Bridge	No.	19
	Deck Area (m^2)	10609.8
	2023 Value $	$ 132,410,429
Culvert	No.	45
	Deck Area (m^2)	8146.4
	2023 Value $	$ 127,083,341

Traffic Signals		
Item Number	Full Traffic Signal	17
	Intersection Pedestrian Signal (IPS)	6
	Mid-Block Pedestrian Signal (MPS)	2
	Pedestrian Crossover	2
	Flashing Beacons	1
	Total	28
2023 Value	Full Traffic Signal	$ 8,840,000
	Intersection Pedestrian Signal (IPS)	$ 780,000
	Mid-Block Pedestrian Signal (MPS)	$ 260,000
	Pedestrian Crossover	$ 247,000
	Flashing Beacons	$ 4,680
	Total	$ 10,131,680

Bike Facilities	
Length (km)	152.277
2023 Value	$ 2,846,076

MUP within ROW	
Length (km)	7.374
2023 Value	$6,007,672

Off-Road Trail	
Length (km)	135.348
2023 Value	$ 110,850,012

Sidewalks	
Length (km)	678.924
2023 Value	$ 313,323,426

Grade Separation	
Item Number	2
2023 Value	$ 120,000,000

Roundabout	
Item Number	8
2023 Value	$ 50,216,000

Illumination	
Item Number	6,700
2023 Value	$ 99,294,000

Total Infrastructure Value $ 5,682,637,174

City of Richmond Hill
2023 Development Charges Update Study
2021 Infrastructure Value

Road Network		
Length (km)	Arterial	8.226
	4-Lane Collector	4.424
	2-Lane Collector	95.011
	Industrial Collector	16.596
	Total	124.258
2023 Value	Arterial	$ 44,461,939
	4-Lane Collector	$ 23,910,511
	2-Lane Collector	$ 414,391,654
	Industrial Collector	$ 94,373,826
	Total	$ 577,137,929
2023 Property Value		$ 3,556,198,680
2023 Total Value		$ 4,710,474,539

Structures		
Bridge	No.	19
	Deck Area (m^2)	10609.8
	2023 Value $	$ 132,410,429
Culvert	No.	45
	Deck Area (m^2)	8146.4
	2023 Value $	$ 127,083,341

Traffic Signals		
Item Number	Full Traffic Signal	17
	Intersection Pedestrian Signal (IPS)	7
	Mid-Block Pedestrian Signal (MPS)	2
	Pedestrian Crossover	2
	Flashing Beacons	1
	Total	29
2023 Value	Full Traffic Signal	$ 8,840,000
	Intersection Pedestrian Signal (IPS)	$ 910,000
	Mid-Block Pedestrian Signal (MPS)	$ 260,000
	Pedestrian Crossover	$ 247,000
	Flashing Beacons	$ 4,680
	Total	$ 10,261,680

Bike Facilities	
Length (km)	152.277
2023 Value	$ 2,846,076

MUP within ROW	
Length (km)	7.374
2023 Value	$6,007,672

Off-Road Trail	
Length (km)	135.348
2023 Value	$ 110,850,012

Sidewalks	
Length (km)	678.924
2023 Value	$ 313,323,426

Grade Separation	
Item Number	2
2023 Value	$ 120,000,000

Roundabout	
Item Number	8
2023 Value	$ 50,216,000

Illumination	
Item Number	6,700
2023 Value	$ 99,294,000

Total Infrastructure Value $ 5,682,767,174

City of Richmond Hill
2023 Development Charges Update Study
2022 Infrastructure Value

Road Network		
Length (km)	Arterial	8.226
	4-Lane Collector	4.424
	2-Lane Collector	95.011
	Industrial Collector	16.596
	Total	124.258
2023 Value	Arterial	$ 44,461,939
	4-Lane Collector	$ 23,910,511
	2-Lane Collector	$ 414,391,654
	Industrial Collector	$ 94,373,826
	Total	$ 577,137,929
2023 Property Value		$ 3,556,198,680
2023 Total Value		$ 4,710,474,539

Structures		
Bridge	No.	19
	Deck Area (m^2)	10609.8
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Traffic Signals		
Item Number	Full Traffic Signal	17
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Bike Facilities	
Length (km)	152.277
2023 Value	$ 2,846,076

MUP within ROW	
Length (km)	7.374
2023 Value	$6,007,672

Off-Road Trail	
Length (km)	135.348
2023 Value	$ 110,850,012

Sidewalks	
Length (km)	678.924
2023 Value	$ 313,323,426

Grade Separation	
Item Number	2
2023 Value	$ 120,000,000

Roundabout	
Item Number	8
2023 Value	$ 50,216,000

Illumination	
Item Number	6,700
2023 Value	$ 99,294,000

Total Infrastructure Value $ 5,682,767,174

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Appendix iii

Future (2041) Service Level Analysis

City of Richmond Hill
2023 Development Charges Update Study

2041 Service Level Analysis

SLRN ID	Street Name	From	To	Length (km)	2041			
					Lanes	Estimated AADT	Lane KMs	VKT
C2087	19th Avenue	Leslie Street	Highway 404	1.010	2	15930	2.020	16088
	Addison Street	Addison Street (e-w segment)	Weldrick Road West	0.530	2	6440	1.060	3413
	Addison Street	Addison Street (n-s segment)	Yonge Street	0.100	2	6060	0.200	606
C3918	Alpaca Drive	Jefferson Sideroad	Tower Hill Road	0.562	2	1170	1.124	658
C1258	Ardwold Gate	Bayview Avenue	Strathearn Avenue	0.410	2	4440	0.820	1820
C0267	Avenue Road	Edgar Avenue	Carrville Road	0.532	2	9330	1.064	4962
C0261	Avenue Road	Carrville Road	Weldrick Road W	1.023	2	9060	2.046	9270
C2318	Bantry Avenue	Bayview Avenue	Silver Linden Drive	0.590	2	9220	1.181	5443
C2176	Bantry Avenue	Silver Linden Drive	Melville Street	0.343	2	6930	0.686	2378
C3024	Bantry Avenue	Melville Street	Red Maple Road	0.385	2	8640	0.771	3330
C2616	Bantry Avenue	Red Maple Road	Yonge Street	0.566	2	11150	1.131	6307
C0978	Bernard Avenue	Silverwood Avenue	Viewmark Drive	0.178	2	420	0.355	75
C0997	Bernard Avenue	Viewmark Drive	Oldhill Street	0.912	2	50	1.823	46
C0859	Bernard Avenue	Oldhill Street	Lorraine Street	0.407	2	60	0.814	24
C0967	Bernard Avenue	Lorraine Street	Yorkland Street	0.092	2	60	0.184	6
C0965	Bernard Avenue	Yorkland Street	Yonge Street	0.303	4	5140	1.211	1556
C3231	Bethesda Sideroad	Highway 404	Leslie Street	1.179	2	6960	2.358	8206
C2985	Bethesda Sideroad	Leslie Street	Bayview Avenue	1.798	2	9420	3.597	16941
C1998	Blackforest Drive	Yonge Street	Regatta Avenue	0.841	2	1260	1.682	1060
C1193	Blackmore Avenue	Valleymede Drive	Bayview Avenue	0.673	2	5150	1.345	3465
C1273	Boake Trail	Strathearn Avenue	Spadina Road	0.551	2	3030	1.101	1668
C1358	Boake Trail	Spadina Road	Delevan Court	1.471	2	6690	2.941	9839
C1673	Boake Trail	Delevan Court	Clarendon Drive	0.171	2	4990	0.343	855
C1531	Boake Trail	Clarendon Drive	Major Mackenzie Drive East	0.547	2	6420	1.095	3514
C1160	Briggs Avenue	Valleymede Drive	Bantry Avenue	0.643	2	5510	1.286	3543
C1701	Brodie Drive	Staples Avenue	Orlando Avenue	0.440	2	7910	0.880	3480
C1701	Brodie Drive	Vogell Road	Orlando Avenue	0.719	2	10140	1.438	7291
C0953	Brookside Road	Yonge Street	Leyburn Avenue	0.299	2	4900	0.598	1465
C0855	Brookside Road	Leyburn Avenue	Shaftsbury Avenue	0.898	2	1950	1.797	1752
C2668	Canyon Hill Avenue	Yonge Street	Palomino Drive	0.534	2	6510	1.068	3477
C2639	Canyon Hill Avenue	Palomino Drive	Shaftsbury Avenue	0.469	2	5710	0.938	2678
C0785	Canyon Hill Avenue	Shaftsbury Avenue	Whalen Court	0.762	2	5200	1.524	3962
C3179	Canyon Hill Avenue	Whalen Court	Bathurst Street	0.463	2	3660	0.927	1696
	Cedar Avenue	High Tech Road	Garden Avenue Extension	0.180	2	7740	0.360	1393
	Cedar Avenue	Garden Avenue Extension	Langstaff Road	0.440	2	11770	0.880	5179
C0740	Centre Street East	Yonge Street	Pugsley Avenue	0.483	2	4580	0.967	2213
C3228	Centre Street East	Pugsley Avenue	Newkirk Road	0.598	2	7730	1.195	4619
C0751	Centre Street East	Newkirk Road	Sussex Avenue	0.261	2	8130	0.522	2122
C1553	Centre Street East	Sussex Avenue	Bayview Avenue	0.531	2	5900	1.062	3132
C1040	Chalmers Road	Highway 7	Valleymede Drive	0.593	2	4340	1.186	2574
C2899	Clarendon Drive	Boake Trail	Boake Trail	1.139	2	4760	2.277	5420
C1532	Clarendon Drive	Boake Trail	Spadina Road	0.493	2	6790	0.986	3349
	Collector Road 1	Bathurst Street	Collector Road 2	0.650	2	5100	1.300	3315
	Collector Road 1	Collector Road 2	Highway 7	0.500	2	2830	1.000	1415
	Collector Road 2	Bathurst and Highway 7 MTSA	Collector Road 1	0.230	2	2270	0.460	522
	Collector Road 3	Bathurst Street	Collector Road 1	0.300	2	480	0.600	144
	Collector Road 4 (ring road)	Yonge-Carville/16th MTSA	East of Yonge Street & South of 16th Avenue	0.400	2	4120	0.800	1648
	Collector Road 5	Yonge-Carville/16th MTSA	West of Yonge Street & North of Carville Road	0.420	2	8420	0.840	3536
	Collector Road 6	Yonge-Carville/16th MTSA	East of Yonge Street and North of 16th Avenue	0.330	2	4030	0.660	1330
	Collector Road 7	Yonge-Carville/16th MTSA	East of Yonge Street and North of 16th Avenue	0.470	2	8290	0.940	3896
C1964	Coon'S Road	Elm Grove Avenue	Humberland Drive	0.411	2	4410	0.822	1812
C3262	Coon'S Road	Humberland Drive	Bloomfield Trail	0.813	2	840	1.627	683
C4041	Coon'S Road	Bloomfield Trail	Yonge Street	0.721	2	2450	1.442	1767
C1595	Crosby Avenue	Bayview Avenue	Osiris Drive	0.604	2	5000	1.208	3021
C2929	Crosby Avenue	Osiris Drive	Newkirk Road	0.388	2	5330	0.776	2068
C0737	Crosby Avenue	Newkirk Road	Pugsley Avenue	0.466	2	8520	0.931	3968
C0679	Crosby Avenue	Pugsley Avenue	Yonge Street	0.366	2	7420	0.733	2718
C1868	Devonsleigh Boulevard	19th Avenue	Brookwood Drive	0.973	2	4430	1.946	4311
C1840	Devonsleigh Boulevard	Brookwood Drive	Yonge Street	0.758	2	4020	1.516	3048
C1363	Dewbourne Avenue	Boake Trail	16th Avenue	0.584	2	5820	1.169	3400
C1378	East Beaver Creek Road	Leslie Street	East Wilmot Street	0.895	4	17120	3.582	15331
C1320	East Beaver Creek Road	East Wilmot Street	East Pearce Street	0.477	4	18230	1.909	8702
C1087	East Beaver Creek Road	East Pearce Street	Highway 7	0.535	4	17330	2.142	9280
C1310	East Pearce Street	Leslie Street	East Beaver Creek Road	0.514	2	7860	1.028	4042
C1308	East Wilmot Street	Leslie Street	East Beaver Creek Road	0.522	2	6370	1.045	3328
C0121	Edgar Avenue	Avenue Road	Pearson Avenue S Leg	0.467	2	820	0.935	383
C0857	Edward Avenue	Elgin Mills Road East	None	0.737	2	4770	1.475	3517
C1125	Elm Avenue	16th Avenue	Springbrook Drive	0.604	2	2600	1.208	1570
C0864	Enford Road	Elgin Mills Road East	Industrial Road	0.320	2	6010	0.640	1923
	Enford Road	Industrial Road	Yonge Street	0.800	2	3620	1.600	2896
C1447	Essex Avenue	Major Mackenzie Drive East	Palmer Avenue	0.415	2	8410	0.830	3491

