



Transportation Master Plan Update

Appendix D – Project List and Costs

Town of East Gwillimbury
Final Report



Project List and Costs

This appendix provides the TMP recommended project list including detailed timings and cost estimates. The projects are categorized as Project List A for non-Whitebelt lands and Project List B for Whitebelt lands. The methodology used for the cost estimates is provided in **Attachment 1** for non-Whitebelt Lands and **Attachment 2** for the Whitebelt Lands. All costs are provided in 2022 dollars.

Attachment 1 provides costing methodology from 2041 network development completed in the draft 2019 TMP for reference purpose. The base year was 2018 at the time the work was completed, but costs have been updated to 2022 dollars.

Attachment 2 outlines the costing methodology for the overall network recommendations in the 2051 horizon and builds off the methodology from the 2041 horizon. The base year was 2022 at the time the work was completed.

Project List A - Non-Whitebelt Lands (\$2022)

Driving

Walking

Cycling

Streetlighting

MUP -> 1 side unless stated otherwise

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Road	From	To	Improvement Type	Road Class (if applicable)	Section length (km)	Timing	Recommended MCEA Schedule	Total cost (\$2022)
ROAD PROJECTS									
Holland Landing									
R-A1	Centennial Avenue Extension (Level Crossing)	Toll Road	Holland Landing Road	New Construction	Minor Collector	0.1	2025-2029	-	\$354,395
R-A2	Centennial Avenue Extension	Highway 11	Holland Landing Road	New Construction	Minor Collector	0.8	2025-2029	C	\$3,192,657
Green Lane West									
R-A3	Murell Boulevard Widening	East-West Collector	Green Lane	Widening	Major Collector	0.5	2025-2029	B	\$2,662,364
R-A4	Bayview Parkway Extension	Green Lane	Current Northern Terminus	New Construction	Minor Collector	0.5	2030-2034	C	\$4,245,019
R-A5	Connector Road / Street I	2nd Concession	East-West Collector	New Construction	Minor Collector	0.9	2025-2029	C	\$3,189,552
R-A7	East-West Collector + Structure	Bathurst Street	Harry Walker Parkway	New Construction	Major Collector		2025-2029	EA Complete	\$92,477,797
R-A8	Harry Walker Parkway Extension	East-West Collector	Green Lane	New Construction	Major Collector	0.2	2025-2029	-	\$819,991
R-A10	Lady Gwillim Avenue Extension	Green Lane	Ring Road H (East of Yonge)	New Construction	Minor Collector	2.33	2025-2029	C	\$5,705,754
R-A11	New East-West Road (South of Green Lane) / Street F	Bayview Parkway	Leslie Street	New Construction	Minor Collector	1.34	2030-2034	C	\$5,525,205
R-A11b	Murrell Blvd South Extension	Green Lane	Street F	New Construction	Major Collector	0.2	2030-2034	-	\$819,991
R-A12	North-South Connector (West of Yonge Street) / Street G	East-West Collector	Green Lane	New Construction	Minor Collector	0.8	2025-2029	B	\$2,835,157
R-A13	Ring Road (East of Yonge Street) / Ring Road H	East-West Collector (west side)	East-West Collector (east side)	New Construction	Minor Collector	2.3	2025-2029	C	\$9,703,710
R-A14	2nd Concession Ring Road / Ring Road J	Rogers Road	East-West Collector	New Construction	Minor Collector	2.35	2025-2029	C	\$8,328,275
R-A15	Street K	Manor Hampton Street	Green Lane	New Construction	Minor Collector	0.9	2025-2029	C	\$3,189,552
R-A16	Woodspring Avenue Extension	East-West Collector	Green Lane	New Construction	Major Collector	0.8	2025-2029	C	\$3,643,712
R-A59	Barrie GO Grade Separation	Green Lane	east of Second Concession	New Structure	Regional Road		Post 2031	C	\$52,758,326

Project List A - Non-Whitebelt Lands (\$2022)

Driving

Walking

Cycling

Streetlighting

MUP -> 1 side unless stated otherwise

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Road	From	To	Improvement Type	Road Class (if applicable)	Section length (km)	Timing	Recommended MCEA Schedule	Total cost (\$2022)
Sharon									
R-A21	New North Queensville Ring Road / Street C	Doane Road	Silk Twist Drive	New Construction	Major Collector	1.15	2035-2039	C	\$4,714,946
R-A22	Murrell Boulevard Extension	Doane Road	Mount Albert Road	New Construction	Major Collector	1.65	2025-2029	EA Complete	\$7,382,423
R-A23	Sharon East Employment Collector	Doane Road	Ward Avenue	New Construction	Major Collector	2.7	2030-2034	C	\$18,193,464
R-A24	Street O	Murell Boulevard Extension	Sharon East Employment Collector	New Construction	Minor Collector	2.08	2030-2034	C	\$7,371,409
R-A25	Silk Twist Drive East	Murell Boulevard Extension	Sharon East Employment Collector	New Construction	Major Collector	2.32	2025-2029	C	\$10,329,391
R-A26	Silk Twist Drive West	2nd Concession	Murell Boulevard	New Construction	Major Collector	1.2	2035-2039	C	\$5,403,694
R-A60	Highway 404 Interchange at Doane Road			New Structure	Regional Road		Post 2031	C	\$6,282,000
Queensville									
R-A27	Jim Mortson Drive Extension (Southern Extension)	Leslie Street	New North Queensville Ring Road / Street C	New Construction	Major Collector	0.3	2030-2034	B	\$1,229,986
R-A28	Jim Mortson Drive Extension (Southern Extension 2)	New North Queensville Ring Road / Street C	New North-South Frontage Road (East of Hwy 404) / Street L	New Construction	Major Collector	1.24	2035-2039	C	\$37,665,510
R-A29	Jim Mortson Drive Extension (Northern Extension)	Leslie Street	Sharon East Employment Collector Extension / Street D	New Construction	Minor Collector	0.8	2030-2034	C	\$3,611,473
R-A30	North Queensville Ring Road (East Portion)	Leslie Street	Queensville Sideroad	New Construction	Major Collector	1.25	Post 2040	C	\$7,841,737
R-A31	New North-South Road / Street A	Queensville Sideroad	Evans Farm Boulevard / Street B	New Construction	Minor Collector	0.6	2025-2029	B	\$2,126,368
R-A32	North Queensville Ring Road Extension / Street C	Queensville Sideroad	Doane Road	New Construction	Major Collector	2.05	2030-2034	C	\$9,142,404
R-A33	New North-South Frontage Road (East of Hwy 404) / Street L	Queensville Sideroad	Doane Road	New Construction	Minor Collector	2.06	2025-2029	C	\$8,733,096
R-A34	New East-West Road / Street M	New North-South Frontage Road (East of Hwy 404) / Street L	Woodbine Avenue	New Construction	Minor Collector	0.5	2035-2039	B	\$1,771,973
R-A35	New East-West Road / Street N	New North-South Frontage Road (East of Hwy 404) / Street L	Woodbine Avenue	New Construction	Minor Collector	0.5	2025-2029	B	\$1,771,973
R-A36	Murell Boulevard Extension / John Candy Drive	Ben Sinclair Avenue	Doane Road	New Construction	Major Collector	0.5	2025-2029	C	\$5,825,053
R-A37	Sharon East Employment Collector Extension / Street D	Leslie Street	Doane Road	New Construction	Major Collector	2.3	2030-2034	C	\$10,001,210

Project List A - Non-Whitebelt Lands (\$2022)

Driving

Walking

Cycling

Streetlighting

MUP -> 1 side unless stated otherwise

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Road	From	To	Improvement Type	Road Class (if applicable)	Section length (km)	Timing	Recommended MCEA Schedule	Total cost (\$2022)
Mount Albert									
R-A38	Centre Street	King Street and King Street East	Mount Albert Road	Reconstruction	Local Road	1.1	2025-2029	B	\$5,353,972
RURAL ROADS									
R-A39	Centre Street	Queensville Sideroad	King Street and King Street East	Reconstruction	Major Collector	3.0	By 2041	B	\$7,366,961
R-A40	Centre Street	Mount Albert Road	Davis Drive	Reconstruction	Major Collector	4.1	By 2041	B	\$7,946,249
R-A41	Doane Road	Woodbine Avenue	McCowan Road	Reconstruction	Major Collector	6.2	By 2041	B	\$15,786,957
R-A42*	Doane Road	Centre Street	York Durham Line	Reconstruction	Major Collector			-	
R-A43	Herald Road	Woodbine Avenue	Hwy 48	Reconstruction	Major Collector	8.2	By 2041	B	\$24,321,073
R-A44	Queensville Sideroad	Woodbine Avenue	York Durham Line	Reconstruction	Major Collector	10.5	By 2041	B	\$26,338,874
R-A61	York Durham Line	Ravenshoe Road	Queensville Sideroad	Reconstruction	Regional Road	6.0	By 2041	B	\$20,520,222
INTERSECTION IMPROVEMENTS									
R-A45	Queensville Side Road / Centre Street			Intersection Improvement / Jog Elimination			By 2041	B	\$506,276
R-A46	Queensville Side Road / Kennedy Road			Intersection Improvement / Jog Elimination			By 2041	B	\$506,276
R-A47	Queensville Side Road / Warden Avenue			Intersection Improvement / Jog Elimination			By 2041	B	\$506,276
R-A48	Doane Road / Warden Avenue			Intersection Improvement / Jog Elimination			By 2041	B	\$506,276
R-A49	Roundabout at East-West Collector and Murrell			Roundabout			2025-2029	B	\$556,250
R-A50	Herald Road / Centre Street			Intersection Improvement / Jog Elimination			2030-2034	B	\$506,276
R-A51	Queensville Sideroad / Highway 48 (Provincial Int.)			Intersection Improvement / Jog Elimination			By 2041	B	\$506,276
R-A52	Doane Road / Woodbine Avenue			Intersection Improvement / Jog Elimination			By 2041	B	\$506,276
R-A53	Doane Road / Leslie Street			Intersection Improvement / Jog Elimination			By 2041	B	\$506,276
R-A54	Doane Road / Murrell Boulevard			Intersection Improvement / Jog Elimination			By 2041	B	\$506,276
R-A55	North Queensville Ring Road / Street D			Roundabout			2030-2034	B	\$556,250
R-A56	North Queensville Ring Road / Jim Morton Drive Extension (Southern Extension 1)			Roundabout			2030-2034	B	\$556,250
R-A57	East-West Collector north of Green Lane / N-S Collector 8 (Woodspring Avenue Extension)			Roundabout			2035-2039	B	\$556,250
R-A58	Silk Twist Drive East / Murrell Boulevard Extension			Roundabout			2035-2039	B	\$556,250

Project List A - Non-Whitebelt Lands (\$2022)