City of Richmond Hill
2023 Development Charges Update Study

2041 Service Level Analysis

					2041			
SLRN ID	Street Name	From	To	Length (km)	Lanes	Estimated AADT	Lane KMs	VKT
C1409	Essex Avenue	Palmer Avenue	Weldrick Road East	0.418	2	7540	0.837	3155
	Far Niente Street	High Tech Road	Highway 7	0.500	2	12000	1.000	6000
C1650	Farmstead Road	Bayview Avenue	Shirley Drive	1.214	2	5430	2.427	6590
C2248	Frank Endean Road	Bayview Avenue	Redstone Road	0.656	2	4360	1.312	2861
C1657	Frank Endean Road	Redstone Road	Farmstead Road	0.752	2	5300	1.504	3987
C3371	Frank Endean Road	Farmstead Road	Major Mackenzie Drive East	0.498	2	7440	0.995	3702
C0072	Garden Avenue	Hunter'S Point Drive	Pearson Avenue	0.427	2	5360	0.854	2289
C0044	Garden Avenue	Pearson Avenue	Yonge Stree	0.559	2	7930	1.118	4433
	Garden Avenue	Red Maple Road	Cedar Avenue	0.220	2	3930	0.440	865
	Garden Avenue	Cedar Avenue	Silver Linden Drive	0.350	2	7830	0.700	2741
	Garden Avenue	Silver Linden Drive	Far Niente Street	0.370	2	5680	0.740	2102
	Garden Avenue	Far Niente Street	Bayview Avenue	0.210	2	21990	0.420	4618
C1694	Greenhill Avenue	Leslie Street	Clarendon Drive	0.253	2	5530	0.506	1398
C2602	Greyfriars Avenue	Blackforest Drive	Coon'S Road	0.336	2	4030	0.671	1353
C2630	Hall Street	Wright Street	Mill Street	0.065	2	1200	0.130	78
C0560	Harding Boulevard West	Yonge Street	Kersey Crescent	0.817	3	5020	2.451	4102
C0539	Harding Boulevard West	Kersey Crescent	Major Mackenzie Drive West	0.349	3	5280	1.046	1841
C3159	Headford Avenue	Boake Trail	Leslie Street	0.326	2	6910	0.653	2255
C2645	High Tech Road	Yonge Street	Red Maple Road	0.579	4	12100	2.318	7011
C3360	High Tech Road	Red Maple Road	Silver Linden Drive	0.690	4	8870	2.760	6121
C2296	High Tech Road	Silver Linden Drive	Bayview Avenue	0.622	4	12450	2.487	7739
C2602	Humberland Drive	Coon'S Road	Red Cardinal Trail	0.262	2	4700	0.523	1230
C2136	Humberland Drive	Red Cardinal Trail	Woodhaven Crescent W Leg	0.601	2	90	1.202	54
C2139	Humberland Drive	Woodhaven Crescent W Leg	Bathurst Street	0.365	2	4300	0.729	1568
C0058	Hunter's Point Drive	Garden Avenue	Highway 7	0.565	2	7420	1.129	4190
C3110	Jefferson Forest Drive	Yonge Street	Hunting Ridges Drive	1.091	2	3540	2.182	3862
C3114	Jefferson Forest Drive	Hunting Ridges Drive	19th Avenue	0.713	2	7590	1.426	5413
C3497	Jefferson Sideroad	Yonge Street	Beech Avenue	0.953	2	10080	1.906	9607
C3725	Jefferson Sideroad	Beech Avenue	Bathurst Street	1.214	2	10020	2.428	12163
C3732	John Birchall Road	Leslie Street	60m south of Bawden Drive	0.230	4	6940	0.922	1600
C3732	John Birchall Road	Elgin Mills Road East	60m south of Bawden Drive	0.437	4	14740	1.748	6441
C0336	Kersey Crescent	Weldrick Road West	May Avenue	0.511	2	6770	1.022	3459
C0347	Kersey Crescent	May Avenue	Harding Boulevard West	0.597	2	7370	1.195	4402
C3680	Kingshill Road	King Road	Poulias Avenue	0.443	2	5050	0.887	2239
C3397	Kingshill Road	Poulias Avenue	Holtby Street	0.568	2	1640	1.136	931
C3648	Kingshill Road	Holtby Street	Bathurst Street	0.465	2	5210	0.930	2422
C2217	Lacewood Drive	Gamble Road	Nottingham Drive	0.345	2	960	0.690	331
C0780	Larratt Lane	Shaftsbury Avenue	Canyon Hill Avenue	0.737	2	4680	1.473	3447
C0789	Larratt Lane	Canyon Hill Avenue	Elgin Mills Road West	0.469	2	6050	0.938	2836
C2752	Leyburn Avenue	Brookside Road	Canyon Hill Avenue	0.488	2	6050	0.977	2955
	Leyburn Avenue	Canyon Hill Avenue	Yonge Street	0.330	2	5300	0.660	1749
	Leyburn Avenue	Yonge Street	Bernard Avenue	0.420	2	4530	0.840	1903
C0675	Mill Street	Hall Street	Trench Street	0.766	2	4100	1.532	3140
C0498	Mill Street	Trench Street	Ellery Drive	0.754	2	6740	1.508	5081
C0419	Mill Street	Ellery Drive	Bathurst Street	0.366	2	5460	0.731	1996
C3939	Milos Road	Bathurst Street	Philips Lake Court	0.585	2	5610	1.170	3282
C3933	Milos Road	Philips Lake Court	Jefferson Sideroad	0.507	2	4320	1.014	2190
C1370	Mural Street	16th Avenue	East Beaver Creek Road	0.859	4	15300	3.436	13144
C0886	Newkirk Road	Elgin Mills Road East	Crosby Avenue	1.123	3	11740	3.370	13188
C0761	Newkirk Road	Crosby Avenue	Centre Street East	0.589	3	14900	1.768	8782
C0584	Newkirk Road	Centre Street East	Major Mackenzie Drive Eas	0.429	4	16450	1.716	7058
C4081	Norman Bethune Avenue	East Beaver Creek Road	230m east of East Beaver Creek Road	0.230	4	18650	0.920	4290
C4081	Norman Bethune Avenue	230m east of East Beaver Creek Road	Hwy 404	0.164	4	18650	0.656	3059
C2051	North Lake Road	Bayview Avenue	Wood Rim Drive	0.944	2	9930	1.887	9371
C1984	North Lake Road	Wood Rim Drive	Yonge Street	1.137	2	9890	2.274	11247
	North-South Road 1	Carville Road	Oak Avenue	0.350	2	7570	0.700	2650
	North-South Road 1	Oak Avenue	Scott Drive	0.400	2	7160	0.800	2864
	North-South Road 1	Scott Drive	Westwood Lane	0.230	2	10300	0.460	2369
	North-South Road 1	Westwood Lane	High Tech Road (west ext.)	0.310	2	5600	0.620	1736
	North-South Road 1	High Tech Road (west ext.)	Garden Avenue	0.260	2	2980	0.520	775
C2227	Nottingham Drive	Yonge Street	Lacewood Drive	0.237	2	2020	0.475	479
C3544	Old Colony Road	Bayview Avenue	Lebovic Drive	0.777	2	9550	1.554	7422
C2567	Old Colony Road	Lebovic Drive	Yonge Street	1.290	2	8930	2.580	11521
C3756	Orlando Avenue	Leslie Street	Vogell Road	0.626	3	4620	1.878	2892
	Orlando Avenue	Vogell Road	Highway 404	0.350	2	10870	0.700	3805
C1495	Palmer Avenue	Bayview Avenue	Essex Avenue	0.511	2	3360	1.022	1717
C1961	Parker Avenue	Coon'S Road	King Road	0.743	2	4730	1.486	3514
C0047	Pearson Avenue	Garden Avenue	Westwood Lane	0.592	2	4760	1.185	2820
C0145	Pearson Avenue	Westwood Lane	Edgar Avenue	0.453	2	6460	0.907	2929
C3876	Performance Drive	Leslie Street	Viarenzo Drive	0.455	4	6870	1.820	3126
	Performance Drive	Viarenzo Drive	Highway 404	0.520	4	11770	2.080	6120
C2232	Princeton Avenue	Leslie Street	Redstone Road	0.567	2	7070	1.133	4006
C3187	Red Cardinal Trail	Humberland Drive	Barberry Crescent	0.551	2	1210	1.102	667
C2674	Red Cardinal Trail	Barberry Crescent	Bloomington Road	0.839	2	2320	1.679	1947
C0296	Red Maple Road	16th Avenue	Bantry Avenue	1.223	2	7750	2.447	9481

City of Richmond Hill
2023 Development Charges Update Study

2041 Service Level Analysis

SLRN ID	Street Name	From	To	Length (km)	2041			
					Lanes	Estimated AADT	Lane KMs	VKT
C2643	Red Maple Road	Bantry Avenue	Highway 7	0.880	4	13130	3.522	11560
C3445	Redstone Road	Elgin Mills Road East	Toporowski Avenue	0.567	2	7830	1.134	4441
C2413	Redstone Road	Toporowski Avenue	Princeton Avenue	0.390	2	1990	0.781	777
C1774	Redstone Road	Princeton Avenue	Shirley Drive	0.673	2	4970	1.346	3345
C1775	Redstone Road	Shirley Drive	Frank Endean Road	0.481	2	5640	0.963	2715
C1751	Redstone Road	Frank Endean Road	Bayview Avenue	0.375	2	7170	0.750	2688
C0479	Regent Street	Bathurst Street	Ellsworth Avenue	0.818	2	6610	1.636	5406
C0523	Regent Street	Ellsworth Avenue	Oxford Street	0.903	2	1720	1.806	1554
C0800	Regent Street	Oxford Street	Elgin Mills Road West	0.284	2	6270	0.569	1783
C3195	Rollinghill Road	Tower Hill Road	Skywood Drive	0.311	2	5640	0.623	1755
C3085	Rollinghill Road	Skywood Drive	Gamble Road	0.980	2	6110	1.960	5988
C3695	Rothbury Road	Gamble Road	Mayan Avenue	0.484	2	8510	0.969	4123
C2931	Rothbury Road	Mayan Avenue	Brookside Road	0.694	2	4590	1.389	3187
C0142	Scott Drive	Pearson Avenue	Yonge Street	0.571	2	6590	1.141	3760
C3612	Selwyn Road	Gamble Road	Hearthside Avenue	0.763	2	5420	1.525	4133
C3851	Selwyn Road	Hearthside Avenue	Tower Hill Road	0.451	2	620	0.903	280
C3851	Selwyn Road	Tower Hill Road	Jefferson Sideroad	0.458	2	5910	0.915	2705
C0779	Shaftsbury Avenue	Bathurst Street	Larratt Lane	0.473	2	8690	0.947	4113
C2213	Shaftsbury Avenue	Larratt Lane	Brookside Road	0.606	2	770	1.212	467
C0812	Shaftsbury Avenue	Brookside Road	Canyon Hill Avenue	0.496	2	4960	0.992	2459
C0801	Shaftsbury Avenue	Canyon Hill Avenue	Elgin Mills Road West	0.498	2	5440	0.995	2707
C2906	Shirley Drive	Elgin Mills Road East	Redstone Road	0.949	2	7250	1.898	6882
C1795	Shirley Drive	Redstone Road	Farmstead Road	0.863	2	6000	1.726	5177
C2454	Shirley Drive	Farmstead Road	Major Mackenzie Drive East	0.395	2	6670	0.790	2635
C2179	Silver Linden Drive	Red Maple Road	Bantry Avenue	1.103	2	2590	2.206	2857
C2288	Silver Linden Drive	Bantry Avenue	High Tech Road	0.442	2	6480	0.883	2862
C3223	Silver Linden Drive	High Tech Road	Highway 7	0.379	4	9060	1.515	3431
C3596	Silver Maple Road	Jefferson Sideroad	Birchbark Court	0.448	2	3880	0.896	1737
C3637	Silver Maple Road	Birchbark Court	Yonge Street	0.775	2	1420	1.550	1100
C0975	Silverwood Avenue	Yonge Street	Bernard Avenue	0.350	2	5500	0.700	1925
C3244	Snively Street	Bayview Avenue	Worthington Avenue	0.700	2	5110	1.401	3579
C1519	Spadina Road	Major Mackenzie Drive	Weldrick Road East	0.743	2	8450	1.486	6277
C1513	Spadina Road	Weldrick Road East	Boake Trail	0.872	2	7150	1.744	6236
C1348	Spadina Road	Boake Trail	16th Avenue	0.466	2	6590	0.932	3072
C1148	Springbrook Drive	Bayview Avenue	Elm Avenue	0.789	2	4960	1.579	3915
C2936	Staples Avenue	Leslie Street	Vogell Road	0.625	2	14000	1.250	8749
C1248	Strathearn Avenue	Valleymede Drive	16th Avenue	0.333	2	5300	0.667	1767
C1229	Strathearn Avenue	16th Avenue	Ardwold Gate	0.719	2	6900	1.437	4959
C1503	Strathearn Avenue	Ardwold Gate	Weldrick Road East	0.615	2	7130	1.231	4387
C1499	Strathearn Avenue	Weldrick Road East	Palmer Avenue	0.439	2	4770	0.877	2093
C1528	Strathearn Avenue	Palmer Avenue	Spadina Road	0.438	2	4420	0.875	1934
C2090	Subrisco Avenue	Bayview Avenue	Woodriver Street	0.330	2	3560	0.659	1173
C2416	Toporowski Avenue	Leslie Street	Redstone Road	0.468	2	4070	0.937	1906
C3200	Tower Hill Road	Yonge Street	Mockingbird Drive	0.783	2	1760	1.565	1377
C3197	Tower Hill Road	Mockingbird Drive	Rollinghill Road	0.408	2	2490	0.817	1017
C3091	Tower Hill Road	Rollinghill Road	Alpaca Drive	0.383	2	3870	0.766	1483
C3564	Tower Hill Road	Alpaca Drive	Bathurst Street	0.701	2	4040	1.403	2833
C0471	Trench Street	Mill Street	Centre Street West	0.305	2	6670	0.611	2037
C0535	Trench Street	Centre Street West	Major Mackenzie Dr	0.525	2	7960	1.050	4181
C3880	Ultimate Drive	Via Renzo Drive	None	0.356	2	500	0.712	178
C1082	Valleymede Drive	Highway 7	Chalmers Road	0.930	2	5510	1.861	5127
C1062	Valleymede Drive	Chalmers Road	Briggs Avenue	0.468	2	7540	0.937	3531
C1169	Valleymede Drive	Briggs Avenue	Blackmore Avenue	0.387	2	6480	0.774	2508
C1207	Valleymede Drive	Blackmore Avenue	Strathearn Avenue	0.350	2	5000	0.700	1750
C1146	Valleymede Drive	Strathearn Avenue	16th Avenue	0.738	2	7110	1.476	5247
C3728	Via Renzo Drive	Leslie Street	Performance Drive	0.750	2	7290	1.500	5467
C3728	Via Renzo Drive	Performance Drive	Major Mackenzie Drive East	0.677	4	14870	2.708	10065
C1380	Vogell Road	16th Avenue	Brodie Drive	0.218	4	27030	0.872	5896
C1380	Vogell Road	Brodie Drive	Orlando Avenue	0.836	4	8750	3.343	7313
C1380	Vogell Road	Staples Avenue	Orlando Avenue	0.390	2	5210	0.780	2032
	Vogell Road	Staples Avenue	Major Mackenzie Drive	1.000	2	6720	2.000	6720
C0368	Weldrick Road East	Yonge Street	Pagehurst Court	0.573	2	7440	1.146	4262
C0402	Weldrick Road East	Pagehurst Court	Essex Avenue	0.844	2	7260	1.687	6125
C1426	Weldrick Road East	Essex Avenue	Bayview Avenue	0.669	2	5490	1.337	3671
C1438	Weldrick Road East	Bayview Avenue	Strathearn Avenue	0.277	2	6780	0.554	1879
C1502	Weldrick Road East	Strathearn Avenue	Spadina Road	0.714	2	4260	1.428	3041
C0263	Weldrick Road West	Yonge Street	Kersey Crescent	0.870	2	5780	1.739	5026
C0160	Weldrick Road West	Kersey Crescent	Walmer Road	0.584	2	5900	1.168	3447
C0199	Weldrick Road West	Walmer Road	Bathurst Street	0.694	2	5020	1.388	3484
C1284	West Beaver Creek Road	Leslie Street	Granton Drive	0.200	4	12450	0.802	2495
C1284	West Beaver Creek Road	Granton Drive	West Wilmot Street	0.824	3	14270	2.471	11756

City of Richmond Hill
2023 Development Charges Update Study

2041 Service Level Analysis

SLRN ID	Street Name	From	To	Length (km)	2041			
					Lanes	Estimated AADT	Lane KMs	VKT
C1282	West Beaver Creek Road	West Wilmot Street	West Pearce Street	0.651	3	7860	1.952	5115
C1085	West Beaver Creek Road	West Pearce Street	Highway 7	0.472	4	16220	1.888	7655
C1312	West Pearce Street	Leslie Street	West Beaver Creek Road	0.358	2	8290	0.716	2968
C1283	West Wilmot Street	Leslie Street	West Beaver Creek Road	0.687	2	7460	1.374	5124
C3164	William F. Bell Parkway	Leslie Street	Hartney Drive	0.170	2	5250	0.340	893
C2522	Wood Rim Drive	Worthington Avenue	North Lake Road	0.667	2	3800	1.334	2535
C0980	Woodriver Street	Bayview Avenue	Subrisco Avenue	0.782	2	1420	1.565	1111
C2027	Worthington Avenue	Yonge Street	Lorridge Street	0.719	2	2890	1.438	2078
C2535	Worthington Avenue	Lorridge Street	Wood Rim Drive	0.437	2	6510	0.875	2847
C3364	Worthington Avenue	Wood Rim Drive	40m north of Litchi Court	0.383	2	3470	0.766	1329
C3364	Worthington Avenue	40m north of Litchi Court	Snively Street	0.196	2	3470	0.392	680
C3296	Worthington Avenue	Snively Street	Bloomington Road	0.696	2	3130	1.391	2177
C0678	Wright Street	Yonge Street	Hall Street	0.259	2	7230	0.518	1873
C0861	Yonge Street	Elgin Mills Road	Oxford Street	0.319	4	34100	1.278	10893
C0728	Yonge Street	Oxford Street	Levendale Road	0.463	4	30100	1.851	13931
C0690	Yonge Street	Levendale Road	Crosby Avenue	0.289	4	36450	1.157	10547
C0690	Yonge Street	Crosby Avenue	Wright Street	0.244	4	33440	0.978	8173
C0690	Yonge Street	Wright Street	Centre Street East	0.232	4	34390	0.928	7982
C0620	Yonge Street	Centre Street East	Major Mackenzie Drive East	0.524	4	30860	2.096	16171
C0976	Yorkland Street	Devonsleigh Boulevard	Bernard Avenue	0.707	2	4680	1.415	3310
C0976	Yorkland Street	Bernard Avenue	Squire Drive	0.359	2	6190	0.718	2223
C0976	Yorkland Street	Squire Drive	Bernard Avenue	0.112	2	4000	0.225	449
C0883	Yorkland Street	Bernard Avenue	Elgin Mills Road East	0.577	4	14490	2.308	8361
				Totals:			301.8658	945623

# LANES	VKT
2	672896
3	47676
4	225051
5	0.0
6	0.0
TOTAL	**945623**

Appendix C

Technical Memo – Policy Recommendations

Memo

Date:	Thursday, September 21, 2023
Project:	City of Richmond Hill Transportation Master Plan Development Charges Background Study
To:	Tong Wang (City of Richmond Hill)
Cc:	Hubert Ng (City of Richmond Hill)
From:	Qingjie Zeng, Keyur Shah (HDR)
Subject:	Technical Memo 2 – Policy Recommendations (Draft Final2)

1 Introduction

HDR has been retained by the City of Richmond Hill (the City) to conduct a Transportation Master Plan Development Charges (D.C.) Background Study for the year 2023 in accordance with the Development Charges Act (1997, S.O. 1997, C.27) and associated regulations. This study needs to be completed concurrently with and in support of the City's ongoing Transportation Master Plan Update and D.C. By-law Update.

This technical memorandum summarizes approaches being considered by different municipalities to estimate the Benefit to Existing (BTE) and Post Period Benefit (PPB) shares from the development charges for the transportation network improvements, and recommends the methodologies and allocations of BTE and PPB which may be considered by the City in the transportation background study development charges update.

2 Benefit to Existing (BTE) and Post Period Benefit (PPB)

Development charges are fees collected by municipalities from development to fund growth-related infrastructure. Infrastructure projects funded by development charges must serve growth. Development charges are collected for many municipal services including roads, transit, public works, libraries, parks and recreation, fire services and others.

The Development Charges (D.C.) Act, in Section 5 (1) 6, stipulates that "*the increase in the need for service must be reduced by the extent to which an increase in service to meet the increased need would benefit existing development*". This apportioning of costs is referred to as Benefit to Existing (BTE) development or the non-growth share. While this section of the Act can be used to justify reductions to D.C. capital cost recovery, the intent of the D.C. Act is that growth should pay for itself and not be a burden on existing taxpayers.

The D.C. Act does not specify how the non-growth share is to be determined and different approaches can be used to determine a dollar value that can be attributed to the existing residents.

Post Period Benefit (PPB) share refers to the cost of oversized infrastructure capacity which is not required by development anticipated within the planning period (i.e., up to 2041 for this D.C. study), and will clearly benefit development in a subsequent period (i.e., beyond 2041).

PPB is not explicitly addressed within the D.C. Act. For the most part, the various roads and associated needs are identified through traffic modeling and master planning and targeting specific residential and non-residential growth assumptions. The projects included in the Transportation Background Study for D.C. update are meant to address the transportation needs for the trips that would be generated from proposed/planned growth that would add to the City road system. Generally, the projects included in the planning horizon are meant to address needs for the planning horizon year (i.e., 2041) and are not designed for oversizing provisions.

3 City's Approach to BTE (2019 D.C.)

The City of Richmond Hill completed its D.C. study in 2019. In 2021, the D.C. by-law was updated to meet the requirements of the Development Charges Act as amended by Bill 108 (More Homes, More Choice Act, 2019), Bill 138 (Plan to Build Ontario Act, 2019), and Bill 197 (COVID-19 Economic Recovery Act, 2020), and Bill 213 (Better for People, Smarter for Business Act, 2020).

The D.C. Background Study report does not provide specific information on the determination of BTE share for roads and related services. The summary of BTE presented in **Table 1** was inferred from the cost table for road projects.

Table 1: City of Richmond Hill – Benefit to Existing (BTE) by Project Type

Project Type	Benefit to Existing	Description / Remarks
New Roads	0%	
Road Widenings	0 to 100%	Varies for different projects; the report does not provide rationale behind different allocations
New Grade Separation	0 or 70%	0% for two CN rail grade separations 70% for one crossover
Hwy 404 Overpass	0%	Three overpasses
Intersection Improvements	0%	Applied to three specific projects
Traffic Signals	0%	City-wide program
Transportation Improvements	34 - 71%	Roadway improvements (details n/a)
	0%	Traffic signals
Active Transportation	70%	Multi-modal Transportation Initiatives
	0 or 70%	Sidewalk
Studies	0%	TDM initiatives, Pedestrians & Cycling Master Plan Implementation, Village Core TMP Implementation

4 City's Approach to PPB (2019 D.C.)

The D.C. Background Study report provided no information on the determination of PPB share for roads and related services. The summary of PPB presented in **Table 2** was inferred from the cost table for road projects.

Table 2: City of Richmond Hill - Post-Period Benefit (PPB) by Project Type

Project Type	Post-Period Benefit	Description / Remarks
New Roads	25%	
Road Widenings	0 or 25%	
New Grade Separation	0 – 25%	0% for one crossover 20 - 25% two CN rail grade separations
Hwy 404 Overpass	20%	Three overpasses
Intersection Improvements	0%	Applied to three specific projects
Traffic Signals	0%	City-wide program
Transportation Improvements	0%	Roadway improvements (details n/a)
	0%	Traffic signals
Active Transportation	0%	Multi-modal Transportation Initiatives
	0%	Sidewalk
Studies	0%	TDM initiatives, Pedestrians & Cycling Master Plan Implementation, Village Core TMP Implementation

5 Review of BTE Allocations

To understand alternate approaches to BTE for road and road-related projects, a jurisdictional scan of other municipalities in Ontario was undertaken.

The twelve municipalities selected for the review were chosen based on similarities such as population size, rates of growth, and municipal structure (e.g., lower tier). Most examples are located within the Greater Toronto and Hamilton Area (GTHA); however, other areas of Ontario were also included to broaden the scope of the review.

The selected jurisdictions are listed in **Table 3**. The table summarizes the total population and employment for each municipality, from the most recent D.C. Background Study, and the magnitude and rate of growth to provide context and comparison to the City of Richmond Hill. In the comparison of BTE, it is important to consider that low growth municipalities would have limited growth-related infrastructure needs while infrastructure needs in high growth municipalities may be entirely driven by growth. In the jurisdictional review, Brampton has the highest growth (+45%) while Ottawa has the lowest (+14%). The average growth in the municipalities included in the jurisdictional scan is 26% (over the planning period for the respective D.C. Background Studies).

The City of Richmond Hill has an ‘existing development’ size of 267,700 persons and jobs.

A summary of the approach to BTE taken by each municipality is provided in the following sections. Each municipality may define project categories somewhat differently and project categories may not match those of the City of Richmond Hill. The rationale for the BTE approach is not always described and the level of detail on the BTE approach presented in each Background Study report varied.

Table 3: Selected Jurisdictions for BTE Review

	Municipality	Tier	D.C. Background Study	Existing Development (pop + emp)	Planning Period		
					Period	Net Growth (pop + emp)	% Growth (pop + emp) over planning period
	Richmond Hill	**Lower**	**2019**	**267,679**	**2019-2031**	**61,751**	**23%**
	GTHA Municipalities						
1.	Markham	Lower	2022	514,799	2022-2031	145,661	28%
2.	Vaughan	Lower	2022	563,407	2022-2031	121,762	22%
3.	Region of York	Upper	2022	1,877,600	2022-2041	687,600	37%
4.	Brampton	Lower	2019	808,465	2018-2041	362,275	45%
5.	Mississauga	Lower	2022	1,228,950	2021-2041	185,370	15%
6.	Region of Peel	Upper	2020	2,198,500	2020-2041	741,560	34%
7.	Oakville	Lower	2017 / 2021	294,917	2017-2031	79,843	27%
8	Region of Halton	Upper	2022	951,777	2021-2031	190,760	20%
9.	Hamilton	Single	2019 / 2021	788,914	2019-2031	147,166	19%
10.	Toronto	Single	2018	4,381,979	2018-2041	736,403	17%
	Other Ontario Municipalities						
11.	Kitchener	Lower	2019 / 2021	335,474	2018-2036	97,471	29%
12.	London	Single	2019 / 2021	612,500	2019-2039	124,800	20%
13.	Ottawa	Single	2019	1,612,994	2019-2031	225,846	14%

Some D.C. Background Studies were updated in 2021 to address changes in the D.C. Act, but development forecasts and planning period remained unchanged from the earlier study.

5.1 City of Markham (2022 D.C.)

The City of Markham has a larger size than Richmond Hill with a higher rate of growth over the planning period at 28% compared to Richmond Hill's 23%.