Driving

Walking

Cycling

Streetlighting

MUP -> 1 side unless stated otherwise

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Road	From	To	Improvement Type	Road Class (if applicable)	Section length (km)	Timing	Recommended MCEA Schedule	Total cost (\$2022)
WALKING									
REGIONAL ROADS									
W-A1a	2nd Concession Road	Queensville Sideroad	Green Lane	Sidewalk on Both Sides		2.5	2030-2034	-	\$905,070
	2nd Concession Road	Doane Road	Queensville Sideroad	MUP		3.7	2030-2034	-	
	Doane Road	Yonge Street	Woodbine Avenue	MUP		6.1	2025-2029	-	
	Green Lane	Yonge Street	Woodbine Avenue	MUP		6.1	2040-2044	-	
W-A4	Holland Landing Road	Bathurst Street	Yonge Street	Sidewalk on One Side		2.9	2030-2034	-	\$524,941
	Leslie Street	Colonel Wayling Boulevard	Green Lane	MUP		0.95	2030-2034	-	
W-A5c	Leslie Street	E-W Collector	Green Lane	Sidewalk on One Side		0.28	2030-2034	-	\$50,684
	Mount Albert Road	2nd Concession Road	Leslie Street	MUP		2	2025-2029	-	
W-A6b*	Mount Albert Road	220m west of Colony Trail Boulevard	Colony Trail Boulevard	Sidewalk on One Side		0.22		-	
W-A6c	Mount Albert Road (north side)	Yonge Street	2nd Concession Road	Sidewalk on One Side		2	2030-2034	-	\$362,028
W-A6d	Mount Albert Road (south side)	335m west of 2nd Concession Road	2nd Concession Road	Sidewalk on One Side		0.335	2030-2034	-	\$60,640
W-A6e	Mount Albert Road (south side)	Charles Street	Sports Complex	Sidewalk on One Side		1.1	2030-2034	-	\$199,115
W-A6f*	Mount Albert Road (north side)	Conn Drive / Howard Avenue	Sports Complex	Sidewalk on One Side		0.7		-	
W-A6g	Mount Albert Road (south side)	Highway 48	Royal Oak Road	Sidewalk on One Side		1.4	2025-2029	-	\$253,420
W-A6h	Mount Albert Road (north side)	Royal Oak Road	York Durham Line	Sidewalk on One Side		0.85	2025-2029	-	\$153,862
W-A7a	Queensville Sideroad (south side)	Sand Road	River Drive	Sidewalk on One Side		0.75	2030-2034	-	\$135,761
	Queensville Sideroad	Holland's Landing Depot Driveway	Leslie Street	MUP		4.3		-	
W-A7c	Queensville Sideroad	North Queensville Ring Road	Woodbine Avenue	Sidewalk on Both Sides		1.7	2030-2034	-	\$615,448
W-A7d	Queensville Sideroad (north side)	115m West of Karissa Lane	River Drive	Sidewalk on One Side		0.92	2030-2034	-	\$166,533
W-A8a	Yonge Street	Queensville Sideroad	Maple Street	Sidewalk on One Side		0.9	2030-2034	-	\$162,913
W-A8b	Yonge Street (west side)	Mount Albert Road	Holland Landing Road	Sidewalk on One Side		0.5	2025-2029	-	\$90,507
W-A8c	Yonge Street	East-West Collector	Lady Gwillim Avenue Extension	Sidewalk on Both Sides		0.4	2040-2044	-	\$144,811
	Yonge Street	400m north of Green Lane	East-West Collector	MUP		0.45	2040-2044	-	
	Highway 11	Sherwood Glen/Dogwood Blvd	Crimson King Way	MUP		0.94	2030-2034	-	
	Highway 11	Crimson King Way	Bathurst St	MUP		1.17	2030-2034	-	
W-A9	Woodbine Avenue (west side)	Queensville Sideroad	Davis Drive	Sidewalk on One Side		8.3	2030-2034	-	\$1,502,417
W-A10	Highway 11 / Yonge Street (east side)	Bathurst Street	East-West Collector	Sidewalk on One Side		2.8	2030-2034	-	\$506,839
	Leslie Street	Mount Albert Road (North Leg)	Colonel Wayling Boulevard	MUP		1.6	2030-2034	-	
W-A11*	Highway 48 (east side)	0.4km North of Princess Street	Mount Albert Road	Sidewalk on One Side		0.9		-	
W-A11b	Leslie Street	Jim Mortson Drive (North Leg)	E-W Collector 9	Sidewalk on Both Sides		1.79	2025-2029	-	\$648,030
W-A11c	Leslie Street	Silk Twist Drive	Mount Alber Road (North	Sidewalk on Both Sides		0.39	2025-2029	-	\$141,191

Project List A - Non-Whitebelt Lands (\$2022)

Driving

Walking

Cycling

Streetlighting

MUP -> 1 side unless stated otherwise

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Road	From	To	Improvement Type	Road Class (if applicable)	Section length (km)	Timing	Recommended MCEA Schedule	Total cost (\$2022)
Holland Landing									
W-A12a	Centennial Avenue Extension (Level Crossing)	Toll Road	Holland Landing Road	Sidewalk on Both Sides		0.1	2025-2029	-	\$36,203
W-A12b	Centennial Avenue Extension	Highway 11	Holland Landing Road	Sidewalk on Both Sides		0.8	2025-2029	-	\$289,622
W-A13	Oriole Drive	Toll Road	250m east of Toll Road	Sidewalk on One Side		0.25	2030-2034	-	\$45,254
W-A15	Toll Road	Oriole Drive	350m south of Oriole Drive	Sidewalk on One Side		0.35	2030-2034	-	\$63,355
W-A51	Mount Albert Road	Sand Road	Yonge Street	Sidewalk on Both Sides		0.89	2030-2034	-	\$322,205
Green Lane West									
W-A16a	Murrell Boulevard Widening	East-West Collector	Green Lane	Sidewalk on Both Sides		0.8	2025-2029	-	\$289,622
W-A16b	Murrell Blvd South Extension	Green Lane	Street F	Sidewalk on Both Sides		0.2	2030-2034	-	\$72,406
W-A17	Street G	East-West Collector	Green Lane	Sidewalk on Both Sides		0.8	2025-2029	-	\$289,622
W-A18	Bayview Parkway Extension	Green Lane	Current Northern Terminus	Sidewalk on Both Sides		0.5	2030-2034	-	\$181,014
W-A19	Connector Road / Street I	2nd Concession	East-West Collector	Sidewalk on Both Sides		0.9	2025-2029	-	\$325,825
W-A20b	Woodspring Avenue Extension	East-West Collector	Green Lane	Sidewalk on Both Sides		0.8	2025-2029	-	\$289,622
W-A21	East West Collector	Bathurst Street	Harry Walker Parkway	Sidewalk on Both Sides		6.75	2025-2029	-	
W-A22a	Harry Walker Parkway Extension	East-West Collector	Green Lane	Sidewalk on Both Sides		0.2	2025-2029	-	\$72,406
W-A23	Lady Gwillim Avenue Extension	Green Lane	Ring Road H (east of Yonge)	Sidewalk on Both Sides		2.33	2025-2029	-	\$843,525
W-A24	Street F	Bayview Parkway	Leslie Street	Sidewalk on Both Sides		1.34	2025-2029	-	\$485,118
W-A25	Ring Road H	East-West Collector (west leg)	East-West Collector (east leg)	Sidewalk on Both Sides		2.3	2025-2029	-	\$832,665
W-A26	Ring Road J	Rogers Road	East-West Collector	Sidewalk on Both Sides		2.35	2025-2029	-	\$850,766
W-A27	Street K	Manor Hampton Street	Green Lane	Sidewalk on Both Sides		0.9	2025-2029	-	\$325,825
Sharon									
W-A29	Farr Avenue	Oxford Court	Sharon East Employment Collector	Sidewalk on One Side		0.1	2030-2034	-	\$18,101
W-A16c	Murrell Boulevard Extension	Doane Road	Mount Albert Road	Sidewalk on Both Sides		1.65	2025-2029	-	\$597,346
W-A31	Sharon East Employment Collector	Doane Road	Mount Albert Road	Sidewalk on Both Sides		2.2	2030-2034	-	\$796,462
W-A32	Street C	Doane Road	Silk Twist Drive	Sidewalk on Both Sides		1.15	2035-2039	-	\$416,332
W-A33	Street O	Murell Boulevard Extension	Sharon East Employment Collector	Sidewalk on Both Sides		2.08	2030-2034	-	\$753,018
W-A34a	Silk Twist Drive East	Murell Boulevard Extension	Sharon East Employment Collector	Sidewalk on Both Sides		2.32	2025-2029	-	\$839,905
W-A34b	Silk Twist Drive West	2nd Concession	Murell Boulevard	Sidewalk on Both Sides		1.2	2035-2039	-	\$434,434

Project List A - Non-Whitebelt Lands (\$2022)

Driving

Walking

Cycling

Streetlighting

MUP -> 1 side unless stated otherwise

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Road	From	To	Improvement Type	Road Class (if applicable)	Section length (km)	Timing	Recommended MCEA Schedule	Total cost (\$2022)
Queensville									
W-A37a	Jim Mortson Drive Extension (Southern	Leslie Street	Street C	Sidewalk on Both Sides		0.3	2030-2034	-	\$108,608
W-A37b	Jim Mortson Drive Extension (Southern Extension 2)	Street C	Street L	Sidewalk on Both Sides		1.24	2035-2039	-	\$448,915
W-A37c	Jim Mortson Drive Extension (Northern Extension)	Leslie Street	Street D	Sidewalk on Both Sides		0.88	2030-2034	-	\$318,585
W-A38	North Queensville Ring Road (East Portion)	Leslie Street	Queensville Sideroad	Sidewalk on Both Sides		1.25	Post 2040	-	\$452,535
W-A39	Street A	Queensville Sideroad	Evans Farm Boulevard / Street B	Sidewalk on One Side		0.6	2025-2029	-	\$108,608
W-A40a	Evans Farm Boulevard / Street B	2nd Concession	Milne Lane	Sidewalk on One Side		1.25	2025-2029	-	\$226,268
W-A41	New North Queensville Ring Road Extension / Street C	Queensville Sideroad	Doane Road	Sidewalk on Both Sides		2.05	2030-2034	-	\$742,158
W-A42	Sharon East Employment Collector Extension /	Leslie Street	Doane Road	Sidewalk on Both Sides		2.25	2030-2034	-	\$814,563
W-A43	Street L	Queensville Sideroad	Doane Road	Sidewalk on Both Sides		2.06	2025-2029	-	\$745,778
W-A44	Street M	Street L	Woodbine Avenue	Sidewalk on Both Sides		0.5	2035-2039	-	\$181,014
W-A45	Street N	Street L	Woodbine Avenue	Sidewalk on Both Sides		0.5	2025-2029	-	\$181,014
W-A16d	Murell Boulevard Extension / John Candy Drive	Ben Sinclair Avenue	Doane Road	Sidewalk on Both Sides		0.5	2025-2029	-	\$181,014
Mount Albert									
W-A46	Centre Street	King Street and King Street East	120m south of Vivian Creek	Sidewalk on Both Sides		0.52	2025-2029	-	\$188,255
W-A47	Samuel Harper Court (west side)	Vivian Creek Trail / Haig Crescent	Mount Albert Road	Sidewalk on One Side		0.21	2025-2029	-	\$38,013
W-A48	King Street (east side)	280m north of Albert Street	Mount Albert Road	Sidewalk on One Side		0.35	2025-2029	-	\$63,355
W-A49*	Ninth Line (west side)	30m south of Donald Stewart Crescent	Mount Albert Road	Sidewalk on One Side		0.43		-	
W-A50	Ninth Line (west side)	Vivian Creek Road	North Terminus	Sidewalk on One Side		0.27	2025-2029	-	\$48,856

Project List A - Non-Whitebelt Lands (\$2022)

Driving

Walking

Cycling

Streetlighting

MUP -> 1 side unless stated otherwise

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Road	From	To	Improvement Type	Road Class (if applicable)	Section length (km)	Timing	Recommended MCEA Schedule	Total cost (\$2022)
CYCLING									
REGIONAL ROADS									
C-A1	2nd Concession Road	Doane Road	Queensville Sideroad	MUP		2.03	2030-2034	-	\$520,504
C-A2	Bathurst Street	Highway 11	Southern Town Boundary	Paved Shoulders		4.8	2030-2034	-	\$1,378,211
C-A3	Davis Drive	Warden Avenue	York Durham Line	Paved Shoulders		9	By 2041	-	\$2,584,146
C-A4	Green Lane	Yonge Street	Woodbine Avenue	MUP		6	2040-2044	-	\$1,538,437
C-A6	Holland Landing Road	Bathurst Street	Oriole Drive	Painted Bike Lanes		0.3	2030-2034	-	\$15,384
C-A7	Kennedy Road	Ravenshoe Road	Herald Road	Paved Shoulders		12.4	By 2041	-	\$3,560,379
C-A8	Kennedy Road	550m North of Davis Drive	Davis Drive	Paved Shoulders		0.55	By 2041	-	\$157,920
C-A9	Leslie Street	Testa Street	Milne Lane	Painted Bike Lanes		0.65	2030-2034	-	\$33,333
C-A9b	Leslie Street	Mount Albert Road (North Leg)	Colonel Wayling Boulevard	MUP		1.6	2030-2034	-	\$410,250
C-A9c	Leslie Street	Colonel Wayling Boulevard	Green Lane	MUP		0.95	2030-2034	-	\$243,586
C-A10	McCowan Road	Ravenshoe Road	Davis Drive	Paved Shoulders		14.3	By 2041	-	\$4,105,921
C-A11a	Mount Albert Road	Yonge Street	2nd Concession Road	Painted Bike Lanes		2	2030-2034	-	\$102,562
C-A11b	Mount Albert Road	2nd Concession Road	Leslie Street	MUP		2	2025-2029	-	\$512,812
C-A11c	Mount Albert Road	Woodbine Avenue	King Street	Paved Shoulders		8.6	By 2041	-	\$2,469,295
C-A12	Ravenshoe Road	Western Town Boundary	York Durham Line	Paved Shoulders		15.75	By 2041	-	\$4,522,255
C-A13	Warden Avenue	Ravenshoe Road	Davis Drive	Paved Shoulders		14.4	By 2041	-	\$4,134,634
C-A14a	Yonge Street	Olive Street / Beckett Avenue	Holland Landing Road / Old Yonge Street	Painted Bike Lanes		1.6	2025-2029	-	\$82,050
C-A14b*	Yonge Street	East-West Collector	Green Lane	Painted Bike Lanes		0.85		-	
C-A14c	Yonge Street	400m north of Green Lane	East-West Collector	MUP		0.45	2040-2044	-	\$852,241
C-A14d	Highway 11	Sherwood Glen/Dogwood Blvd	Crimson King Way	MUP		0.94	2030-2034	-	\$178,199
C-A14e	Highway 11	Crimson King Way	Bathurst St	MUP		1.17	2030-2034	-	\$221,801
C-A15	York Durham Line	Ravenshoe Road	Davis Drive	Paved Shoulders		14.2	By 2041	-	\$4,077,208
C-A15a	Doane Road	Yonge Street	Woodbine Avenue	MUP		6.1	2025-2029	-	\$1,564,077
C-A64*	Queensville Sideroad	Holland's Landing Depot Driveway	Leslie Street	MUP		4.3		-	
RURAL ROADS									
	Centre Street	Queensville Sideroad	King Street and King Street East	Paved Shoulders			By 2041	-	
	Centre Street	Mount Albert Road	Davis Drive	Paved Shoulders			By 2041	-	
	Doane Road	Woodbine Avenue	McCowan	Paved Shoulders			By 2041	-	
	Herald Street	Woodbine Avenue	York Durham Line	Paved Shoulders			By 2041	-	
	Queensville Sideroad	Woodbine Avenue	York Durham Line	Paved Shoulders			By 2041	-	

Project List A - Non-Whitebelt Lands (\$2022)

Driving

Walking

Cycling

Streetlighting

MUP -> 1 side unless stated otherwise

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Road	From	To	Improvement Type	Road Class (if applicable)	Section length (km)	Timing	Recommended MCEA Schedule	Total cost (\$2022)
Holland Landing									
C-A20a	Centennial Avenue Extension (Level Crossing)	Toll Road	Holland Landing Road	Painted Bike Lanes		0.1	2025-2029	-	\$5,128
C-A20b	Centennial Avenue Extension	Highway 11	Holland Landing Road	Painted Bike Lanes		0.8	2025-2029	-	\$41,025
C-A21	Colony Trail Boulevard	Western Terminus	Mount Albert Road	Painted Bike Lanes		1	2030-2034	-	\$51,281
C-A22	Oriole Drive	Holland Landing Road	Yonge Street	Painted Bike Lanes		1.9	2030-2034	-	\$97,434
C-A23	Sand Road	Queensville Sideroad	Oriole Drive	Sharrows		2.1	2030-2034	-	\$107,691
C-A24a	Thompson Drive	Yonge Street	Silk Twist Drive	Painted Bike Lanes		1	2025-2029	-	\$51,281
C-A24b	Bradford Street	Yonge Street	Holland Landing Road	Painted Bike Lanes		0.59	2025-2029	-	\$30,256
C-A25	Oriole Drive	Holland Landing Road	Sand Road	Sharrows		1	2030-2034	-	\$51,281
C-A62	Silk Twist Drive	Doane Road	2nd Concession Road	Painted Bike Lanes		2.07	2025-2029	-	\$106,152
C-A63a	Dog Wood Boulevard	Northern Terminus	Highway 11	Painted Bike Lanes		1.34	2025-2029	-	\$68,717
C-A63b	Crimson King Way	Highway 11	Dog Wood Boulevard	Painted Bike Lanes		0.53	2025-2029	-	\$27,179
C-A63c	Charlotte Abby Drive	Dog Wood Boulevard	Holland Landing Road	Painted Bike Lanes		0.53	2025-2029	-	\$27,179
C-A63d	Holland Vista Street	Dog Wood Boulevard	Holland Landing Road	Painted Bike Lanes		0.82	2025-2029	-	\$42,051
Green Lane West									
C-A26	Murell Boulevard Widening	East-West Collector	Green Lane	Painted Bike Lanes		0.8	2025-2029	-	\$41,025
C-A27	Bayview Parkway Extension	Green Lane	Current Northern Terminus	Painted Bike Lanes		0.5	2030-2034	-	\$25,641
C-A28	Connector Road / Street I	2nd Concession	East-West Collector	Painted Bike Lanes		0.9	2025-2029	-	\$46,153
C-A29b	Woodspring Avenue Extension	East-West Collector	Green Lane	Painted Bike Lanes		0.8	2025-2029	-	\$41,025
C-A30	East West Collector	Bathurst Street	Harry Walker Parkway	Painted Bike Lanes		6.75	2025-2029	-	\$346,148
C-A31a	Harry Walker Parkway Extension	East-West Collector	Green Lane	Painted Bike Lanes		0.2	2025-2029	-	\$10,256
C-A32	Lady Gwillim Avenue Extension	Green Lane	Ring Road H (East lof Yonge)	Painted Bike Lanes		2.33	2025-2029	-	\$119,485
C-A33	Street F	Bayview Parkway	Leslie Street	Painted Bike Lanes		1.34	2025-2029	-	\$68,717
C-A34	Murrell Blvd South Extension	Green Lane	Street F	Painted Bike Lanes		0.2	2025-2029	-	\$10,256
C-A35	Street G	Green Lane	East-West Collector	Painted Bike Lanes		0.8	2025-2029	-	\$41,025
C-A36	Ring Road H	East-West Collector (west leg)	East-West Collector (East leg)	Painted Bike Lanes		2.3	2025-2029	-	\$117,947
C-A37	Ring Road J	Rogers Road	East-West Collector	Painted Bike Lanes		2.35	2025-2029	-	\$120,511
C-A38	Street K	Manor Hampton Street	Green Lane	Painted Bike Lanes		0.9	2025-2029	-	\$46,153
C-A39	Harvest Hills (19T-04001)	Nature Way Crescent	Woodspring Avenue	Painted Bike Lanes		0.8	2025-2029	-	\$41,025
Sharon									
C-A40a	Colonel Wayling Boulevard	Northern Terminus	Leslie Street	Painted Bike Lanes		2.4	2030-2034	-	\$123,075
C-A42	Manor Hampton Street	Murell Boulevard	Leslie Street	Painted Bike Lanes		1	2030-2034	-	\$51,281
C-A43*	Murrell Boulevard Extension	Doane Road	Mount Albert Road	Painted Bike Lanes		1.65		-	
C-A44	Sharon East Employment Collector	Doane Road	Mount Albert Road	Painted Bike Lanes		2.2	2030-2034	-	\$112,819
C-A45	Street C	Doane Road	Silk Twist Drive	Painted Bike Lanes		1.15	2035-2039	-	\$58,973
C-A46	Street O	Murell Boulevard Extension	Sharon East Employment Collector	Painted Bike Lanes		2.08	2030-2034	-	\$106,665
C-A47	Silk Twist Drive East	Murell Boulevard Extension	Sharon East Employment Collector	Painted Bike Lanes		2.32	2025-2029	-	\$118,972
C-A48	Silk Twist Drive West	2nd Concession	Murell Boulevard	Painted Bike Lanes		1.2	2035-2039	-	\$61,537

Project List A - Non-Whitebelt Lands (\$2022)

Driving

Walking

Cycling

Streetlighting

MUP -> 1 side unless stated otherwise

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Road	From	To	Improvement Type	Road Class (if applicable)	Section length (km)	Timing	Recommended MCEA Schedule	Total cost (\$2022)
Queensville									
C-A50	Jim Mortson Drive	Leslie Street (north leg)	Leslie Street (south leg)	Painted Bike Lanes		1.16	2030-2034	-	\$59,486
C-A50a	Jim Mortson Drive Extension (Southern Extension)	Leslie Street	Street C	Painted Bike Lanes		0.3	2030-2034	-	\$15,384
C-A50b	Jim Mortson Drive Extension (Southern Extension 2)	Street C	Street L	Painted Bike Lanes		1.24	2035-2039	-	\$63,589
C-A50c	Jim Mortson Drive Extension (Northern Extension)	Leslie Street	Street D	Painted Bike Lanes		0.88	2030-2034	-	\$45,127
C-A51	Murrell Boulevard Extension / John Candy Drive	Blazing Star Street	Doane Road	Sharrows		0.78	2025-2029	-	\$39,999
C-A52	North Queensville Ring Road (East Portion)	Leslie Street	Queensville Sideroad	Painted Bike Lanes		1.25	Post 2040	-	\$64,102
C-A53	Street A	Queensville Sideroad	Evans Farm Boulevard / Street B	Painted Bike Lanes		0.6	2025-2029	-	\$30,769
C-A54	Evans Farm Boulevard / Street B	2nd Concession	Jim Mortson Drive Ring	Painted Bike Lanes		1.7	2025-2029	-	\$87,178
C-A55	North Queensville Ring Road Extension / Street C	Queensville Sideroad	Doane Road	Painted Bike Lanes		2.05	2030-2034	-	\$105,127
C-A56	Sharon East Employment Collector Extension /	Leslie Street	Doane Road	Painted Bike Lanes		2.25	2030-2034	-	\$115,383
C-A57	Street L	Queensville Sideroad	Doane Road	Painted Bike Lanes		2.06	2025-2029	-	\$105,639
C-A58	Street M	Street L	Woodbine Avenue	Painted Bike Lanes		0.5	2035-2039	-	\$25,641
C-A59	Street N	Street L	Woodbine Avenue	Painted Bike Lanes		0.5	2025-2029	-	\$25,641
Mount Albert									
C-A60	Centre Street	King Street and King Street East	Mount Albert Road	Sharrows		1.5	2025-2029	-	\$76,922
C-A61	King Street and King Street East	Mount Albert Road	Ninth Line	Painted Bike Lanes		3.4	2025-2029	-	\$174,356

Project List A - Non-Whitebelt Lands (\$2022)