The BTE allocation in Markham's D.C. program has 0% BTE (i.e., entirely developer or D.C. funded) for most transportation infrastructure projects. Markham allocates a higher share of costs to existing development for some road infrastructure projects. Infrastructure projects with a non-zero BTE deduction include:

- illumination projects in more established areas (65%),
- intersection improvements in more established areas (65%),
- sidewalks in Gapping Program (18%),
- bike lanes and cycle tracks on Collector / Arterial Roads (18%),
- MUP on collector / arterial roads (18%)
- safety and traffic calming (18%), and
- streetscaping on Regional Roads and miscellaneous City Roads (50%).

The D.C. Background Study does not provide any rationales for how the BTE values were determined. **Table 4** provides a summary of the benefit to existing by project type from the City of Markham's City-Wide Hard Services project summary tables.

Table 4: City of Markham – BTE by Project Type

Project Type	Benefit to Existing	Description / Remarks
Roads	0%	All roads in Markham's roads program, which include roads in future urban area and widening of existing roads, have 0% BTE. The D.C. Background Study report does not differentiate the types of road projects for BTE.
Illumination	0% 18% 65%	A non-growth share of 0% or 65% is applied on a project-specific basis. Roadways in or adjacent to growth areas For Sidewalk Gapping Program and AT Program Roadways in more established areas
Intersections	0% 65%	A non-growth share of 0% or 65% is applied on a project-specific basis. Includes improvements, pedestrian signals, and future signals. Intersections in or adjacent to growth areas Intersections in more established areas
Property Acquisition	0%	All property acquisition to for road expansions, structure, mid-block crossings, and ramps have 0% BTE. In a few cases, a portion of costs are paid for by direct developer contributions.
Special Projects	18%	Bike Lanes on Collector / Arterial Roads
	18%	City-wide Street Safety and Traffic Calming
	18%	MUP on Collector / Arterial Roads
	18%	Cycle Track on Collector / Arterial Roads
	0%	Travel Demand Management
	50%	Streetscaping on Regional Roads
	0%	Streetscaping on Collector / Arterial Roads
	50%	Streetscaping on Miscellaneous City Roads
Structures	0%	All structures, including highway ramps, mid-block crossings, pedestrian bridges, rail grade separations.
Sidewalks	18% 0%	Sidewalk projects in: Gapping Program All other sidewalk projects
Studies	0%	Includes studies for transportation, cycling, traffic calming, etc.

5.2 City of Vaughan (2022 D.C.)

The City of Vaughan's approach to BTE allocations for transportation infrastructure is that the need for new and expanded transportation infrastructure is driven by the need to accommodate new growth. **Table 5** provides a summary of project types and the approach to the 0% non-growth share under the City's 2022 Development Charges Update Study.

Table 5: City of Vaughan – BTE by Project Type

Project Type	Benefit to Existing	Description / Remarks
New Road Construction, Mid-block Crossing, and Missing Link	0%	New roads and mid-block crossings over 400-series highways (and all related right-of-way infrastructure inclusive of property acquisition) to accommodate new growth.
Road Widening	0%	Widening of existing roads (and all related right-of-way infrastructure inclusive of property acquisition) for additional capacity to accommodate new growth.
Reconstruction	0%	Reconstruct roadway to Major Collector or Minor Arterial standard to accommodate growth.
Road Improvement, Jog Elimination	0%	Road improvements, such as a realignment, road reconfiguration or jog elimination, that increase capacity to serve traffic growth.
Valley Crossings	0%	Valley Crossings are new structures on major or minor collectors that provide connectivity across valleys in new growth areas. These crossings are required to serve growth.
Highway Interchange, Off-ramp (Ramp Extension)	0%	New 400-series highway interchanges or new off-ramps and ramp extensions at existing interchanges required to serve growth.
Rail Grade Separations	0-10%	New rail grade separations at new or existing at-grade crossing locations.
Active Transportation (AT Bridge, Multi-use Path, Cycle Track, Bike Lane)	10%	Active Transportation projects include multi-use paths, cycle tracks, and bike lanes within road rights-of-ways and infrastructure projects such as trail crossings and AT rail crossings.
Streetscaping	0%	Streetscape and urban design works following the standards of the City-Wide

Project Type	Benefit to Existing	Description / Remarks
		Streetscape Implementation Manual and Financial Strategy.
Transportation Related Infrastructure Programs • Traffic Signals • Pedestrian Signals • Sidewalks & Streetlighting	5%	New traffic signals, pedestrian signals, sidewalks, streetlighting are required to support growth.
Growth-related Studies	0%	Growth-related engineering studies to support the Official Plan, Transportation Master Plan, and other strategic growth-related initiatives.

5.3 Region of York (2022 D.C.)

York Region has a historical practice of applying a minimum of 10% BTE to all road projects. The 10% represents a deduction for elements such as repaving existing lanes, sub-base reconstruction, and rehab of existing structures. For new road infrastructure, 0% BTE generally applies with one exception – BTE for new rail grade separations is based on the increase in the rail exposure index.

York Region also sets a maximum BTE of 73%, which is estimated based on the population and employment growth between 2022 and 2041 (mid-year), at approximately 27%. It is the position of York Region, that the maximum BTE shall not exceed 73% of the total Regional contribution to a project. This is applied to the reconstruction of roads to regional standards and capital costs related to the remaining gravel or surface-treated roads.

Table 6: Region of York – BTE by Project Type

Project Type	Benefit to Existing	Description / Remarks
New Arterial Road Links, Missing Arterial Road Links	0%	New arterial road to support development areas have 0% BTE
Grade Separation Structures – New	0 to 73%	The BTE for new rail grade separation is based on the difference of the rail exposure index from when the need was identified and the time of construction. The BTE is calculated as 1-rail exposure increase. Where the rail exposure increase is greater than 100%, the BTE is 0%.

Project Type	Benefit to Existing	Description / Remarks
Road Widenings	10%	Road widenings, in urban or rural areas, to increase capacity to support growth have 10% BTE. Road widenings for HOV lanes to increase person capacity in multi-passenger vehicle trips, car/van pooling or transit have 10% BTE.
Grade Separation – Widen	10 to 73%	BTE of for the road widening project will apply to the grade separation when being constructed concurrently. As a minimum, a 10% benefit to existing deduction will be applied to accommodate the cost of rehabilitating the existing structure.
Jog Elimination / Intersection Improvements	10%	Improvements include geometric improvements, new signals, and modifications to existing signals.
Mid-Block Crossings	0%	Mid-block crossings of 400-series highways
400-Series Interchanges	10%	Interchange improvements or new interchanges
Interchange Ramp Extensions	0%	New interchange ramp extensions from 400-series highways
Reconstruction to Regional Standard	73%	Includes reconstruction of existing general-purpose lanes, structural design, intersection improvements, turn lanes, geometric improvements, and improvements to shoulder width.
Miscellaneous Capital	10%	Urbanization
	10 to 73%	Intersection and Miscellaneous Capital
	20%	Streetscaping
	73%	Remaining Gravel Roads
	73%	Remaining Surface Treated Roads
Programs and Studies	10%	Includes Master Plans, transportation planning studies, programs and initiatives required to support planned growth.

5.4 City of Brampton (2019 D.C.)

Over the 23-year planning period (2019-2041), growth is forecast for over 362,000 new persons and jobs, a 45% increase over 2019. Brampton's local servicing policy identifies certain types of collector roadways as shared between the developer and the D.C. fund in a 50/50 or 65/35 split with no BTE. The BTE allocation for active transportation projects is significant at 69%, which is the proportion of the existing population and employment at the end of the planning period.

Table 7: City of Brampton – BTE by Project Type

Project Type	Benefit to Existing	Description / Remarks
New Roads	0% 0%	All new roads are considered 100% growth. Local Service – Roads[1]
Road Widenings	5% 10%	Two values of BTE depending on project scope: 2 to 4 lanes with urbanization, 2 to 4 lanes, 2 to 6 lanes 4 to 6 lanes
New Structures	0 to 5% 0% 5%	New Structures Local Service – Structures[1] Rail Grade Separations
Reconstruction	5%	
Traffic Signals and Intersection Improvements	0%	City-wide program
Active Transportation	69% 0%	ATMP projects – BTE is based on future share of existing population and employment at the end of the planning period. Sidewalks

1. *Cost share for certain roads and structures are 50/50 or 65/35 cost share between the Developer and the D.C. fund as per the Local Service policy with no allocation to existing development.*

5.5 City of Mississauga (2022 D.C.)

The BTE approach for City of Mississauga's 2022 D.C. Background Study is consistent with the previously 2019 D.C. background study. Mississauga's non-growth share and rationale are project type is summarized in **Table 8**.

Table 8: City of Mississauga – BTE by Project Type

Project Type	Benefit to Existing	Description / Remarks
New Road Construction	0%	New arterial and major collector roads to support development areas have 0% BTE.
Road Widenings, Reconstruction	10% 20%	BTE is based on the equivalent of resurfacing or reconstructing the existing lanes. 2 to 4 lanes or 2 to 6 lanes 4 to 6 lanes
Noise Walls	50%	Cost is shared between growth and non-growth.
Grade Separations	0 to 25%	A sliding scale is applied based on the exposure index (0% BTE for exposure index of 0 up to 25% BTE for exposure index of 1,000,000).
Other	0% 0% 0%	Stand-alone traffic signals Stand-alone sidewalks Studies (EA, D.C. and TMP)
Active Transportation	23%	Bicycle facilities are assigned BTE based on the road class and the average BTE in the road program for that road class. Bicycle facilities on arterial roads were applied a 16.9% BTE, facilities on collector roads were applied a 4.4% BTE, and facilities on local roads, minor collectors and new crossing were shared 50/50 between growth and non-growth. The resulting BTE for the active transportation program is 23%.

5.6 Region of Peel (2020 D.C.)

An upper tier municipality that includes Brampton and Mississauga, a significant amount of growth is anticipated in the Region of Peel – 34% over the 21-year planning period (2020-2041).

The Region of Peel updated how it applies the BTE to road projects in the recent 2020 D.C. background study. In previous years, the BTE deduction was applied to the construction cost only (and not to property acquisition, utility relocation, design, streetscaping, etc.) In the 2020 D.C., the BTE deduction is applied to the net capital project cost (similar to the approach taken by most other municipalities).

Table 9: Region of Peel – BTE by Project Type

Project Type	Benefit to Existing	Description / Remarks
New Regional infrastructure	0%	0% BTE for road extensions, new traffic signals, property for new roads
Road widenings	15%	2 to 4 or 4 to 6 lane widenings
Intersection Improvements	5%	Widenings at existing intersections (turn lanes)
Grade Separations	5%	Applied to Coleraine Drive and King Street crossings
Interchange Improvements	50%	Improvements at existing interchange
Signal phasing and AODA updates	50%	Applied to program for new advanced green phases, traffic and pedestrian warning and control signals.
TDM Initiatives	50%	Funding for TDM program
Goods Movement Program	50%	
Sustainable Transportation Strategy Implementation	14.3%	Includes projects for walking and cycling
Property	0% 5%	Property for new roads Property for road widenings and intersection improvements
Studies	0% 15%	D.C. update studies EA studies

Project Type	Benefit to Existing	Description / Remarks
	50%	Traffic engineering studies related to intersections and improvement, transportation planning studies, data collection

5.7 Town of Oakville (2018 D.C. / 2021 D.C.)

In terms of existing population and employment, the Town of Oakville is one of the smaller municipalities in this review at slightly larger size than Richmond Hill. The anticipated growth in Oakville is similar to that of Richmond Hill at 27% compared to 23% for the City.

The Town of Oakville completed a D.C. Update Study in early 2021 to update the 2018 D.C. to meet the requirements of the Development Charges Act as amended by Bill 108 (More Homes, More Choice Act, 2019), Bill 138 (Plan to Build Ontario Act, 2019), and Bill 197 (COVID-19 Economic Recovery Act, 2020), and Bill 213 (Better for People, Smarter for Business Act, 2020). The 2021 D.C. assumed the same growth forecasts and roads program as the 2018 D.C..

The 2018 D.C. Background Study report provided no rationale on the determination of BTE share for roads and related services, however, an older 2012 D.C. Background Study report provided insights and appears to be in line with the current BTE values as summarized in Table 10.

Table 10: Town of Oakville – BTE by Project Type

Project Type	Benefit to Existing	Description / Remarks
New Roads	0%	
Road Widening	5% to 20%	BTE varies depending on number of existing lanes and whether existing lanes are reconstructed as part of widening.
New Structure	0%	Applied to new crossings over highways.
Reconstruction	75% to 90%	Road reconstruction (without widening) but with some increase in capacity.
Grade Separation	20%	Rail grade separation on existing roadways.
Active Transportation	10% 20%	Applied to AT initiatives; AT cycle lanes, routes, and pathways; AT Studies AT crossings

5.8 Region of Halton (2022 D.C.)

An upper tier municipality in the GTHA, the Region of Halton anticipates 20% growth over the 10-year planning period (2021-2031). Halton completed its 2022 D.C. Background Study in December 2021 and supporting 2022 D.C. Transportation Technical Report in September 2021.

Halton takes a more complicated approach to BTE which is documented in the Region's Transportation Technical Report and summarized in **Table 11**. For existing transportation infrastructure that is being improved, Halton calculates BTE for individual components of the project and accounts for the residual value of the infrastructure. Halton has used the same approach in its 2012 and 2017 D.C..