Driving

Walking

Cycling

Streetlighting

MUP -> 1 side unless stated otherwise

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Road	From	To	Improvement Type	Road Class (if applicable)	Section length (km)	Timing	Recommended MCEA Schedule	Total cost (\$2022)
STREETLIGHTING									
S-A1	2nd Concession Road	Queensville Sideroad	0.3km North of Doane Road	Streetlights		1.7	2030-2034	-	\$366,246
S-A2	Doane Road	Anchor Court	Woodbine Avenue	Streetlights		5.8	2025-2029	-	\$1,247,875
S-A3a	Green Lane East	Yonge Street	Woodbine Avenue	Streetlights		6.1	2040-2044	-	\$1,306,740
S-A3b	Green Lane West	Bathurst Street	Yonge Street	Streetlights		2.2	2040-2044	-	\$463,937
S-A4*	Highway 11	Bathurst Street	Morning Sideroad	Streetlights		3.6		-	
S-A5	Highway 48	0.4km North of Princess Street	Mount Albert Road	Streetlights		1.0	2025-2029	-	\$208,294
S-A6	Holland Landing Road	Bathurst Street	Green Lane	Streetlights		2.9	2030-2034	-	\$617,109
S-A7a	Leslie Street	Jim Mortson Drive	Mount Albert Road	Streetlights		2.7	2025-2029	-	\$586,972
S-A7b	Leslie Street	Colonel Wayling Boulevard	Green Lane	Streetlights		0.9	2030-2034	-	\$193,382
S-A8a	Mount Albert Road	Stonehill Boulevard / Valleview Avenue	Leslie Street	Streetlights		2.9	2025-2029	-	\$628,734
S-A8b	Mount Albert Road	Colonel Wayling Boulevard	Woodbine Avenue	Streetlights		0.7	2025-2029	-	\$141,520
S-A8c	Mount Albert Road	Highway 48	Ninth Line	Streetlights		2.6	2025-2029	-	\$560,165
S-A10a	Queensville Sideroad	Yonge Street	Woodbine Avenue	Streetlights		2.6	2030-2034	-	\$560,165
S-A10b	Queensville Sideroad West	0.2km West of Yonge Street	Yonge Street	Streetlights		0.2	2030-2034	-	\$45,774
S-A11	Woodbine Avenue	Queensville Sideroad	Mount Albert Road	Streetlights		6.2	2030-2034	-	\$1,322,009
S-A12a	Yonge Street	400m north of Green Lane	East-West Collector	Streetlights		0.5	2040-2044	-	\$212,264
S-A12b	Highway 11	Sherwood Glen/Dogwood Blvd	Crimson King Way	Streetlights		0.9	2030-2034	-	\$178,199
S-A12c	Highway 11	Crimson King Way	Bathurst St	Streetlights		1.2	2030-2034	-	\$221,801
Holland Landing									
S-A13a	Centennial Avenue Extension (Level Crossing)	Toll Road	Holland Landing Road	Streetlights		0.1	2025-2029	-	\$21,367
S-A13b	Centennial Avenue Extension	Highway 11	Holland Landing Road	Streetlights		0.8	2025-2029	-	\$170,937

Project List A - Non-Whitebelt Lands (\$2022)

Driving

Walking

Cycling

Streetlighting

MUP -> 1 side unless stated otherwise

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Road	From	To	Improvement Type	Road Class (if applicable)	Section length (km)	Timing	Recommended MCEA Schedule	Total cost (\$2022)
Green Lane West									
S-A14a	Murell Boulevard Widening	East-West Collector	Green Lane	Streetlights		0.5	2025-2029	-	\$106,836
S-A14b	Murrell Blvd South Extension	Green Lane	Street F	Streetlights		0.2	2030-2034	-	\$42,734
S-A15	Bayview Parkway Extension	Green Lane	Current Northern Terminus	Streetlights		0.5	2030-2034	-	\$106,836
S-A16	Connector Road / Street I	2nd Concession	East-West Collector	Streetlights		0.9	2025-2029	-	\$192,305
S-A17b	Woodspring Avenue Extension	East-West Collector	Green Lane	Streetlights		0.8	2025-2029	-	\$170,937
S-A18a	Harry Walker Parkway Extension	East-West Collector	Green Lane	Streetlights		0.2	2025-2029	-	\$42,734
S-A19	Lady Gwillim Avenue Extension	Green Lane	Ring Road H (East of Yonge)	Streetlights		2.3	2025-2029	-	\$497,855
S-A20	New East-West Road (South of Green Lane) / Street F	Bayview Parkway	Leslie Street	Streetlights		1.3	2030-2034	-	\$286,320
S-A21	North-South Connector (West of Yonge Street) / Street G	East-West Collector	Green Lane	Streetlights		0.8	2025-2029	-	\$170,937
S-A22	Ring Road (East of Yonge Street) / Ring Road H	East-West Collector (west side)	East-West Collector (east side)	Streetlights		2.3	2025-2029	-	\$491,445
S-A23	2nd Concession Ring Road / Ring Road J	Rogers Road	East-West Collector	Streetlights		2.4	2025-2029	-	\$502,129
S-A24	Street K	East-West Collector	Green Lane	Streetlights		0.9	2025-2029	-	\$192,305
Sharon									
S-A28	New North Queensville Ring Road / Street C	Doane Road	Silk Twist Drive	Streetlights		1.2	2035-2039	-	\$245,723
S-A14c	Murrell Boulevard Extension	Doane Road	Mount Albert Road	Streetlights		1.7	2025-2029	-	\$352,558
S-A29	Sharon East Employment Collector	Doane Road	Ward Avenue	Streetlights		2.7	2030-2034	-	\$576,914
S-A30	Street O	Murell Boulevard Extension	Sharon East Employment Collector	Streetlights		2.1	2030-2034	-	\$444,437
S-A31a	Silk Twist Drive East	Murell Boulevard Extension	Sharon East Employment Collector	Streetlights		2.3	2025-2029	-	\$495,719
S-A31b	Silk Twist Drive West	2nd Concession	Murell Boulevard	Streetlights		1.2	2035-2039	-	\$256,406

Project List A - Non-Whitebelt Lands (\$2022)

Driving

Walking

Cycling

Streetlighting

MUP -> 1 side unless stated otherwise

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Road	From	To	Improvement Type	Road Class (if applicable)	Section length (km)	Timing	Recommended MCEA Schedule	Total cost (\$2022)
Queensville									
S-A32a	Jim Morton Drive Extension (Southern Extension)	Leslie Street	New North Queensville Ring Road / Street C	Streetlights		0.3	2030-2034	-	\$64,102
S-A32b	Jim Morton Drive Extension (Southern Extension 2)	New North Queensville Ring Road / Street C	New North-South Frontage Road (East of Hwy 404) / Street L	Streetlights		1.2	2035-2039	-	\$264,953
S-A32c	Jim Morton Drive Extension (Northern Extension)	Leslie Street	Sharon East Employment Collector Extension / Street D	Streetlights		2.0	2030-2034	-	\$435,890
S-A33	North Queensville Ring Road (East Portion)	Leslie Street	Queensville Sideroad	Streetlights		1.3	Post 2040	-	\$267,090
S-A34	New North-South Road / Street A	Queensville Sideroad	Evans Farm Boulevard / Street B	Streetlights		0.6	2025-2029	-	\$128,203
S-A35	North Queensville Ring Road Extension / Street C	Queensville Sideroad	Doane Road	Streetlights		2.1	2030-2034	-	\$438,027
S-A36	New North-South Frontage Road (East of Hwy 404) / Street L	Queensville Sideroad	Doane Road	Streetlights		2.1	2025-2029	-	\$440,164
S-A37	New East-West Road / Street M	New North-South Frontage Road (East of Hwy 404) / Street L	Woodbine Avenue	Streetlights		0.5	2035-2039	-	\$106,836
S-A38	New East-West Road / Street N	New North-South Frontage Road (East of Hwy 404) / Street L	Woodbine Avenue	Streetlights		0.5	2025-2029	-	\$106,836
S-A39	Murell Boulevard Extension / John Candy Drive	Ben Sinclair Avenue	Doane Road	Streetlights		0.5	2025-2029	-	\$106,836
S-A40	Sharon East Employment Collector Extension / Street D	Leslie Street	Doane Road	Streetlights		2.3	2030-2034	-	\$480,761
Mount Albert									
S-A41	Centre Street	King Street and King Street East	Mount Albert Road	Streetlights		1.1	2025-2029	-	\$235,039
OTHER									
	Centre Street	Mill Street	North of MDA Lands	Reconstruction			2025-2029		
	Princess Street (19T-89060)	King Street	Highway 48	Resurfacing			2025-2029		
	Queensville Sideroad (19T-89091)	Park	Karissa Road				2030-2034		
OTHER PROJECTS									
O-A1	EcoMobility Hub			Other Improvements (bike share, EcoMobitliy					
O-A2	Bike-share program			Other Improvements (bike share, EcoMobitliy					
	Total					461.8			\$538,782,267

Project List B - Whitebelt Lands (\$2022)

Driving

Walking

Cycling

MUP -> 1 side unless stated otherwise

Streetlighting

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Whitebelt Lands	Road	From	To	Improvement Type	Road Class	Section length (km)	Timing	Recommended MCEA Schedule	Total Cost (\$2022)
ROAD PROJECTS										
Northwest of Queensville Sideroad and Highway 404										
R-B1	100%	N-S Collector 1	Queensville Sideroad	E-W Collector 4	New Construction	Major Collector	0.4	Post 2051	B	\$1,759,253
R-B2	100%	N-S Collector 2	Queensville Sideroad	E-W Collector 4	New Construction	Minor Collector	1.2	Post 2051	C	\$4,562,026
R-B3	100%	N-S Collector 3	E-W Collector 1	E-W Collector 2	New Construction	Minor Collector	0.8	Post 2051	B	\$3,041,351
R-B4	100%	E-W Collector 1	N-S Collector 1	2nd Concession Road	New Construction	Minor Collector	0.8	Post 2051	B	\$3,041,351
R-B5	100%	E-W Collector 3	N-S Collector 1	2nd Concession Road	New Construction	Minor Collector	0.6	Post 2051	B	\$2,281,013
R-B6	100%	E-W Collector 4	N-S Collector 1	2nd Concession Road	New Construction	Major Collector	0.6	Post 2051	B	\$2,638,879
R-B7	100%	Collector 1	Leslie Street	E-W Collector north of Queensville Sideroad	New Construction	Major Collector	1.2	Post 2051	C	\$5,277,758
R-B8	100%	E-W Collector 5	Leslie Street	Collector 1	New Construction	Minor Collector	0.45	Post 2051	B	\$1,710,760
R-B9	70%	Collector 2	2nd Concession Road	Queensville Sideroad	New Construction	Minor Collector	1	2040-2044	C	\$3,801,688
R-B10	70%	N-S Collector 4	E-W Collector 5	Queensville Sideroad	New Construction	Major Collector	0.4	2025-2029	B	\$1,759,253
R-B11	70%	Collector 3	Leslie Street	South of Queensville Sideroad	New Construction	Major Collector	2.7	2045-2049	C	\$11,874,955
R-B12	70%	E-W Collector 5	2nd Concession Road	Collector 2	New Construction	Major Collector	1.1	2040-2044	C	\$4,837,945
R-B13	70%	E-W Collector 6	Collector 2	Leslie Street	New Construction	Minor Collector	1	2045-2049	C	\$3,801,688
Northeast of Queensville Sideroad and Highway 404										
R-B14	70%	70% Collectors (2 total in parallel)			New Construction	Minor Collector	1.1	Post 2051	C	\$4,181,857
R-B15	100%	Collector 4	Zone 2, 70% Collectors	Woodbine Avenue	New Construction	Major Collector	1	Post 2051	C	\$4,398,131
R-B16	100%	N-S Collector 6	Queensville Sideroad	Zone 2, 70% Collectors	New Construction	Major Collector	1.2	2045-2049	C	\$5,277,758
Surrounding Highway 11 and Yonge Street										
R-B17	70%	Collector 5	N-S Collector 8	E-W Collector north of Green Lane	New Construction	Minor Collector	1.3	2035-2039	C	\$4,942,195
R-B18	70%	N-S Collector 8	Highway 11	E-W Collector north of Green Lane	New Construction	Major Collector	1.1	2035-2039	C	\$4,837,945
R-B19	70%	N-S Collector 9	Collector 6	E-W Collector north of Green Lane	New Construction	Minor Collector	0.3	2035-2039	B	\$1,140,506
R-B20	70%	Collector 6	Highway 11	E-W Collector north of Green Lane	New Construction	Minor Collector	1.2	2035-2039	C	\$4,562,026
North of Holland Landing										
R-B21	70%	E-W Collector 8	Silk Twist Drive	2nd Concession Road	New Construction	Minor Collector	1	2040-2044	C	\$3,801,688
R-B22	70%	Collector 7	2nd Concession Road	E-W Collector 8	New Construction	Minor Collector	0.9	2040-2044	C	\$3,421,519
R-B23	70%	N-S Collector 10	E-W Collector 8	Holland Landing Collector	New Construction	Minor Collector	0.4	2040-2044	B	\$1,520,675
Near and Surrounding Sharon										
R-B24	70%	Collector 8	2nd Concession Road	Doane Road	New Construction	Minor Collector	2.6	2035-2039	C	\$9,884,390
R-B25	70%	N-S Collector 11	Mount Albert Road	Doane Road	New Construction	Minor Collector	1.7	2040-2044	C	\$6,462,870
R-B26	70%	N-S Collector 12	Silk Twist Drive Extension	E-W Collector south of Doane Road	New Construction	Minor Collector	1.2	2040-2044	C	\$4,562,026
R-B27	70%	E-W Collector 9	2nd Concession Road	Sharon East Collector*	New Construction	Minor Collector	3.3	2035-2039	C	\$12,545,571
										\$121,927,076

Project List B - Whitebelt Lands (\$2022)

Driving

Walking

Cycling MUP -> 1 side unless stated otherwise

Streetlighting

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Whitebelt Lands	Road	From	To	Improvement Type	Road Class	Section length (km)	Timing	Recommended MCEA Schedule	Total Cost (\$2022)
Structures Cost										
B101	70%	N-S Collector 4	E-W Collector 5	Queensville Sideroad					C	\$2,395,490
B102	70%	Collector 3	Leslie Street	South of Queensville Sideroad					C	\$7,186,469
B103	70%	Collector 1	Leslie Street	E-W Collector north of Queensville Sideroad					C	\$4,790,979
B104	70%	Collector 2	2nd Concession Road	Queensville Sideroad					C	\$2,395,490
B105	100%	Collector 4	Zone 2, 70% Collectors	Woodbine Avenue					C	\$2,395,490
B106	100%	N-S Collector 6	Queensville Sideroad	Zone 2, 70% Collectors					C	\$2,395,490
B107	70%	N-S Collector 8	Highway 11	E-W Collector north of Green Lane					C	\$4,790,979
B108	70%	Collector 6	Highway 11	E-W Collector north of Green Lane					C	\$2,395,490
B109	70%	Collector 8	2nd Concession Road	Doane Road					C	\$2,395,490
B110	70%	N-S Collector 11	Mount Albert Road	Doane Road					C	\$4,790,979
B111	70%	E-W Collector 9	2nd Concession Road	Sharon East Collector*					C	\$4,790,979
INTERSECTION IMPROVEMENTS										
R-B601	70%	E-W Collector 5 / Collector 3			Roundabout			2040-2044	B	\$556,250
										\$556,250

Project List B - Whitebelt Lands (\$2022)

Driving

Walking

Cycling MUP -> 1 side unless stated otherwise

Streetlighting

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Whitebelt Lands	Road	From	To	Improvement Type	Road Class	Section length (km)	Timing	Recommended MCEA Schedule	Total Cost (\$2022)
WALKING										
REGIONAL ROADS										
W-B401	70%	Queensville Sideroad	Zone 1 100% Whitebelt west boundary	2nd Concession Road	Sidewalk on One Side			Post 2051	-	\$325,825
W-B402	100%	Queensville Sideroad	2nd Concession Road	Zone 1 70% Whitebelt east boundary	Sidewalk on One Side			2030-2034	-	\$126,710
W-B403	70%	Leslie Street (Northern Section)	Zone 1 70% Whitebelt north boundary	Zone 1 70% Whitebelt south boundary	Sidewalk on One Side			2045-2049	-	\$199,115
W-B404	100%	Leslie Street (Northern Section)	Zone 1 100% Whitebelt north boundary	Zone 1 100% Whitebelt south boundary	Sidewalk on One Side			2045-2049	-	\$199,115
W-B405	70%	2nd Concession (Northern Section)	Queensville Sideroad	E-W Collector 3	Sidewalk on One Side			Post 2051	-	\$126,710
W-B406	100%	2nd Concession (Northern Section)	Queensville Sideroad	E-W Collector 3	Sidewalk on One Side			Post 2051	-	\$126,710
W-B407	100%	2nd Concession (Northern Section)	E-W Collector 3	Zone 1 100% Whitebelt north boundary	Sidewalk on Both Sides			Post 2051	-	\$398,231
W-B408	100%	Woodbine Avenue (Northern Section)	Queensville Sideroad	Zone 2 100% Whitebelt north boundary	Sidewalk on One Side			2045-2049	-	\$199,115
W-B409	70%	Highway 11 / Yonge Street	Highway 11/Yonge Street	Zone 3 70% Whitebelt north boundary	Sidewalk on Both Sides			2035-2039	-	\$398,231
W-B410	70%	Highway 11 / Yonge Street	Highway 11/Yonge Street	Zone 3 70% Whitebelt south boundary	Sidewalk on One Side			2035-2039	-	\$72,406
W-B411	100%	Highway 11 / Yonge Street	Highway 11/Yonge Street	Zone 3 100% Whitebelt south boundary	Sidewalk on One Side			2035-2039	-	\$72,406
W-B415	70%	Mount Albert Road	Allangrove Avenue	2nd Concession Road	Sidewalk on Both Sides			2035-2039	-	\$253,420
W-B416	70%	Mount Albert Road	West of Countryman Road	Allangrove Avenue	Sidewalk on One Side			2035-2039	-	\$144,811
W-B417	70%	Leslie Street (Southern Section)	Silk Twist Drive extension	Zone 5 70% Whitebelt north boundary	Sidewalk on Both Sides			2035-2039	-	\$217,217
W-B418	70%	Leslie Street (Southern Section)	E-W Collector (north of Green Lane)	Colonel Wayling Boulevard	Sidewalk on One Side			2030-2034	-	\$90,507
W-B419	70%	Woodbine Avenue (Southern Section)	Zone 5 70% Whitebelt north boundary	Zone 5 70% Whitebelt south boundary	Sidewalk on One Side			2030-2034	-	\$271,521
W-B420	70%	Doane Road	Yonge Street	Woodbine Avenue	Sidewalk on One Side			2025-2029	-	\$1,104,186

Project List B - Whitebelt Lands (\$2022)

Driving

Walking

Cycling

MUP -> 1 side unless stated otherwise

Streetlighting

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Whitebelt Lands	Road	From	To	Improvement Type	Road Class	Section length (km)	Timing	Recommended MCEA Schedule	Total Cost (\$2022)
COLLECTORS										
W-B1	100%	N-S Collector 1	Queensville Sideroad	E-W Collector 4	Sidewalk on One Side	Major Collector	0.4	Post 2051	-	\$72,406
W-B2	100%	N-S Collector 2	Queensville Sideroad	E-W Collector 4	Sidewalk on Both Sides	Minor Collector	1.2	Post 2051	-	\$434,434
W-B3	100%	N-S Collector 3	E-W Collector 1	E-W Collector 2	Sidewalk on Both Sides	Minor Collector	0.8	Post 2051	-	\$289,622
W-B4	100%	E-W Collector 1	N-S Collector 1	2nd Concession Road	Sidewalk on One Side	Minor Collector	0.8	Post 2051	-	\$144,811
W-B5	100%	E-W Collector 3	N-S Collector 1	2nd Concession Road	Sidewalk on Both Sides	Minor Collector	0.6	Post 2051	-	\$217,217
W-B6	100%	E-W Collector 4	N-S Collector 1	2nd Concession Road	Sidewalk on One Side	Major Collector	0.6	Post 2051	-	\$108,608
W-B7	100%	Collector 1	Leslie Street	E-W Collector north of Queensville Sideroad	Sidewalk on One Side	Major Collector	1.2	Post 2051	-	\$217,217
W-B8	100%	E-W Collector 5	Leslie Street	Collector 1	Sidewalk on Both Sides	Minor Collector	0.45	Post 2051	-	\$162,913
W-B9	70%	Collector 2	2nd Concession Road	Queensville Sideroad	Sidewalk on Both Sides	Minor Collector	1	2040-2044	-	\$362,028
W-B10	70%	N-S Collector 4	E-W Collector 5	Queensville Sideroad	Sidewalk on One Side	Major Collector	0.4	2025-2029	-	\$72,406
W-B11	70%	Collector 3	Leslie Street	South of Queensville Sideroad	Sidewalk on One Side	Major Collector	2.7	2045-2049	-	\$488,738
W-B12	70%	E-W Collector 5	2nd Concession Road	Collector 2	Sidewalk on One Side	Major Collector	1.1	2040-2044	-	\$199,115
W-B13	70%	E-W Collector 6	Collector 2	Leslie Street	Sidewalk on Both Sides	Minor Collector	1	2045-2049	-	\$362,028
W-B14	70%	70% Collectors (2 total in parallel)			Sidewalk on Both Sides	Minor Collector	1.1	Post 2051	-	\$398,231
W-B15	100%	Collector 4	Zone 2, 70% Collectors	Woodbine Avenue	Sidewalk on One Side	Major Collector	1	Post 2051	-	\$181,014
W-B16	100%	N-S Collector 6	Queensville Sideroad	Zone 2, 70% Collectors	Sidewalk on One Side	Major Collector	1.2	2045-2049	-	\$217,217
W-B17	70%	Collector 5	N-S Collector 8	E-W Collector north of Green Lane	Sidewalk on Both Sides	Minor Collector	1.3	2035-2039	-	\$470,637
W-B18	70%	N-S Collector 8	Highway 11	E-W Collector north of Green Lane	Sidewalk on One Side	Major Collector	1.1	2035-2039	-	\$199,115
W-B19	70%	N-S Collector 9	Collector 6	E-W Collector north of Green Lane	Sidewalk on Both Sides	Minor Collector	0.3	2035-2039	-	\$108,608
W-B20	70%	Collector 6	Highway 11	E-W Collector north of Green Lane	Sidewalk on Both Sides	Minor Collector	1.2	2035-2039	-	\$434,434
W-B21	70%	E-W Collector 8	Silk Twist Drive	2nd Concession Road	Sidewalk on Both Sides	Minor Collector	1	2040-2044	-	\$362,028
W-B22	70%	Collector 7	2nd Concession Road	E-W Collector 8	Sidewalk on Both Sides	Minor Collector	0.9	2040-2044	-	\$325,825
W-B23	70%	N-S Collector 10	E-W Collector 8	Holland Landing Collector	Sidewalk on Both Sides	Minor Collector	0.4	2040-2044	-	\$144,811
W-B24	70%	Collector 8	2nd Concession Road	Doane Road	Sidewalk on One Side	Minor Collector	2.6	2035-2039	-	\$470,637
W-B25	70%	N-S Collector 11	Mount Albert Road	Doane Road	Sidewalk on Both Sides	Minor Collector	1.7	2040-2044	-	\$615,448
W-B26	70%	N-S Collector 12	Silk Twist Drive Extension	E-W Collector south of Doane Road	Sidewalk on Both Sides	Minor Collector	1.2	2040-2044	-	\$434,434
W-B27	70%	E-W Collector 9	2nd Concession Road	Sharon East Collector*	Sidewalk on Both Sides	Minor Collector	3.3	2035-2039	-	\$1,194,693
										\$13,014,911

Project List B - Whitebelt Lands (\$2022)