Table 11: Halton – BTE by Project Type

Project Type	Benefit to Existing	Description / Remarks
Reconstruction (no widening)	100%	These projects are removed from the D.C. calculation.
New Alignment	0%	All new alignment projects
Provincial Freeway Interchanges	0%	Improvements create new access points and reduce congestion at upstream and downstream interchanges. The projects are implemented to provide additional capacity in the road network to serve Growth. An existing road user might benefit from these interchanges (if the trip length is reduced) but the benefit is offset in most cases by the increased traffic congestion created by growth.
Road Widening without reconstruction	Varies	$BTE = BTE_{Resurfacing\ Existing\ Lanes} + BTE_{Intersection\ Modifications} + BTE_{New\ Signals\ and\ Signal\ Modifications} + BTE_{Bridge\ Rehabilitation} + BTE_{Grade\ Separation\ Rehabilitation} + BTE_{Culvert\ Rehabilitation}$ *where* $BTE_{Resurfacing\ Existing\ Lanes}$ = % Used Value x Value of Resurfacing Existing Lanes ($BTE_{Intersection\ Modifications}$ = 50% x Cost of Intersection Modifications $BTE_{New\ Signals\ and\ Signal\ Modifications}$ = 50% x Cost of New Signals and Signal Modifications $BTE_{Bridge\ Rehabilitation}$ = 100% x Cost of Bridge Rehabilitation $BTE_{Grade\ Separation\ Rehabilitation}$ = 100% x Cost of Grade Separation Rehabilitation $BTE_{Culvert\ Rehabilitation}$ = 100% x Cost of Culvert Rehabilitation

Project Type	Benefit to Existing	Description / Remarks
Road widening with reconstruction	Varies	$BTE = BTE_{Reconstructing\ Existing\ Lanes} + BTE_{Intersection\ Modifications} + BTE_{New\ Signals\ and\ Signal\ Modifications} + BTE_{Bridge\ Rehabilitation} + BTE_{Grade\ Separation\ Rehabilitation} + BTE_{Culvert\ Rehabilitation} + BTE_{Engineering\ Design\ and\ Contingency}$ *where* $BTE_{Reconstructing\ Existing\ Lanes}$ = % Used Value x Value Reconstructing Existing Lanes (s $BTE_{Intersection\ Modifications}$ = 50% x Cost of Intersection Modifications $BTE_{New\ Signals\ and\ Signal\ Modifications}$ = 50% x Cost of New Signals and Signal Modifications $BTE_{Bridge\ Rehabilitation}$ = 100% x Cost of Bridge Rehabilitation $BTE_{Grade\ Separation\ Rehabilitation}$ = 100% x Cost of Grade Separation Rehabilitation $BTE_{Culvert\ Rehabilitation}$ = 100% x Cost of Culvert Rehabilitation $BTE_{Engineering\ Design\ and\ Contingency}$ = 50% x Cost of Engineering Design and Contingency
Traffic Management	50%	New traffic signals, modifications to existing signals, new intersections and improvements to existing intersections are deemed to accommodate additional traffic created by growth and for existing development
Rail Grade Separation – Widen	Varies	$BTE\ Reconstruction\ of\ Existing\ Deck = \%\ Used\ Value \times Value\ of\ Rehabilitating\ Existing\ Deck$
Rail Grade Separation – New	5-25%	BTE is correlated to exposure (daily train movements x traffic volumes) with 5% for exposure of 200,000 up to 25% for exposure of 1,000,000 or more.
Structures (bridges and culverts	0%residual value	New structures Widening of existing structure
Studies and Programs	0% 50%	TMP, ATMP, DMG, TTS, Cordon Counts, Urban Design Guidelines; D.C. Transportation Technical Study; Other Growth-Related Studies Traffic and Screenline Counts; TDM; Active Transportation Initiatives

5.9 City of Hamilton (2019 D.C. / 2021 Amendment)

The City of Hamilton completed its D.C. study in 2019. In 2021, the D.C. by-law was updated to meet the requirements of the Development Charges Act as amended by Bill 108 (More Homes, More Choice Act, 2019), Bill 138 (Plan to Build Ontario Act, 2019), and Bill 197 (COVID-19 Economic Recovery Act, 2020), and Bill 213 (Better for People, Smarter for Business Act, 2020). Transportation-related updates to the 2021 D.C. include establishing classes of services for Growth Studies and for Public Works Facilities, Vehicles and Equipment.

All new road projects have been determined to be 100% growth related (0% BTE). Certain portions of future reconstruction, widening and urbanization projects have recognized a BTE component. Appendix H of the Hamilton D.C. Background Study report provides commentary on the rational for the benefit to existing which is summarized in **Table 12**.

Table 12: City of Hamilton – BTE by Project Type

Project Type	Benefit to Existing	Description / Remarks
New Roads	0%	New road links are built to serve growth. The level of service in the overall network is deteriorating even with the new road.
Road Widenings	5 to 50%	Typically, 15% is the estimated value of resurfacing existing lanes, improving intersections and traffic signals as part of the widening that is benefit to existing development. 5% BTE for projects to support OPA 40 (Waterdown) 40-50% BTE applied to projects in established neighbourhoods and corridors.
Road Reconstruction and Urbanization	15 to 50%	Typically, 15% applied. 40-50% applied to projects in established neighbourhoods and corridors.
Traffic Management	5 to 85%	Typically, 5% applied to geometric improvements or updated signals. Some projects were deemed to have a higher BTE due to their wider applicability to the existing community.
Major Structures and Grade Separations	0 to 50%	Includes structure for rail, pedestrians and wildlife that are designed to address capacity, safety and crossing opportunities resulting from traffic growth.

Project Type	Benefit to Existing	Description / Remarks
		A structure that is driven by growth has 0% BTE.
Active Transportation	15% (standalone projects)	Includes sidewalks, bicycle lanes, off-road trails, multi-use paths, bicycle parking, crosswalks and other amenities and programs. AT is critical to helping manage growth. When AT facility is constructed as part of a road project, then the BTE is that of the roadway.
Studies (Category was moved to a new class in the 2021 addendum)	0% 0% to 90%	D.C. studies Transit studies, 10-year Strategy and Feasibility studies at 50% BTE

5.10 City of Toronto (2018 D.C.)

The City of Toronto is a single tier municipality that is much larger than Richmond Hill (about 16 times). Toronto is anticipating a growth of 736,000 persons and jobs; Toronto's D.C. program supports a growth of 17% in a 23-year planning period.

The City of Toronto's 2018 D.C. Background study provides limited rationale on the approach to the BTE determination. In Appendix C.1, it notes that the "BTE shares were examined on a project-by-project basis and the nature of each project determined the rationale for the reductions".

The BTE share ranged widely for road projects in different areas of the city as summarized in **Table 13**. For example, the Six Point Redevelopment had a 75% BTE, the Lawrence-Allen Revitalization had a 16% BTE, Lakeshore Road Re-alignment had a 23% BTE and ReImagining Yonge had a 48% BTE.

Similarly, road widening projects had a wide range of BTE. The project descriptions do not note whether the widening is from 2 to 4 lanes, 4 to 6 lanes, or other.

Table 13: City of Toronto – BTE by Project Type

Project Type	Benefit to Existing	Description / Remarks
Traffic Control and Signalization	40% 50% 92%	New Traffic Control Signals Traffic Signal Major Modifications Other Traffic Control & Signalization projects. Includes RESCU, traffic congestion management, pedestrian safety & infrastructure, other safety improvements, road safety plan
New roads / road extensions	0%	New projects are deemed to be entirely growth-related.
Road Widening	7% to 46%	Varied by project. No rationale provided.
Road projects as part of redevelopment and revitalization	16% to 92%	Includes project such as Six Points Interchange Redevelopment, Regent Park Revitalization, ReImagining Yonge, Eglinton Connects
"Roads to 2041"	0% to 6%	Applies to projects are in the port lands area. Most projects have BTE of 0%, with a few 'upgrade' projects having BTE of 1% to 6%. One section of Commissioners Street has BTE of 15%
Rail Grade Separations and Related	5% to 25%	Galloway Road at BTE of 5%. All other projects at 15% to 25%.
Active Transportation	75% 0%	New cycling infrastructure New pedestrian bridge
Engineering Studies	36%	10-year studies

5.11 City of Kitchener (2019 D.C.)

The City of Kitchener is a mid-sized city in Waterloo Region that will experience slightly higher growth than Richmond Hill.

For the roads and related D.C. program, all capital projects are considered 100% development-related and 0% BTE is applied as summarized in **Table 14**. The D.C. Background Study report notes that "all of the capital projects in the Roads and Related capital program represent entirely new infrastructure" and the capital program includes only seven road corridor and one intersection project.

Table 14: City of Kitchener – BTE by Project Type

Project Type	Benefit to Existing	Description / Remarks
New Road Construction	0%	All road projects in capital program are considered new infrastructure with 0% BTE.
Intersection Improvements	0%	All intersections in the capital program are considered new infrastructure with 0% BTE. Only 1 intersection is included in the program – Strasburg and Huron which is an existing roundabout.
Active Transportation	n/a	Bike routes and bike lanes within the road allowance are included in the road costs. Multi-use pathways/trails are included in the Outdoor Recreation program.

5.12 City of London (2021 D.C.)

The City of London is a single tier city in southwestern Ontario that is planning for 20% growth over the planning period.

For Major Roadworks and Arterial Upgrades, the benefit to existing is the estimated dollar amount of rehabilitating the existing lanes, rather than a percentage of the total project cost. The resulting BTE percentage ranges from approximately 5% to 20%, which is similar to other municipalities. London's approach to BTE for expanding structures and interchanges is based on the ratio of the existing and future infrastructure footprint, which is different from other municipalities in this review. London's BTE by project type is summarized in **Table 15.**

Table 15: City of London – BTE by Project Type

Project Type	Benefit to Existing	Description / Remarks
Major Roadworks / Two-Lane Arterial Upgrades	$274,000 per lane per km (or ~10%)	The 20-year rehabilitation cost of the existing roadway is estimated as the BTE. On average, this is 10% of the total cost but varies project by project.
New roads and road extensions	0%	New roads are considered to be a 100% growth need.
Arterial roadworks related to BRT	8.7%	BTE by segment varies and is based on the rehabilitation cost of the existing lanes. BTE for the 5 BRT sections ranged from 6.5% to 10.6% with an average of 8.7%.
Intersection improvements / Operational improvements	10%	Improvements required to address increasing traffic demands are primarily a growth need. Applying approach that BTE is the rehab cost, the average BTE of Major Roadworks was applied. For 2022 D.C., BTE is 10%.
Highway 401 improvements and replacement of freeway interchanges	Varies	Ratio of existing footprint of interchange / proposed footprint of interchange 0% applied to new VMP interchange at Bradley Avenue 50% applied to 401 interchange at Col. Talbot Road 55% applied to 401 bridge expansion at Dingman Drive
New rail grade separation	Varies	Ratio of the delay attributed to growth. 67.3% applied to Adelaide grade separation
Reconstruction of existing grade separation	Varies	Ratio of existing footprint of structure / proposed footprint of structure 41.9% applied to structure widening on Wonderland Road
Minor roadworks	0%	Minor roadworks such as traffic control devices are required to address growth needs.
Active Transportation	50%	For infill active transportation projects in the AT program.

5.13 City of Ottawa (2019 D.C.)

The City of Ottawa is a single tier city in eastern Ontario. The Ottawa D.C. Background Study states that new projects are deemed to be entirely growth-related and no BTE is deducted. The D.C. capital program lists many road projects (without information as to the type of improvement) with a 5% BTE and many projects, including widenings, with 0% BTE. The rest of the D.C. program includes transportation programs with BTE ranging from 0% to 84%. No additional rationale is provided.

Table 16: City of Ottawa – BTE by Project Type

Project Type	Benefit to Existing	Description / Remarks
City-wide Road Network	0% 0% or 5% 0%	New roads Widening / unknown improvement Urbanization projects
Transportation Programs	50% 84% 5% 0%	TDM Traffic management Development sidewalks Intersection Control Measures - traffic signals, roundabouts, and turning lanes
Public Works	20% 20% 80%	New signals Traffic Management program Streetlighting
Area-Specific Road Projects	0% to 10%	9 specific road projects including roads with front-ending agreements, oversizing, grade separation, extension and other
Active Transportation	75% 51% 57% 0%	Pedestrian Facilities – standalone pedestrian projects Cycling Facilities - standalone cycling projects Multi-use Path Structures Multi-use Path - West Urban Community
Studies	5% 50% 32%	EA studies OD Survey Transit Priority, Feasibility

6 PPB Review

A number of different methods were utilized by municipalities to assign PPB, including:

- The timing of construction relative to the planning period identified in the D.C. study (e.g., assign 25% PPB for capacity improvement projects in the last 10 years of the planning period);
- Measure future service levels compared to historical service levels (vehicles per lane or lane-km per capita);
- Calculate volume to capacity ratios for roadway improvement programs;
- Based on the value of any anticipated surplus capacity at the end of the forecast period which is to be recovered from subsequent development;
- Based on phasing of growth where secondary plans are available that identify works required only for phases that are in the post planning period; and,
- TMP identified projects would provide excess capacity to accommodate growth post the planning horizon year.

7 Summary

7.1 Findings

Various approaches are used to determine Benefit to Existing

The jurisdictional scan identified many similarities and some differences in the approach to determining a reasonable benefit to existing cost share for transportation infrastructure. Not all D.C. Background Study report described the rationale for the calculation of BTE or any special considerations on a case-by-case basis. Where the approach to BTE is not described, the applied BTE was inferred through a review of the infrastructure capital programs and observed cost deductions.

All municipalities deem new roads and road extensions as entirely growth-related as the need for the new infrastructure is required due to growth-related traffic.

Where existing roads are widened, most municipalities assign a BTE between 5% and 20% with the rationale that this represents the cost of resurfacing or rehabilitating the existing lanes. For the City of London, the value of the rehabilitation of existing lanes is applied directly as BTE.