Driving

Walking

Cycling MUP -> 1 side unless stated otherwise

Streetlighting

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Whitebelt Lands	Road	From	To	Improvement Type	Road Class	Section length (km)	Timing	Recommended MCEA Schedule	Total Cost (\$2022)
CYCLING										
REGIONAL ROADS										
C-B201a	70%	Highway 11	Morning Sideroad	Sherwood Glen/Dogwood Blvd	MUP			2035-2039	-	\$2,727,170
C-B201b	70%	Yonge Street	East West Collector	Morning Sideroad	MUP			2035-2039	-	\$435,590
C-B202	70%	2nd Concession (Northern Section)	E-W Collector 3	Zone 1 70% Whitebelt north boundary	Paved Shoulders			Post 2051	-	\$200,989
C-B203	100%	2nd Concession (Northern Section)	Queensville Sideroad	E-W Collector 3	Paved Shoulders			Post 2051	-	\$315,840
C-B204	70%	Queensville Sideroad	Whitebelt west boundary	2nd Concession Road	Paved Shoulders			Post 2051	-	\$516,829
C-B205	100%	Queensville Sideroad	2nd Concession Road	Zone 1 70% Whitebelt east boundary	Paved Shoulders			2030-2034	-	\$200,989
C-B208	70%	Leslie Street (Southern Section)	E-W Collector (north of Green Lane)	Colonel Wayling Boulevard	Painted Bike Lanes			2030-2034	-	\$25,641
COLLECTORS										
C-B1	100%	N-S Collector 1	Queensville Sideroad	E-W Collector 4	MUP	Major Collector		Post 2051	-	\$102,562
C-B2	100%	N-S Collector 2	Queensville Sideroad	E-W Collector 4	Painted Bike Lanes	Minor Collector		Post 2051	-	\$61,537
C-B3	100%	N-S Collector 3	E-W Collector 1	E-W Collector 2	Painted Bike Lanes	Minor Collector		Post 2051	-	\$41,025
C-B4	100%	E-W Collector 1	N-S Collector 1	2nd Concession Road	MUP	Minor Collector		Post 2051	-	\$205,125
C-B5	100%	E-W Collector 3	N-S Collector 1	2nd Concession Road	Painted Bike Lanes	Minor Collector		Post 2051	-	\$30,769
C-B6	100%	E-W Collector 4	N-S Collector 1	2nd Concession Road	MUP	Major Collector		Post 2051	-	\$153,844
C-B7	100%	Collector 1	Leslie Street	E-W Collector north of Queensville Sideroad	MUP	Major Collector		Post 2051	-	\$307,687
C-B8	100%	E-W Collector 5	Leslie Street	Collector 1	Painted Bike Lanes	Minor Collector		Post 2051	-	\$23,077
C-B9	70%	Collector 2	2nd Concession Road	Queensville Sideroad	Painted Bike Lanes	Minor Collector		2040-2044	-	\$51,281
C-B10	70%	N-S Collector 4	E-W Collector 5	Queensville Sideroad	MUP	Major Collector		2025-2029	-	\$102,562
C-B11	70%	Collector 3	Leslie Street	South of Queensville Sideroad	MUP	Major Collector		2045-2049	-	\$692,297
C-B12	70%	E-W Collector 5	2nd Concession Road	Collector 2	MUP	Major Collector		2040-2044	-	\$282,047
C-B13	70%	E-W Collector 6	Collector 2	Leslie Street	Painted Bike Lanes	Minor Collector		2045-2049	-	\$51,281
C-B14	70%	70% Collectors (2 total in parallel)			Painted Bike Lanes	Minor Collector		Post 2051	-	\$56,409
C-B15	100%	Collector 4	Zone 2, 70% Collectors	Woodbine Avenue	MUP	Major Collector		Post 2051	-	\$256,406
C-B16	100%	N-S Collector 6	Queensville Sideroad	Zone 2, 70% Collectors	MUP	Major Collector		2045-2049	-	\$307,687
C-B17	70%	Collector 5	N-S Collector 8	E-W Collector north of Green Lane	Painted Bike Lanes	Minor Collector		2035-2039	-	\$66,666
C-B18	70%	N-S Collector 8	Highway 11	E-W Collector north of Green Lane	MUP	Major Collector		2035-2039	-	\$282,047
C-B19	70%	N-S Collector 9	Collector 6	E-W Collector north of Green Lane	Painted Bike Lanes	Minor Collector		2035-2039	-	\$15,384
C-B20	70%	Collector 6	Highway 11	E-W Collector north of Green Lane	Painted Bike Lanes	Minor Collector		2035-2039	-	\$61,537
C-B21	70%	E-W Collector 8	Silk Twist Drive	2nd Concession Road	Painted Bike Lanes	Minor Collector		2040-2044	-	\$51,281
C-B22	70%	Collector 7	2nd Concession Road	E-W Collector 8	Painted Bike Lanes	Minor Collector		2040-2044	-	\$46,153
C-B23	70%	N-S Collector 10	E-W Collector 8	Holland Landing Collector	Painted Bike Lanes	Minor Collector		2040-2044	-	\$20,512
C-B24	70%	Collector 8	2nd Concession Road	Doane Road	MUP	Minor Collector		2035-2039	-	\$666,656
C-B25	70%	N-S Collector 11	Mount Albert Road	Doane Road	Painted Bike Lanes	Minor Collector		2040-2044	-	\$87,178
C-B26	70%	N-S Collector 12	Silk Twist Drive Extension	E-W Collector south of Doane Road	Painted Bike Lanes	Minor Collector		2040-2044	-	\$61,537
C-B27	70%	E-W Collector 9	2nd Concession Road	Sharon East Collector*	Painted Bike Lanes	Minor Collector		2035-2039	-	\$169,228
										\$8,676,825

Project List B - Whitebelt Lands (\$2022)

Driving

Walking

Cycling MUP -> 1 side unless stated otherwise

Streetlighting

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Whitebelt Lands	Road	From	To	Improvement Type	Road Class	Section length (km)	Timing	Recommended MCEA Schedule	Total Cost (\$2022)
Streetlighting										
REGIONAL ROADS										
S-B301	70%	Queensville Sideroad	Zone 1 100% Whitebelt west boundary	2nd Concession Road	Streetlights			Post 2051	-	\$384,609
S-B302	100%	Queensville Sideroad	2nd Concession Road	Zone 1 70% Whitebelt east boundary	Streetlights			2030-2034	-	\$149,570
S-B303	70%	Leslie Street (Northern Section)	Zone 1 70% Whitebelt north boundary	Zone 1 70% Whitebelt south boundary	Streetlights			2045-2049	-	\$235,039
S-B304	70%	2nd Concession (Northern Section)	E-W Collector 3	Zone 1 70% Whitebelt north boundary	Streetlights			Post 2051	-	\$149,570
S-B305	100%	2nd Concession (Northern Section)	Queensville Sideroad	E-W Collector 3	Streetlights			Post 2051	-	\$235,039
S-B306	100%	Woodbine Avenue (Northern Section)	Queensville Sideroad	Zone 2 100% Whitebelt north boundary	Streetlights			2045-2049	-	\$235,039
S-B307a	70%	Highway 11	Morning Sideroad	Sherwood Glen/Dogwood Blvd	Streetlights			2035-2039	-	\$679,245
S-B307b	70%	Yonge Street	East West Collector	Morning Sideroad	Streetlights			2035-2039	-	\$108,491
S-B308	70%	2nd Concession (Southern Section)	Zone 5 100% Whitebelt north boundary	Zone 5 100% Whitebelt south boundary	Streetlights			2035-2039	-	\$619,648
S-B309	70%	2nd Concession (Southern Section)	Zone 4 100% Whitebelt north boundary	Zone 4 100% Whitebelt south boundary	Streetlights			2040-2044	-	\$256,406
S-B310	70%	Mount Albert Road	Allangrove Avenue	2nd Concession Road	Streetlights			2035-2039	-	\$149,570
S-B311	70%	Mount Albert Road	West of Countryman Road	Allangrove Avenue	Streetlights			2035-2039	-	\$170,937
S-B312	70%	Leslie Street (Southern Section)	Silk Twist Drive extension	Zone 5 70% Whitebelt north boundary	Streetlights			2035-2039	-	\$128,203
S-B313	70%	Leslie Street (Southern Section)	E-W Collector (north of Green Lane)	Colonel Wayling Boulevard	Streetlights			2030-2034	-	\$106,836
S-B314	70%	Woodbine Avenue (Southern Section)	Zone 5 70% Whitebelt north boundary	Zone 5 70% Whitebelt south boundary	Streetlights			2030-2034	-	\$320,508

Project List B - Whitebelt Lands (\$2022)

Driving

Walking

Cycling

MUP -> 1 side unless stated otherwise

Streetlighting

* Funded projects that are recommended in the TMP but not included in total cost

Cost of MUPs and paved shoulders on rural roads are included in cycling and road project sections respectively

Standalone sidewalk (walking), cycling, and streetlighting projects are projects limited in scale / minimal adverse environmental impacts and are not subject to MCEA.

ID	Whitebelt Lands	Road	From	To	Improvement Type	Road Class	Section length (km)	Timing	Recommended MCEA Schedule	Total Cost (\$2022)
COLLECTORS										
S-B1	100%	N-S Collector 1	Queensville Sideroad	E-W Collector 4	Streetlights	Major Collector		Post 2051	-	\$85,469
S-B2	100%	N-S Collector 2	Queensville Sideroad	E-W Collector 4	Streetlights	Minor Collector		Post 2051	-	\$256,406
S-B3	100%	N-S Collector 3	E-W Collector 1	E-W Collector 2	Streetlights	Minor Collector		Post 2051	-	\$170,937
S-B4	100%	E-W Collector 1	N-S Collector 1	2nd Concession Road	Streetlights	Minor Collector		Post 2051	-	\$170,937
S-B5	100%	E-W Collector 3	N-S Collector 1	2nd Concession Road	Streetlights	Minor Collector		Post 2051	-	\$128,203
S-B6	100%	E-W Collector 4	N-S Collector 1	2nd Concession Road	Streetlights	Major Collector		Post 2051	-	\$128,203
S-B7	100%	Collector 1	Leslie Street	E-W Collector north of Queensville Sideroad	Streetlights	Major Collector		Post 2051	-	\$256,406
S-B8	100%	E-W Collector 5	Leslie Street	Collector 1	Streetlights	Minor Collector		Post 2051	-	\$96,152
S-B9	70%	Collector 2	2nd Concession Road	Queensville Sideroad	Streetlights	Minor Collector		2040-2044	-	\$213,672
S-B10	70%	N-S Collector 4	E-W Collector 5	Queensville Sideroad	Streetlights	Major Collector		2025-2029	-	\$85,469
S-B11	70%	Collector 3	Leslie Street	South of Queensville Sideroad	Streetlights	Major Collector		2045-2049	-	\$576,914
S-B12	70%	E-W Collector 5	2nd Concession Road	Collector 2	Streetlights	Major Collector		2040-2044	-	\$235,039
S-B13	70%	E-W Collector 6	Collector 2	Leslie Street	Streetlights	Minor Collector		2045-2049	-	\$213,672
S-B14	70%	70% Collectors (2 total in parallel)			Streetlights	Minor Collector		Post 2051	-	\$235,039
S-B15	100%	Collector 4	Zone 2, 70% Collectors	Woodbine Avenue	Streetlights	Major Collector		Post 2051	-	\$213,672
S-B16	100%	N-S Collector 6	Queensville Sideroad	Zone 2, 70% Collectors	Streetlights	Major Collector		2045-2049	-	\$256,406
S-B17	70%	Collector 5	N-S Collector 8	E-W Collector north of Green Lane	Streetlights	Minor Collector		2035-2039	-	\$277,773
S-B18	70%	N-S Collector 8	Highway 11	E-W Collector north of Green Lane	Streetlights	Major Collector		2035-2039	-	\$235,039
S-B19	70%	N-S Collector 9	Collector 6	E-W Collector north of Green Lane	Streetlights	Minor Collector		2035-2039	-	\$64,102
S-B20	70%	Collector 6	Highway 11	E-W Collector north of Green Lane	Streetlights	Minor Collector		2035-2039	-	\$256,406
S-B21	70%	E-W Collector 8	Silk Twist Drive	2nd Concession Road	Streetlights	Minor Collector		2040-2044	-	\$213,672
S-B22	70%	Collector 7	2nd Concession Road	E-W Collector 8	Streetlights	Minor Collector		2040-2044	-	\$192,305
S-B23	70%	N-S Collector 10	E-W Collector 8	Holland Landing Collector	Streetlights	Minor Collector		2040-2044	-	\$85,469
S-B24	70%	Collector 8	2nd Concession Road	Doane Road	Streetlights	Minor Collector		2035-2039	-	\$555,547
S-B25	70%	N-S Collector 11	Mount Albert Road	Doane Road	Streetlights	Minor Collector		2040-2044	-	\$363,242
S-B26	70%	N-S Collector 12	Silk Twist Drive Extension	E-W Collector south of Doane Road	Streetlights	Minor Collector		2040-2044	-	\$256,406
S-B27	70%	E-W Collector 9	2nd Concession Road	Sharon East Collector*	Streetlights	Minor Collector		2035-2039	-	\$705,117
										\$10,456,383
Other Items										
O-B501		Land Acquisition								\$ 37,421,305
Total										\$ 192,052,751



Transportation Master Plan Update

Appendix D

Attachment 1 – Costing Methodology for 2041 Horizon

Town of East Gwillimbury
Final Report



Memo

Date: Friday, July 12, 2019

Project: Transportation Master Plan

To: Town of East Gwillimbury

From: HDR

Subject: Infrastructure Cost Estimates

The following memorandum describes the methodology, standards, assumptions used to develop preliminary engineering costing estimates of the TMP recommendations. These estimates provided input to the Town's Development Charges update.

Methodology

To develop the pre-engineering cost estimates, project costs provided by the Town of East Gwillimbury as well as Environmental Study Report (ESR) cost estimates were relied on first and foremost. ESRs exhibit a more detailed cost analysis specific to individual study areas and are therefore the preferred approach when seeking to cost road improvement projects.

Where ESR cost estimates were unavailable, a high-level costing methodology was applied, as follows:

Design Standards: For construction of linear transportation infrastructure, the Town of East Gwillimbury Engineering Standards and Design Criteria (2012) as well as the Streetscape and Public Realm Design Guidelines (2015) were relied upon primarily. Where recommended projects do not follow those guidelines, the TAC Geometric Design Guide, the MTO Geometric Standard, and the MTO Parametric Estimating Guide for Structures were employed. The East Gwillimbury Official Plan was also examined for additional guidance on cross-sectional elements.

Construction Unit Costs: Unit costs for construction and materials were provided by the Town. Pertinent to the development and validation of unit costs include the following:

- a. **Inflation Rate:** inflation rates for prices were derived based on information from Statistics Canada. Based on the historical average of the construction price index for building and non-residential construction, the

consumer price index, and the producer price index for consulting engineering services.

- b. Comparison against Municipalities:** Unit costs received for the 2018 TMP Update were reviewed and compared with estimates used by other municipalities to validate them before following through with the costing process.

Benchmark Costs: the information collected from the previous steps will be used to determine the benchmark costs for the majority of infrastructure works.

Adjustment Factors: to account for additional fees for a project, the adjustment factors generally include basic construction, engineering design, and contingency. These were kept consistent with the previous East Gwillimbury TMP and were applied accordingly.

Projects were sorted into the following categories for unit costs and benchmarking:

- Road construction (Reconstruction, New Construction, Widening, etc.);
- Structures;
- Active Transportation Infrastructure (Sidewalks, Bike Lanes, Multi-Use Paths, etc.);
- Streetlighting;
- Intersection Improvements;
- Studies; and
- Other Improvements (Bike share, EcoMobility Hubs, etc.).

Utility relocation costs were included within the contingency adjustment.

Further details related to the steps outlined above are described in the following sections.

Design Standards

The road specifications for this TMP Update were determined through a review of the design standard drawings found in the Town of East Gwillimbury ***Engineering Standards and Design Criteria*** (2012). Because the document did not provide the required details, supporting information was extracted from the ***Streetscape and Public Realm Design Guidelines*** (2015) and the TAC ***Geometric Design Guide***.

Moreover, engineering judgment and industry best practices helped inform recommendations used in the road construction costing process. For example, because rural road cross-sections were unavailable for East Gwillimbury, a paved shoulder width of 1m and an unpaved shoulder width of 2m were assumed for Town roads. These dimensions are used by nearby local municipalities such as the Town of Innisfil and the Town of Whitchurch-Stouffville as well as by regional municipalities such as York and Peel Region.

As the Town of East Gwillimbury continues to grow, design standards are expected to continue to evolve and be updated.

Unit Costs

Unit costs are integral to properly price the road improvements and calculate total project costs. The unit costs that were provided by the Town of East Gwillimbury stemmed from 2016 and are summarized in **Table 1**.

Table 1: Town Provided Road Construction Costs

Item	Unit	Unit prices (2016\$)	Greenfield Unit prices (2016\$)
Road			
Excavation	\$/m ³	\$15.00	\$5.00
Granular Base	\$/t	\$20.00	\$20.00
Concrete Median	\$/m ²	\$150.00	\$150.00
Curb and Gutter	\$/m	\$80.00	\$80.00
Subdrain	\$/m	\$20.00	\$20.00
Base Asphalt - HL4 / HL8	\$/t	\$100.00	\$100.00
Top Asphalt - HL3	\$/t	\$110.00	\$110.00
Permanent Roadway Signing	\$/km	\$25,000.00	\$25,000.00
Line Painting	\$/km	\$5,000.00	\$5,000.00
Storm Sewer			
MH	ea.	\$8,000.00	\$8,000.00
CB	ea.	\$2,000.00	\$2,000.00
OGS	ea.	\$50,000.00	\$50,000.00
Electrical			
Streetlighting	\$/km	\$125,000.00	\$125,000.00

Item	Unit	Unit prices (2016\$)	Greenfield Unit prices (2016\$)
Traffic Signals - New	ea.	\$200,000.00	\$200,000.00
Traffic Signals - Mod	ea.	\$100,000.00	\$100,000.00
Streetscaping			
Concrete Sidewalk (total width)	\$/m ²	\$100.00	\$100.00
Asphalt Bike Path (total width)	\$/m ²	\$50.00	\$50.00
Topsoil and Sod (both sides)	\$/m ²	\$15.00	\$15.00
Landscaping	\$/km	\$100,000.00	\$100,000.00
Structures / Bridges			
Bridge Structure	\$/m	\$100,000.00	\$100,000.00
Pedestrian Bridge	\$/m	\$10,000.00	\$10,000.00

The recommended unit costs used in the 2018 costing exercise are discussed in the following sections.

Inflation Rate

Unit costs must be updated to reflect inflation. The inflation rate was calculated based on Statistics Canada and includes the historical average of the construction price index for building and non-residential construction, the consumer price index, and the producer price index for consulting engineering services. The averages of these were calculated to determine a total average inflation rate of 1.9% (see **Table 2**). As a result, an inflation rate of **2%** was used for this TMP Update.

Table 2: Inflation Rate Calculation

Greater Toronto Area	Description	Change by Year (%)					Historical Average Change (%)
Construction price Index- Building construction	Measures changes in contractors' selling prices of a representative apartment building.	2012	2013	2014	2015	2016	1.6%
		1.9%	0.6%	1.4%	2.0%	2.3%	
Construction Price Index- Non Residential Construction	Measures the changes in contractors' selling prices of non-residential building construction (i.e. commercial, industrial and institutional).	2012	2013	2014	2015	2016	1.4%
		2.8%	0.9%	1.4%	0.9%	1.0%	

Greater Toronto Area	Description	Change by Year (%)					Historical Average Change (%)
Consumer Price Index	Measures the increase of the cost of basic products and services that Canadians consume on a daily basis, such as: food, shelter, clothing, healthcare, transportation, alcoholic beverages and tobacco products.	2012	2013	2014	2015	2016	1.8%
			1.2%	2.5%	1.5%	2.1%	
Producer Price Index - Consulting Engineering Services	Measures the average changes in prices received by domestic producers for their output. It is one of several price indices.	2008	2009	2010	2011	2012	2.8%
		2.4%	1.7%	4.7%	2.1%	3.0%	
Total Average Change (%)							1.9%

Source: Statistics Canada

Recommended Unit Costs

An adjustment of 2% per year was applied to the unit costs provided by the Town to account for inflation. The recommended unit costs are shown in **Table 3**.

Table 3: Recommended Construction Unit Costs

Item	Unit	Recommended Unit Prices (2018)	Source
Road Construction			
Excavation	\$/m3	\$15.61	Town of EG (inflated)
Granular Base	\$/t	\$20.81	Town of EG (inflated)
Concrete Median	\$/m2	\$156.06	Town of EG (inflated)
Curb and Gutter	\$/m	\$83.23	Town of EG (inflated)
Subdrain	\$/m	\$20.81	Town of EG (inflated)
Base Asphalt - HL4 / HL8	\$/t	\$104.04	Town of EG (inflated)
Top Asphalt - HL3	\$/t	\$114.44	Town of EG (inflated)
Permanent Roadway Signing	\$/km	\$26,010.00	Town of EG (inflated)

Item	Unit	Recommended Unit Prices (2018)	Source
Line Painting	\$/km	\$5,202.00	Town of EG (inflated)
Stormwater Management			
STM Sewer	\$/m	\$608.87	
MH	Each	\$8,323.20	Town of EG (inflated)
Catchbasin	Each	\$2,446.01	Review of costs used in neighbouring municipalities (Peel, Brampton, Innisfil and Vaughan)
Oil Grit Separator (OGS)	Each	\$52,020.00	Town of EG (inflated)
Electrical			
Streetlighting	\$/km	\$130,050.00	Town of EG (inflated)
Traffic Signals - New	Each	\$208,080.00	Town of EG (inflated)
Traffic Signals - Mod	Each	\$104,040.00	Town of EG (inflated)
Streetscaping			
Concrete Sidewalk (total width)	\$/m2	\$104.04	Town of EG (inflated)
Asphalt Bike Path (total width)	\$/m2	\$52.02	Town of EG (inflated)
Topsoil and Sod (both sides)	\$/m2	\$15.61	Town of EG (inflated)
Landscaping	\$/km	\$104,040.00	Town of EG (inflated)
Structures			
Bridge Structure (25m x-section)	\$/m	\$104,040.00	MTO Parametric Estimating Guide for Structures (2016)

Item	Unit	Recommended Unit Prices (2018)	Source
Bridge Structure (10m x-section)	\$/m	\$67,500.00	MTO Parametric Estimating Guide for Structures (2016)
Bridge Structure (10m x-section), 20m span	Each	\$1,350,000.00	MTO Parametric Estimating Guide for Structures (2016)
Bridge Structure (10m x-section), 7m span	\$/m	\$472,500.00	MTO Parametric Estimating Guide for Structures (2016)
Pedestrian Bridge	\$/m	\$10,404.00	MTO Parametric Estimating Guide for Structures (2016)
Two-lane Level Crossing	Each	\$694,709.24	HDR cost estimate

Unit Cost Validation

The unit costs provided by the Town of East Gwillimbury were compared to those used by neighbouring municipalities. For this task, costs from the Town of Innisfil TMP and from the Town of Whitchurch-Stouffville TMP were selected due to their proximity and comparable size. A weighted average cost comparison was completed as part of the costing exercise to determine if the recommended unit prices are representative of the market price or whether they need to be refined.

The main drivers of road construction costs are shown in **Table 4** and include asphalt hot mix, excavation and subsurface granulars (crushed limestone) as well as the stormwater infrastructure. As the determinants, these items exert a significant influence on the overall road construction cost.

To better understand the cost variations, percentage changes were developed between the recommended unit costs for this update and the other studies. An overall weighted average change was then obtained to help compare the costs on a macroscopic level.

The analysis showed that, compared to the Town of Innisfil, the recommended unit costs for the Town of East Gwillimbury are on average 16% lower. Conversely, when compared to the Town of Whitchurch-Stouffville costs, the recommended unit costs are 31% higher.



These findings indicate that the recommended unit costs are within a reasonable margin of variability relative to comparable municipalities and are therefore acceptable for this high-level costing exercise.