A wide variation in BTE approach is seen for rail grade separations. Some municipalities apply a BTE of 0% (Markham), as these new rail crossing provide new capacity and reduces delay for growth-related traffic, while Richmond Hill applied a BTE as high as 70% for 2019 D.C.. Most municipalities apply a BTE of 5-25%.

Table 17: Comparison of Existing BTE Considered by the City for Key Project Types

Project Type	Richmond Hill	Low	High
New Roads	0%	0%	0%
Road Widening	0-100%	0% - Markham, Ottawa 5-10% - Brampton	46% - Toronto (project specific) 50% - Hamilton (in established neighbourhoods)
New Structure	0%	0% - Markham 0-5% - Brampton	0-73% - York Region
New Grade Separation	70%	0-73% - York Region 5% - Brampton 5% - Peel	70% - Richmond Hill (project specific)
Traffic Signals, Intersections	0%	0% - Kitchener 0% - Ottawa 5% - Peel 5% - Oakville	65% - Markham (in more established areas) 40% - Toronto (new signals)
Active Transportation	70%	10% - York Region 10% - Oakville	75% - Toronto 50% - London

A few municipalities apply 0% BTE to road construction projects

Of the 13 municipalities reviewed in this scan, only City of Kitchener applied a 0% BTE deduction to all projects in the roads and related program. However, it was also noted in the Kitchener D.C. Background Study report that all projects in the D.C. program represent new infrastructure and the Kitchener D.C. program consisted of only seven road corridors and one intersection.

City of Markham applied 0% to all road construction projects including new roads and widening but applies up to 65% BTE for other project categories.

The City of Ottawa applied 0% BTE to many road construction projects, including some widenings and improvements to existing roads. Unfortunately, there was no description of what these ‘improvements’ entail or rational for why 0% BTE for those projects, as other widening projects had a 5% BTE.

Table 18: 0% BTE Comparison for New Roads and Road Widenings

Project Type	Vaughan	Kitchener	Markham	Ottawa
New Roads	0%	0%	0%	0%
Road Widening	0%	n/a	0% (assumed)	0% or 5%
Unknown Road Improvement	n/a	n/a	0%	0% or 5%

7.2 Proposed BTE Allocation

The proposed BTE allocations for this D.C. study are presented in Table 19.

Table 19: Proposed BTE Allocations

Category	Sub-Category	Benefit to Existing %	Remarks
Road	New Road	0%	Includes new roads, road extensions, missing link
	Road Widening	20%	For a 2-lane to 4-lane widening
Structure	New Grade Separation	10%	New grade separation
	New Structure	0%	New bridge, culvert, freeway overpass
Intersection Improvements	New Signals	0%	Standalone new traffic signals
	Geometric Improvement	0%	Standalone new turning lanes
Active Transportation	New Area	0%	For new development area or new corridor
	Other	10%	For all other projects, including standalone projects in established area, dedicated cycling corridors, partnership programs, and initiatives to support active and sustainable transportation
Traffic Safety	New Area	0%	For new development area or new corridor
	PXOs	70%	Standalone project for the established area
	Other	70%	Standalone project for the established area - ASE, radar boards, etc.
Miscellaneous	New Area	0%	For new development area or new corridor
	Smart Commute	10%	To support active and sustainable transportation
	Illumination	10%	Standalone project for the established area

Category	Sub-Category	Benefit to Existing %	Remarks
	Other City-wide	70%	Other City-wide projects mainly for the established area

Note: a maximum BTE of 70% is derived based on the 30% City-wide capita growth from 2023 to 2041.

7.3 Proposed PPB Allocations

For this D.C. study, the recommended PPB allocation method considering the timing of construction relative to the planning period identified in the D.C. study:

- For projects in the earlier phases of the D.C. planning period, the need for improvement projects is driven by growth within the planning period, and thus a post-period deduction was not applied to projects identified for implementation in the first 10 years (2023- 2031).
- A PPB capacity deduction of 25% was used for projects in the last 10 years (2032-2041) of the planning period.
- A 100% PPB deduction was applied to those projects proposed post 2041, i.e., no D.C.-eligible cost was considered for this study.

Appendix D

Technical Memo – D.C.-Eligible Costing Analysis

Memo

Date:	Wednesday, December 20, 2023
Project:	City of Richmond Hill Transportation Master Plan Development Charges Background Study
To:	Tong Wang (City of Richmond Hill)
Cc:	Hubert Ng (City of Richmond Hill)
From:	Qingjie Zeng, Keyur Shah (HDR)
Subject:	Technical Memo 6: D.C.-Eligible Costing Analysis

1 Introduction

HDR has been retained by the City of Richmond Hill (the City) to conduct a Transportation Master Plan Development Charges (D.C.) Background Study for the year 2023 in accordance with the Development Charges Act (1997, S.O. 1997, C.27) and associated regulations. This study needs to be completed concurrently with and in support of the City's ongoing Transportation Master Plan Update and D.C. By-law Update.

This technical memorandum provides an estimate for the growth-related D.C.-eligible share considering the deductions of BTE and PPB.

2 Cost Sharing

2.1 Benefit to Existing (BTE)

The proposed BTE allocations for various transportation components are presented in **Table 1**.

Table 1: Proposed BTE Allocation for Transportation Components

Category	Sub-Category	Benefit to Existing %	Remarks
Road	New Road	0%	Includes new roads, road extensions, missing link
	Road Widening	20%	For a 2-lane to 4-lane widening
Structure	New Grade Separation	10%	New grade separation
	New Structure	0%	New bridge, culvert, freeway overpass
Intersection Improvements	New Signals	0%	Standalone new traffic signals
	Geometric Improvement	0%	Standalone new turning lanes
Active Transportation	New Area	0%	For new development area or new corridor
	Other	10%	For all other projects, including standalone projects in established area, dedicated cycling corridors, partnership programs, and initiatives to support active and sustainable transportation
Traffic Safety	New Area	0%	For new development area or new corridor
	PXOs	70%	Standalone project for the established area
	Other	70%	Standalone project for the established area - ASE, radar boards, etc.
Miscellaneous	New Area	0%	For new development area or new corridor
	Smart Commute	10%	To support active and sustainable transportation
	Illumination	10%	Standalone project for the established area
	Other City-wide	70%	Other City-wide projects mainly for the established area

Note: a maximum BTE of 70% is derived based on the 30% City-wide capita growth from 2023 to 2041.

2.2 Post-Period Benefit (PPB)

This D.C. study adopted a PPB allocation method considering the timing of construction relative to the planning period identified in the D.C. study. The proposed PPB allocation is identified based on the review of the past D.C. studies completed for the City (earlier - Town) of Richmond Hill. The suggested PPB are:

- For projects in the earlier phases of the D.C. planning period, the need for improvement projects is primarily driven by the planned growth within the planning period, and thus a post-period deduction was not applied to projects identified for implementation in the first 10 years (2023- 2031).
- A **PPB deduction of 25%** was used for projects in the last 10 years (2032-2041) of the planning period.
- A **PPB deduction of 100%** was applied to those projects which are planned after the D.C. Planning period - i.e., year 2041. Therefore, the cost for the TMP-recommended projects which are proposed/planned after the year 2041 were excluded from the costing analysis.

2.3 Grants, Subsidies and Other Contributions

Any applicable grants, subsidies and other contributions shall be deducted from the D.C.-eligible costs in accordance with the requirements of the Act. The grants are primarily from other levels of government and their amounts vary by project. For the projects included in the 2023 D.C. Background Study, grants, subsidies and other contributions have been considered and excluded from the total cost estimation, i.e., the total cost estimation is for City share only. Therefore, the applicable grants/ subsidies are $0.

3 Forecast 2041 Transportation Infrastructure Costs

3.1 Transportation Infrastructure Cost Summary

The total costs for transportation infrastructures for 2023 to 2041 are presented in **Table 2**; details of costing analysis were documented in **Appendix I**.

Table 2: Transportation Infrastructure Cost Summary

Transportation Infrastructure		Phasing	Quantity	Total Cost Estimate
Road Infrastructure	Roadway	By 2031	7.47 km	$90,481,800 (Incl. $31,040,800 for land acquisition)
		By 2041	4.82 km	$111,727,800 (Incl. $76,892,800 for land acquisition)
		Post 2041[1]	1.74 km	$37,972,700 (Incl. $25,815,700 for land acquisition)
	Intersection Improvements	By 2031	10 Intersections	$6,955,000 (Incl. $637,000 for land acquisition)
		By 2041	15 Intersections	$9,555,000 (Incl. $637,000 for land acquisition)
		Post 2041[1]	3 Intersections	$1,560,000
	Structure	By 2031	1 Highway overpass	$22,862,000
		By 2041	1 Highway overpass 1 New Bridge	$16,932,000
		Post 2041[1]	5 Grade separations 1 Highway overpasses	$320,693,000
AT and Trail	Priority AT Spine Routes	By 2031	30.30 km	$24,516,000
		By 2041	4.22 km	$511,200
		Post 2041[1]	-	$0

Transportation Infrastructure		Phasing	Quantity	Total Cost Estimate
	Other AT Facilities and Trails	By 2031	84.73 km	$35,727,400
		By 2041	38.46 km	$34,767,300
		Post 2041[1]	8.14 km	$53,720,600
York Region Projects		By 2031	77.40 km	$35,221,000
		By 2041	51.52 km	$30,475,000
		Post 2041[1]	90.68 km	$41,373,000
Other Projects		By 2031 and 2041	-	$40,743,500
		Post 2041[1]	-	$0
Total		**By 2031 and 2041**	**-**	**$$460,475,000** (Incl. $109,207,600 for land acquisition)
		Post 2041[1]	**-**	**$455,319,300** (Incl. $25,815,700 for land acquisition)

Note: 1. Projects with Phasing post 2041 (greyed-out items) will be included in the D.C. Study with 100% PPB, i.e., no D.C.-eligible cost.

3.2 D.C.-Eligible Transportation Infrastructure Costs

The transportation infrastructure costs are separated into 'growth' related (i.e., either City-wide roads and road-related or charge to the developers) and 'non-growth' related components as presented in **Table 3**.

As presented in the table, the total capital cost for the transportation programs is **$915.79 million**. The 'non-growth' related share (BTE) of the cost is **$85.31 million**, the 'post-period benefit' share of the cost is **$468.81 million**, and the growth-related D.C.-eligible shares are **$361.67 million**.

Detailed D.C.-eligible cost estimates for transportation improvement programs are presented in **Appendix i**.

Table 3: D.C.-Eligible Transportation Infrastructure Costs

Transportation Infrastructure		Total Capital Cost	Grants, Subsidies and Other Contributions	Benefit to Existing (Non-Growth Related)	Net Capital Cost	Post-Period Benefit	Total Deductions	Potential D.C. Recoverable Cost (City-wide D.C.-Eligible)
Road Infrastructure	Roadways	$ 106,433,000	$ 0	$ 10,337,000	$ 96,096,000	$ 20,803,700	$ 31,140,700	$ 75,292,300
	Intersection Improvements	$ 16,796,000	$ 0	$ 0	$ 16,796,000	$ 3,789,500	$ 3,789,500	$ 13,006,500
	Structures	$ 360,487,000	$ 0	$ 30,000,000	$ 330,487,000	$ 294,926,000	$ 324,926,000	$ 35,561,000
	Land Acquisition	$ 135,023,300	$ 0	$ 1,638,100	$ 133,385,200	$ 45,198,300	$ 46,836,400	$ 88,186,900
AT and Trail	Priority AT Spine Routes	$ 25,027,200	$ 0	$ 2,502,700	$ 22,524,500	$ 115,100	$ 2,617,800	$ 22,409,400
	Other AT Facilities and Trails	$ 22,924,600	$ 0	$ 1,852,600	$ 21,072,000	$ 4,451,800	$ 6,304,400	$ 16,620,200
	Sidewalk on Collector Roads	$ 20,290,700	$ 0	$ 1,046,000	$ 19,244,700	$ 6,079,700	$ 7,125,700	$ 13,165,000
	AT Bridges	$ 81,000,000	$ 0	$ 8,100,000	$ 72,900,000	$ 46,350,000	$ 54,450,000	$ 26,550,000
York Region Boulevard Improvements		$ 107,069,000	$ 0	$ 10,706,900	$ 96,362,100	$ 44,092,600	$ 54,799,500	$ 52,269,500
Other Projects		$ 40,743,500	$ 0	$ 19,131,400	$ 21,612,100	$ 2,999,300	$ 22,130,700	$ 18,612,800
All Transportation Infrastructures		**$915,794,300**	**$0**	**$85,314,700**	**$830,479,600**	**$468,806,000**	**$554,120,700**	**$361,673,600**

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Appendix i

D.C.-Eligible Cost Analysis for Transportation Improvement Programs

D.C.-Eligible Cost Estimates – Roadways

ID	Location/ Project Name	Section	Improvement Category	Phasing	Total Capital Cost	Grants, Subsidies and Other Contributions	Benefit to Existing (Non-Growth Related)		Net Capital Cost	Post-Period Benefit		Total Deductions	Potential D.C. Recoverable Cost (City-wide D.C.-Eligible)
							%	$		%	$		
1	East Beaver Creek Road	Leslie Street to Highway 7	Road-Road Widening	By 2031	$ 15,938,000	$ 0	20%	$ 3,187,600	$ 12,750,400	0%	$ 0	$ 3,187,600	$ 12,750,400
2	Wertheim Court	West Beaver Creek to Leslie Street	Road-New Road	Post 2041[1]	$ 4,827,000	$ 0	0%	$ 0	$ 4,827,000	100%	$ 4,827,000	$ 4,827,000	$ 0
3	Wertheim Court	Leslie Street to East Beaver Creek	Road-New Road	Post 2041[1]	$ 1,383,000	$ 0	0%	$ 0	$ 1,383,000	100%	$ 1,383,000	$ 1,383,000	$ 0
4	West Beaver Creek Road	Leslie Street to Highway 7	Road-Road Widening	By 2031	$ 17,968,000	$ 0	20%	$ 3,593,600	$ 14,374,400	0%	$ 0	$ 3,593,600	$ 14,374,400
5	Far Niente Street Extension	High Tech Road to Highway 7	Road-New Road	By 2041	$ 3,938,000	$ 0	0%	$ 0	$ 3,938,000	25%	$ 984,500	$ 984,500	$ 2,953,500
6	Garden Avenue Extension	Red Maple Road to Bayview Avenue	Road-New Road	By 2041	$ 9,169,000	$ 0	0%	$ 0	$ 9,169,000	25%	$ 2,292,300	$ 2,292,300	$ 6,876,700
7	Cedar Avenue Extension	High Tech Road to Langstaff Road	Road-New Road	By 2031	$ 2,933,000	$ 0	0%	$ 0	$ 2,933,000	0%	$ 0	$ 0	$ 2,933,000
8	Garden Avenue Extension	Yonge Street to Red Maple Road	Road-New Road	Post 2041[1]	$ 3,066,000	$ 0	0%	$ 0	$ 3,066,000	100%	$ 3,066,000	$ 3,066,000	$ 0
9	North-South Road	Carville Road to Garden Avenue	Road-New Road	By 2041	$ 10,515,000	$ 0	0%	$ 0	$ 10,515,000	25%	$ 2,628,800	$ 2,628,800	$ 7,886,200
17	Addison Street Extension	to Weldrick Road West	Road-New Road	By 2031	$ 3,463,000	$ 0	0%	$ 0	$ 3,463,000	0%	$ 0	$ 0	$ 3,463,000
18	Addison Street Extension	to Yonge Street	Road-New Road	By 2041	$ 768,000	$ 0	0%	$ 0	$ 768,000	25%	$ 192,000	$ 192,000	$ 576,000
19	Enford Road Extension	to Yonge Street	Road-New Road	By 2041	$ 4,279,000	$ 0	0%	$ 0	$ 4,279,000	25%	$ 1,069,800	$ 1,069,800	$ 3,209,200
27	Collector Road	Bawden Drive to future Highway 404 Overpass	Road-New Road	Post 2041[1]	$ 2,881,000	$ 0	0%	$ 0	$ 2,881,000	100%	$ 2,881,000	$ 2,881,000	$ 0
31	Performance Drive Extension	to future Highway 404 Overpass	Road-New Road	By 2041	$ 2,275,000	$ 0	0%	$ 0	$ 2,275,000	25%	$ 568,800	$ 568,800	$ 1,706,200
34	Brodie Drive Extension		Road-New Road	By 2041	$ 1,547,000	$ 0	0%	$ 0	$ 1,547,000	25%	$ 386,800	$ 386,800	$ 1,160,200
36	Orlando Avenue Extension	to Highway 404 Overpass	Road-New Road	By 2031	$ 2,607,000	$ 0	0%	$ 0	$ 2,607,000	0%	$ 0	$ 0	$ 2,607,000

ID	Location/ Project Name	Section	Improvement Category	Phasing	Total Capital Cost	Grants, Subsidies and Other Contributions	Benefit to Existing (Non-Growth Related)		Net Capital Cost	Post-Period Benefit		Total Deductions	Potential D.C. Recoverable Cost (City-wide D.C.-Eligible)
							%	$		%	$		
37	Newkirk Road	Elgin Mills Road E to Major Mackenzie Drive East	Road-Road Widening	By 2031	$ 16,532,000	$ 0	20%	$ 3,306,400	$ 13,225,600	0%	$ 0	$ 3,306,400	$ 13,225,600
39	East-West Minor Collector Road	between North-South Minor Collector Road and Yonge Street	Road-New Road	By 2041	$ 1,097,000	$ 0	0%	$ 0	$ 1,097,000	25%	$ 274,300	$ 274,300	$ 822,700
40	Oak Avenue	from North-South Road (ID #9) to Yonge Street	Road-Road Widening	By 2041	$ 1,247,000	$ 0	20%	$ 249,400	$ 997,600	25%	$ 249,400	$ 498,800	$ 748,200

Note: 1. Projects with Phasing post 2041 (greyed-out items) will be included in the D.C. Study with 100% PPB, i.e., no D.C.-eligible cost.

D.C.-Eligible Cost Estimates – Intersection Improvements

ID	Location	Number of Intersections	Improvement Category	Phasing	Total Capital Cost	Grants, Subsidies and Other Contributions	Benefit to Existing (Non-Growth Related)		Net Capital Cost	Post-Period Benefit		Total Deductions	Potential D.C. Recoverable Cost (City-wide D.C.-Eligible)
							%	$		%	$		
	Multi-locations	4 intersections	Intersection Improvement-Geometric	By 2031	$ 3,198,000	$ 0	0%	$ 0	$ 3,198,000	0%	$ 0	$ 0	$ 3,198,000
	Multi-locations	4 intersections	Intersection Improvement-Geometric	By 2041	$ 3,198,000	$ 0	0%	$ 0	$ 3,198,000	25%	$ 799,500	$ 799,500	$ 2,398,500
	Multi-locations	6 intersections	Intersection Improvement-New Traffic Signal	By 2031	$ 3,120,000	$ 0	0%	$ 0	$ 3,120,000	0%	$ 0	$ 0	$ 3,120,000
	Multi-locations	11 intersections	Intersection Improvement-New Traffic Signal	By 2041	$ 5,720,000	$ 0	0%	$ 0	$ 5,720,000	25%	$ 1,430,000	$ 1,430,000	$ 4,290,000
	Multi-locations	3 intersections	Intersection Improvement-New Traffic Signal	Post 2041[1]	$ 1,560,000	$ 0	0%	$ 0	$ 1,560,000	100%	$ 1,560,000	$ 1,560,000	$ 0

Note: 1. Projects with Phasing post 2041 (greyed-out items) will be included in the D.C. Study with 100% PPB, i.e., no D.C.-eligible cost.

D.C.-Eligible Cost Estimates – Structures

ID	Location/ Project Name	Improvement Category	Phasing	Total Capital Cost	Grants, Subsidies and Other Contributions	Benefit to Existing (Non-Growth Related)		Net Capital Cost	Post-Period Benefit		Total Deductions	Potential D.C. Recoverable Cost (City-wide D.C.-Eligible)
						%	$		%	$		
C1	Iconic Bridge Improvement in Richmond Hill Centre	Structure-New Grade Separation	Post 2041[1]	$60,000,000	$0	10%	$ 6,000,000	$ 54,000,000	100%	$ 54,000,000	$ 60,000,000	$ 0
C2	Weldrick Road East	Structure-New Grade Separation	Post 2041[1]	$60,000,000	$0	10%	$ 6,000,000	$ 54,000,000	100%	$ 54,000,000	$ 60,000,000	$ 0
C3	Centre Street East	Structure-New Grade Separation	Post 2041[1]	$60,000,000	$0	10%	$ 6,000,000	$ 54,000,000	100%	$ 54,000,000	$ 60,000,000	$ 0
C4	Crosby Avenue	Structure-New Grade Separation	Post 2041[1]	$60,000,000	$0	10%	$ 6,000,000	$ 54,000,000	100%	$ 54,000,000	$ 60,000,000	$ 0
C8	Bethesda Sideroad	Structure-New Grade Separation	Post 2041[1]	$60,000,000	$0	10%	$ 6,000,000	$ 54,000,000	100%	$ 54,000,000	$ 60,000,000	$ 0
	Performance Drive Rouge River Crossing (City-wide Share)	Structure-New Structure	By 2041	$3,200,000	$0	0%	$ 0	$ 3,200,000	25%	$ 800,000	$ 800,000	$ 2,400,000
O	Highway Overpass North of 16th Avenue	Structure-New Structure	By 2031	$22,862,000	$0	0%	$ 0	$ 22,862,000	0%	$ 0	$ 0	$ 22,862,000
O	Highway Overpass North of Major Mackenzie Drive	Structure-New Structure	By 2041	$13,732,000	$0	0%	$ 0	$ 13,732,000	25%	$ 3,433,000	$ 3,433,000	$ 10,299,000
O	Highway Overpass North of Elgin Mills Road	Structure-New Structure	Post 2041[1]	$20,693,000	$0	0%	$ 0	$ 20,693,000	100%	$ 20,693,000	$ 20,693,000	$ 0

Note: 1. Projects with Phasing post 2041 (greyed-out items) will be included in the D.C. Study with 100% PPB, i.e., no D.C.-eligible cost.

D.C.-Eligible Cost Estimates – Land Acquisition

Transportation Infrastructure		Total Capital Cost	Grants, Subsidies and Other Contributions	Benefit to Existing (Non-Growth Related)	Net Capital Cost	Post-Period Benefit	Total Deductions	Potential D.C. Recoverable Cost (City-wide D.C.-Eligible)
Road Infrastructure	Land Acquisition	$ 135,023,300	$ 0	$ 1,638,100	$ 133,385,200	$ 45,198,300	$ 46,836,400	$ 88,186,900

D.C.-Eligible Cost Estimates – Priority AT Spine Routes

ID	Location/ Project Name	Facility	Phasing[1]	Total Capital Cost	Grants, Subsidies and Other Contributions	Benefit to Existing (Non-Growth Related)		Net Capital Cost	Post-Period Benefit		Total Deductions	Potential D.C. Recoverable Cost (City-wide D.C.-Eligible)
						%	$		%	$		
1	North-South Route and CN Rail Corridor	Bike Lane	ST	$ 17,700	$ 0	10%	$ 1,800	$ 15,900	0%	$ 0	$ 1,800	$ 15,900
1	North-South Route and CN Rail Corridor	Off-Road Trail	ST	$ 3,196,800	$ 0	10%	$ 319,700	$ 2,877,100	0%	$ 0	$ 319,700	$ 2,877,100
1	North-South Route and CN Rail Corridor	Signed Bike Route	ST	$ 7,100	$ 0	10%	$ 700	$ 6,400	0%	$ 0	$ 700	$ 6,400
1	North-South Route and CN Rail Corridor	Signed Bike Route with Edgeline	ST	$ 2,300	$ 0	10%	$ 200	$ 2,100	0%	$ 0	$ 200	$ 2,100
2	Lake to Lake	Off-Road Trail	ST	$ 884,200	$ 0	10%	$ 88,400	$ 795,800	0%	$ 0	$ 88,400	$ 795,800
2	Lake to Lake - Anchusa Drive	In-Boulevard Multi-Use Pathway	ST	$ 146,700	$ 0	10%	$ 14,700	$ 132,000	0%	$ 0	$ 14,700	$ 132,000
2	Lake to Lake - Regional (50% City Contribution)	In-Boulevard Multi-Use Pathway	ST	$ 8,098,300	$ 0	10%	$ 809,800	$ 7,288,500	0%	$ 0	$ 809,800	$ 7,288,500
3	Spadina-Valleymede	Bike Lane	ST	$ 706,200	$ 0	10%	$ 70,600	$ 635,600	0%	$ 0	$ 70,600	$ 635,600
4	Weldrick	Bike Lane	ST	$ 338,600	$ 0	10%	$ 33,900	$ 304,700	0%	$ 0	$ 33,900	$ 304,700
4	Weldrick	In-Boulevard Multi-Use Pathway	ST	$ 4,072,200	$ 0	10%	$ 407,200	$ 3,665,000	0%	$ 0	$ 407,200	$ 3,665,000
5	East-West Route and Trans Canada Pipeline	Bike Lane	MT	$ 59,400	$ 0	10%	$ 5,900	$ 53,500	25%	$ 13,400	$ 19,300	$ 40,100
5	East-West Route and Trans Canada Pipeline	Off-Road Trail	ST	$ 1,982,300	$ 0	10%	$ 198,200	$ 1,784,100	0%	$ 0	$ 198,200	$ 1,784,100
6	East Don River Trail	Off-Road Trail	ST	$ 384,600	$ 0	10%	$ 38,500	$ 346,100	0%	$ 0	$ 38,500	$ 346,100
7	MacLeod Trail	Off-Road Trail	ST	Funded in 2023	$ 0	10%	$ 0		0%	$ 0	$ 0	$ 0
8	Garden Avenue Multi-Modal Connection	In-Boulevard Multi-Use Pathway	MT	$ 184,200	$ 0	10%	$ 18,400	$ 165,800	25%	$ 41,500	$ 59,900	$ 124,300
9	East Beaver Creek-Headford	Bike Lane	MT	$ 530,000	$ 0	10%	$ 53,000	$ 477,000	0%	$ 0	$ 53,000	$ 477,000
9	East Beaver Creek-Headford	Buffered Bike Lane	MT	$ 215,700	$ 0	10%	$ 21,600	$ 194,100	25%	$ 48,500	$ 70,100	$ 145,600
9	East Beaver Creek-Headford	Cycle Track	ST	$ 51,900	$ 0	10%	$ 5,200	$ 46,700	25%	$ 11,700	$ 16,900	$ 35,000

ID	Location/ Project Name	Facility	Phasing[1]	Total Capital Cost	Grants, Subsidies and Other Contributions	Benefit to Existing (Non-Growth Related)		Net Capital Cost	Post-Period Benefit		Total Deductions	Potential D.C. Recoverable Cost (City-wide D.C.-Eligible)
						%	$		%	$		
10	High Tech Road	Cycle Track	ST	$ 4,149,000	$ 0	10%	$ 414,900	$ 3,734,100	0%	$ 0	$ 414,900	$ 3,734,100

D.C.-Eligible Cost Estimates – Other AT Facilities and Trails

ID	Location/ Project Name	Location	Phasing[1]	Total Capital Cost	Grants, Subsidies and Other Contributions	Benefit to Existing (Non-Growth Related)		Net Capital Cost	Post-Period Benefit		Total Deductions	Potential D.C. Recoverable Cost (City-wide D.C.-Eligible)
						%	$		%	$		
	Cycle Track	City-wide	MT	$ 3,047,800	$ 0	0-10%	$ 10,500	$ 3,037,300	25%	$ 759,300	$ 769,800	$ 2,278,000
	Cycle Track	City-wide	LT[2]	$ 1,460,200	$ 0	0%	$ 0	$ 1,460,200	100%	$ 1,460,200	$ 1,460,200	$ 0
	Off-Road Trail	City-wide	MT	$ 1,097,600	$ 0	10%	$ 109,800	$ 987,800	25%	$ 247,000	$ 356,800	$ 740,800
	Bike Lane	City-wide	ST	$ 3,064,500	$ 0	10%	$ 306,400	$ 2,758,100	0%	$ 0	$ 306,400	$ 2,758,100
	Bike Lane	City-wide	MT	$ 890,200	$ 0	10%	$ 89,300	$ 800,900	25%	$ 200,200	$ 289,500	$ 600,700
	Advisory Bike Lane	City-wide	ST	$ 50,700	$ 0	10%	$ 5,000	$ 45,700	0%	$ 0	$ 5,000	$ 45,700
	In-Boulevard Multi-Use Pathway	City-wide	ST	$ 4,572,400	$ 0	10%	$ 457,300	$ 4,115,100	0%	$ 0	$ 457,300	$ 4,115,100
	In-Boulevard Multi-Use Pathway	City-wide	MT	$ 7,908,000	$ 0	10%	$ 790,800	$ 7,117,200	25%	$ 1,779,300	$ 2,570,100	$ 5,337,900
	Buffered Bike Lane	City-wide	ST	$ 213,200	$ 0	10%	$ 21,400	$ 191,800	0%	$ 0	$ 21,400	$ 191,800
	Buffered Bike Lane	City-wide	MT	$ 22,600	$ 0	10%	$ 2,200	$ 20,400	25%	$ 5,100	$ 7,300	$ 15,300
	Signed Route with Super Sharrows	City-wide	ST	$ 48,200	$ 0	10%	$ 4,800	$ 43,400	0%	$ 0	$ 4,800	$ 43,400
	Signed Bike Route with Edgeline	City-wide	ST	$ 473,900	$ 0	10%	$ 47,400	$ 426,500	0%	$ 0	$ 47,400	$ 426,500
	Signed Bike Route	City-wide	ST	$ 74,200	$ 0	10%	$ 7,600	$ 66,600	0%	$ 0	$ 7,600	$ 66,600

ID	Location/ Project Name	Location	Phasing[1]	Total Capital Cost	Grants, Subsidies and Other Contributions	Benefit to Existing (Non-Growth Related)		Net Capital Cost	Post-Period Benefit		Total Deductions	Potential D.C. Recoverable Cost (City-wide D.C.-Eligible)
						%	$		%	$		
	Signed Bike Route	City-wide	MT	$ 1,100	$ 0	10%	$ 100	$ 1,000	25%	$ 300	$ 400	$ 700

Note: 1. ST-Short term by 2031, MT-mid term by 2041, and LT-long term post 2041.

2. Projects with Phasing LT-long term (i.e., post 2041 greyed-out items) will be included in the D.C. Study with 100% PPB, i.e., no D.C.-eligible cost.

D.C.-Eligible Cost Estimates – Sidewalk on Collector Roads

ID	Location/ Project Name	Location	Phasing[1]	Total Capital Cost	Grants, Subsidies and Other Contributions	Benefit to Existing (Non-Growth Related)		Net Capital Cost	Post-Period Benefit		Total Deductions	Potential D.C. Recoverable Cost (City-wide D.C.-Eligible)
						%	$		%	$		
	Sidewalk	City-wide	ST	$ 5,230,300	$ 0	10%	$ 523,000	$ 4,707,300	0%	$ 0	$ 523,000	$ 4,707,300
	Sidewalk	City-wide	MT	$ 11,800,000	$ 0	0-10%	$ 523,000	$ 11,277,000	25%	$ 2,819,300	$ 3,342,300	$ 8,457,700
	Sidewalk	City-wide	LT[2]	$ 3,260,400	$ 0	0%	$ 0	$ 3,260,400	100%	$ 3,260,400	$ 3,260,400	$ 0

Note: 1. ST-Short term by 2031, MT-mid term by 2041, and LT-long term post 2041.

2. Projects with Phasing LT-long term (i.e., post 2041 greyed-out items) will be included in the D.C. Study with 100% PPB, i.e., no D.C.-eligible cost.

D.C.-Eligible Cost Estimates – AT Bridges

ID	Location/ Project Name	Facility	Phasing[1]	Total Capital Cost	Grants, Subsidies and Other Contributions	Benefit to Existing (Non-Growth Related)		Net Capital Cost	Post-Period Benefit		Total Deductions	Potential D.C. Recoverable Cost (City-wide D.C.-Eligible)
						%	$		%	$		
2	German Mills Creek / CNR	AT Bridge	LT[2]	$ 7,000,000	$ 0	10%	$ 700,000	$ 6,300,000	100%	$ 6,300,000	$ 7,000,000	$ 0
67	Trailwood Reserve Watercourse and Trail / CNR	AT Bridge	LT[2]	$ 7,000,000	$ 0	10%	$ 700,000	$ 6,300,000	100%	$ 6,300,000	$ 7,000,000	$ 0
73	Off-Road Trail West of Leslie Street / CNR	AT Bridge	LT[2]	$ 7,000,000	$ 0	10%	$ 700,000	$ 6,300,000	100%	$ 6,300,000	$ 7,000,000	$ 0
96	Trans Richmond Trail South of 29th Avenue/CNR	AT Bridge	LT[2]	$ 7,000,000	$ 0	10%	$ 700,000	$ 6,300,000	100%	$ 6,300,000	$ 7,000,000	$ 0
97	David Dunlop Observatory Park Trail/CNR	AT Bridge	ST	$ 7,000,000	$ 0	10%	$ 700,000	$ 6,300,000	0%	$ 0	$ 700,000	$ 6,300,000
99	Off Road Trail West of Oneida Crescent/CNR	AT Bridge	ST	$ 10,000,000	$ 0	10%	$ 1,000,000	$ 9,000,000	0%	$ 0	$ 1,000,000	$ 9,000,000
101	Newberry Park/CNR	AT Bridge	LT[2]	$ 7,000,000	$ 0	10%	$ 700,000	$ 6,300,000	100%	$ 6,300,000	$ 7,000,000	$ 0
102	Roseview Avenue Trail/Richmond Hill GO (Funding subject to Metrolinx)	AT Bridge	LT[2]	$ 7,000,000	$ 0	10%	$ 700,000	$ 6,300,000	100%	$ 6,300,000	$ 7,000,000	$ 0
103	Iconic Bridge in Richmond Hill Centre	AT Bridge	MT	$ 10,000,000	$ 0	10%	$ 1,000,000	$ 9,000,000	25%	$ 2,250,000	$ 3,250,000	$ 6,750,000
	Crossing south of Carrville and east of Yonge	AT Bridge	LT[2]	$ 7,000,000	$ 0	10%	$ 700,000	$ 6,300,000	100%	$ 6,300,000	$ 7,000,000	$ 0
	High Tech Road	AT Bridge	ST	$ 5,000,000	$ 0	10%	$ 500,000	$ 4,500,000	0%	$ 0	$ 500,000	$ 4,500,000

Note: 1. ST-Short term by 2031, MT-mid term by 2041, and LT-long term post 2041.

2. Projects with Phasing LT-long term (i.e., post 2041 greyed-out items) will be included in the D.C. Study with 100% PPB, i.e., no D.C.-eligible cost.

D.C.-Eligible Cost Estimates – York Region Boulevard Improvements

ID	Location/ Project Name	Location	Improvement Category	Phasing	Total Capital Cost	Grants, Subsidies and Other Contributions	Benefit to Existing (Non-Growth Related)		Net Capital Cost	Post-Period Benefit		Total Deductions	Potential D.C. Recoverable Cost (City-wide D.C.-Eligible)
							%	$		%	$		
	Sidewalk	City-wide	Active Transportation-Other	By 2031	$ 14,722,000	$ 0	10%	$ 1,472,200	$ 13,249,800	0%	$ 0	$ 1,472,200	$ 13,249,800
	Sidewalk	City-wide	Active Transportation-Other	By 2041	$ 8,381,000	$ 0	10%	$ 838,100	$ 7,542,900	25%	$ 1,885,700	$ 2,723,800	$ 5,657,200
	Sidewalk	City-wide	Active Transportation-Other	Post 2041[1]	$ 18,165,000	$ 0	10%	$ 1,816,500	$ 16,348,500	100%	$ 16,348,500	$ 18,165,000	$ 0
	Bicycle Facilities	City-wide	Active Transportation-Other	By 2031	$ 5,829,000	$ 0	10%	$ 582,900	$ 5,246,100	0%	$ 0	$ 582,900	$ 5,246,100
	Bicycle Facilities	City-wide	Active Transportation-Other	By 2041	$ 585,000	$ 0	10%	$ 58,500	$ 526,500	25%	$ 131,600	$ 190,100	$ 394,900
	Bicycle Facilities	City-wide	Active Transportation-Other	Post 2041[1]	$ 10,474,000	$ 0	10%	$ 1,047,400	$ 9,426,600	100%	$ 9,426,600	$ 10,474,000	$ 0
	MUP within ROW	City-wide	Active Transportation-Other	By 2031	$ 1,948,000	$ 0	10%	$ 194,800	$ 1,753,200	0%	$ 0	$ 194,800	$ 1,753,200
	MUP within ROW	City-wide	Active Transportation-Other	By 2041	$ 9,842,000	$ 0	10%	$ 984,200	$ 8,857,800	25%	$ 2,214,500	$ 3,198,700	$ 6,643,300
	MUP within ROW	City-wide	Active Transportation-Other	Post 2041[1]	$ 783,000	$ 0	10%	$ 78,300	$ 704,700	100%	$ 704,700	$ 783,000	$ 0
	Illumination	City-wide	Miscellaneous-Illumination	By 2031	$ 12,722,000	$ 0	10%	$ 1,272,200	$ 11,449,800	0%	$ 0	$ 1,272,200	$ 11,449,800
	Illumination	City-wide	Miscellaneous-Illumination	By 2041	$ 11,667,000	$ 0	10%	$ 1,166,700	$ 10,500,300	25%	$ 2,625,100	$ 3,791,800	$ 7,875,200
	Illumination	City-wide	Miscellaneous-Illumination	Post 2041[1]	$ 11,951,000	$ 0	10%	$ 1,195,100	$ 10,755,900	100%	$ 10,755,900	$ 11,951,000	$ 0

Note: 1. Projects with Phasing post 2041 (greyed-out items) will be included in the D.C. Study with 100% PPB, i.e., no D.C.-eligible cost.

D.C.-Eligible Cost Estimates – Other Projects

ID	Location/ Project Name	Location	Improvement Category	Phasing	Total Capital Cost	Grants, Subsidies and Other Contributions	Benefit to Existing (Non-Growth Related)		Net Capital Cost	Post-Period Benefit		Total Deductions	Potential D.C. Recoverable Cost (City-wide D.C.-Eligible)
							%	$		%	$		
	Walkway Illumination	City-wide	Miscellaneous-Illumination	2027-2041	$4,198,500	$ 0	10%	$ 419,900	$ 3,778,600	0-25%	$ 629,800	$ 1,049,700	$ 3,148,800
	Walkway & Street Illumination	City-wide	Miscellaneous-Illumination	2024-2026	$1,000,000	$ 0	10%	$ 100,000	$ 900,000	0%	$ 0	$ 100,000	$ 900,000
	Sidewalk Program	City-wide	Active Transportation-Other	2024-2041	$10,450,000	$ 0	10%	$ 1,045,000	$ 9,405,000	0-25%	$ 1,306,300	$ 2,351,300	$ 8,098,700
	Pedestrian Crossover (PXO) Implementation	City-wide	Traffic Safety-PXOs	2024-2041	$5,400,000	$ 0	70%	$ 3,780,000	$ 1,620,000	0-25%	$ 225,000	$ 4,005,000	$ 1,395,000
	Automated Speed Enforcement (ASE) Implementation	City-wide	Traffic Safety-Other	2025-2041	$7,140,000	$ 0	70%	$ 4,998,000	$ 2,142,000	0-25%	$ 315,000	$ 5,313,000	$ 1,827,000
	TSOS Implementation	City-wide	City-wide	2024-2041	$5,625,000	$ 0	70%	$ 3,937,500	$ 1,687,500	0-25%	$ 234,400	$ 4,171,900	$ 1,453,100
	Annual Traffic Improvements	City-wide	Miscellaneous-Other City-wide	2024-2041	$6,930,000	$ 0	70%	$ 4,851,000	$ 2,079,000	0-25%	$ 288,800	$ 5,139,800	$ 1,790,200