Table 4: Unit Cost Comparison with Other Sources

Construction Item	Unit	Current EG TMP Update	Innisfil TMP (2017)	East Gwillimbury vs. Innisfil			Whitchurch Stouffville TMP (2016)	East Gwillimbury vs. Whitchurch-Stouffville		
		Unit Cost (2018\$)	Unit Cost (2018\$)	Absolute Change	Average (EG-IN)	Weight	Unit Cost (2018\$)	Absolute Change	Average (EG-WS)	Weight
Excavation	m ³	\$15.61	\$20.17	-23%	\$17.89	0.03%	\$18.53	-16%	\$17.07	0.17%
Hot Mix HL3	tonne	\$114.44	\$66.31	73%	\$90.38	0.14%	\$88.65	29%	\$101.54	1.02%
Hot Mix HL4	tonne	\$104.04	\$90.67	15%	\$97.35	0.15%	\$80.92	29%	\$92.48	0.93%
Granular A	tonne	\$20.81	\$20.92	-1%	\$20.87	0.03%	\$38.06	-45%	\$29.43	0.30%
Granular B	tonne	\$20.81	\$14.12	47%	\$17.46	0.03%	\$30.73	-32%	\$25.77	0.26%
Concrete Curb & Gutter	m	\$83.23	\$77.84	7%	\$80.53	0.13%	\$50.52	65%	\$66.88	0.67%
Manhole & Maintenance Holes	each	\$8,323.20	\$7,808.43	7%	\$8,065.81	12.75%	\$6,089.61	37%	\$7,206.41	72.70%
Catchbasins	each	\$2,446.01	\$2,819.52	-13%	\$2,632.77	4.16%	\$2,136.08	15%	\$2,291.05	23.11%
Stormceptors	each	\$52,020.00	\$63,177.78	-18%	\$57,598.89	91.07%	n/a	n/a	n/a	n/a
Concrete Sidewalk	m ²	\$102.00	\$81.64	25%	\$91.82	0.15%	\$61.40	66%	\$81.70	0.82%
				Weighted average change		-15.62%		Weighted average change		31.32%

Adjustment Factors

In the early stages of the planning process, the required construction activity cannot be defined to a high level of accuracy. Challenges in accurately predicting costs arise as a result of variable data, intangible construction costs, unforeseen site-specific factors and project management ineffectiveness. For this reason, it is common practice to protect for additional costs by applying adjustment factors to the basic per meter cost of a road improvement.

For the current update, the adjustment factors were based on the 2010 East Gwillimbury TMP. Basic construction and general contingency adjustments are applied to account for miscellaneous items and for risk, respectively. The engineering adjustment is then used to estimate costs associated with detailed design and the construction supervision. **Table 5** presents the adjustment factors recommended for the 2018 TMP update.

Table 5: Adjustment Factors

Adjustment	Urban Roads	Rural Roads
Traffic Control	2%	0%
Utility Relocation	10%	0%
Construction Adjustment	10%	10%
Contingency Adjustment	10%	10%
Engineering Adjustment	15%	15%
<i>EA / Predesign</i>	5%	5%
<i>Design</i>	5%	5%
<i>CA + Inspection</i>	5%	5%

It must be noted that compared to rural roads, urban roads have added costs associated with utility relocation and traffic control. Moreover, the standard practice is to apply the construction adjustment cost in the derivation of benchmark (per unit length) costs while other adjustment factors such as Engineering and Contingency are be applied on a project's total cost.

Road Construction

Benchmark costs for road construction projects were developed for the project types listed in **Table 6** were developed. Costs for structures, cycling

facilities, sidewalks, streetlighting and land acquisition are allocated on an individual project level.

Table 6: Preliminary Road Benchmark Costs

Improvement Type	Road Class	Cross-section	# of lanes	Code ¹	Roadwork cost ² (\$2018/km)
Roads					
New Construction	Collector	Rural ³	2	NC-RColl2	\$1,156,919
New Construction	Major Collector	Urban	2	NC-UMajC	\$2,633,554
New Construction	Minor Collector	Urban	2	NC-UMinC	\$2,308,466
Widening	Arterial	Urban	4	W2-4-UMajC	\$2,832,135
Reconstruction	Collector	Rural	2	R-RColl2	\$1,156,919
Reconstruction	Minor Collector	Urban	2	R-UMinC	\$2,098,606
Reconstruction	Local	Urban	2	R-ULocal	\$1,932,647

Notes

¹ Each code is associated with a road improvement tab in the costing Excel spreadsheet.

² Roadworks costs only include the basic construction adjustment (10%). The rest of the adjustment factors are applied on a project-by-project basis.

³ Rural road costs incorporate the cost of the paved and unpaved shoulders.

⁴ Urban road costs are derived from curb –to-curb, with an allowance for landscaping included. Costs for sidewalks and streetlighting were added on a project-by-project basis.

Active Transportation

The unit cost for sidewalks, bike lanes and MUPs was provided directly by the Town and are shown in **Table 7**. The values in the table have been manipulated from their original values to display the cost in dollars per kilometer.

Table 7: Active Transportation Unit Costs

Improvement Type	Cross-section	Code	Roadwork cost (\$2018/km)
Active Transportation			
Sidewalk on One Side	Urban	SW	\$156,060
Sidewalk on Both Sides	Urban	SW(2)	\$312,120
Multi-use Path on One Side	Urban	MUP (1)	\$156,060
Multi-use Path on Both Sides	Urban	MUP (2)	\$312,120
Painted Bike Lane	Urban	BL	\$31,212
Paved Shoulders	Rural	PS	\$171,395
Sharrows	Urban	SHW	\$31,212

Paved shoulders are acknowledged to provide a benefit for cyclists in rural areas and can, in the context of East Gwillimbury, be considered as active transportation facilities. Paved shoulders account for approximately 15% of the rural road construction. It must be noted that for the few rural road reconstruction projects, the cost of shoulders was rolled into the overall project cost, instead of appearing as a standalone item. For more information about the costs, please see attached Excel Spreadsheet for Rural Roads.

A standard width of 1.5m was assumed for sidewalks and bike lanes. 3m was considered appropriate for MUPs.

For dedicated cycling space on the roads, bike lane costs were developed. According to the East Gwillimbury design standards, bike lanes do not have any specific subsurface soil requirements and therefore can be implemented simply through paint and signage application. A cost of \$31,212 per km is recommended and accounts for bike lane markings and signage as well as sharrows.

Land Acquisition

The cost of property required to achieve the ultimate right-of-way (ROW) was provided by the Town from the year 2016 and were indexed to 2018 value. The property prices per hectare are listed in **Table 8**. Land use types were comprised of official plan designated commercial, agricultural, urban serviced and unserviced.

Table 8: Property Costing Assumptions (per acre)

Land	Unit	Unit Cost (2018\$)
Rural Agriculture	\$/hectare	\$25,709
Urban Serviced	\$/hectare	\$2,570,884
Urban Non-serviced	\$/hectare	\$385,633
Commercial	\$/hectare	\$1,542,531

Structures

The recommended unit costs for structures are displayed in **Table 9**. The linear costs were applied according to high level approximates of the structures' future lengths on a project-by-project basis.

Table 9: Structure Unit Costs

Item	Unit	Unit Prices (2018\$)	Source
Bridge Structure (25m cross-section)	\$/m	\$132,500.00	2016 Parametric Estimating Guide
Bridge Structure (10m x-section)	\$/m	\$67,500.00	2016 Parametric Estimating Guide

The Parametric Estimating Guide was used to estimate a linear cost for the Highway 404 Flyover, to which the Town must contribute a third of the overall project cost. Where projects have moved passed the EA process, structure costs were based on estimates from the ESR or the detailed design process as was the case for the Structure along the East-West Collector (between Bathurst Street and Harry Walker Parkway).



Transportation Master Plan Update

Appendix D

Attachment 2 – Costing Methodology for 2051 Horizon

Town of East Gwillimbury
Final Report





1. Introduction

The Town of East Gwillimbury has initiated an Official Plan Review, which includes a land needs assessment to accommodate land use growth projections to the 2051 horizon year. HDR previously completed a Draft Transportation Master Plan for the Town in September 2019 (the “Draft 2041 TMP”) to identify transportation servicing and infrastructure needs to the 2041 horizon year. To address transportation needs to the 2051 horizon year, an update to the Draft 2041 TMP is required to update the preferred solution considering growth to the 2051 horizon year.

This memo will discuss preliminary engineering cost estimates to inform a future Development Charges by-law update. Benchmark and unit costs developed will be used to cost all projects proposed in the 2051 TMP update.

2. Road and Related Benchmark Costs

The main components of road project costs included in the benchmarking are “curb-to-curb” which represent items such as excavation, granular, asphalt, curb and gutter, manholes, catch basins. In addition, landscaping costs are also included. Other road items such as structures (bridges and culverts), active transportation infrastructure (cycling and walking), and streetlights are costed separately as add-ons.

All costs are reported in 2022 dollars. As cost data is gathered from various sources from different years, a price index was applied to escalate costs to a common year, in this case 2022, for analysis.

Construction Price Index

Non-residential construction prices, based on Statistics Canada data for the Toronto Census Metropolitan Area (CMA), indicate an average annual increase of 7.6% in construction costs over the past 3 years (2018 Q1 to 2021 Q1).

Unit Costs

Unit costs were developed by indexing values used in the 2041 TMP (completed in 2019) to 2022 dollars. All unit costs were also compared to HDR’s internal unit cost database to validate the reasonability of the indexed cost to those of other municipalities within the GTA. HDR’s database incorporate construction price information for specific construction unit prices obtained through construction tenders of multiple GTA municipalities between 2019 and 2021. A summary of the unit costs proposed for the 2022 TMP (in 2022 dollars) and the 2019 TMP (in 2018 dollars) is provided in **Table 2-1**.

Most items have had a total cost increase of 31% (consistent with annual 7.6% increase); however, the total cost increase ranges from 2% to 31%. Excavation costs have increased the most at 76% due to higher observed costs than the 2019 TMP when compared to the average of other municipalities. Several items also have either no cost changes or have cost decreases since the 2019 TMP to correct for significant costing differences observed when compared to average costs of other municipalities. Items without cost changes include base asphalt and top asphalt, while items with cost decreases include manhole/maintenance hole installation (-20%), sidewalks (-23%), and storm sewer installation (-24%).

Table 2-1. Unit Costs Comparison

Item	Unit	2022 TMP (\$2022)	2019 TMP (\$2018)	% change
Base Road Items				
Excavation	m3	\$27.40	\$15.61	76%
Granular Base	t	\$27.29	\$20.81	31%
Curb and Gutter	m	\$84.71	\$83.23	2%
Subdrain	m	\$27.29	\$20.81	31%
Base Asphalt - HL4 / HL8	t	\$104.04	\$104.04	0%
Top Asphalt - HL3	t	\$114.44	\$114.44	0%
Pavement Markings and Symbols (all types)	m	\$6.82	\$5.20	31%
Permanent Road Signing	km	\$34,111	\$26,010	31%
Stormwater Items				
Supply and Install Storm, Sewer Pipes (all sizes and type)	m	\$462.80	\$608.87	-24%
Supply and Install Manhole, Maintenance Holes (all sizes)	ea	\$6,639.83	\$8,323.20	-20%
Supply and Install Catchbasins (all types and sizes)	ea	\$3,207.85	\$2,446.01	31%
Stormceptors (all sizes)	ea	\$68,222	\$52,020	31%
Streetscaping Items				
Landscaping	km	\$136,444	\$104,040	31%
Topsoil and Sod	m2	\$20.47	\$15.61	31%

Road Benchmark Costs

Based on the recommendations from the **Model Development and Network**

Recommendations Memo and discussions with the Town, benchmark costing for linear road projects is only required for new construction of major and minor collector road. A breakdown of the major and minor collector benchmark is estimated to be approximately \$3 million and \$2.6 million as shown in **Table 2-2**, respectively. The costing reflects a continuous mid-block road cross-section and does not account for additional costs required with tying in existing side approaches at intersections.



Table 2-2. Major and Minor Collector Benchmark Costs

Item	Unit	Unit Price	Major Collector		Minor Collector	
			Quantity	Total	Quantity	Total
Excavation	m3	\$27.40	18,720	\$512,953	15,840	\$434,037
Hot Mix HL3	tonne	\$114.44	1,277	\$146,122	894	\$102,285
Hot Mix HL4	tonne	\$104.04	2,744	\$285,486	1,921	\$199,840
Granular A Base (all depths)	tonne	\$27.29	5,328	\$145,395	3,816	\$104,134
Granular B Subbase (all depths)	tonne	\$27.29	13,320	\$363,487	9,540	\$260,336
Install Concrete Curb & Gutter (all types)	m	\$84.71	2,000	\$169,426	2,000	\$169,426
Supply and Install Storm, Sewer Pipes (all sizes and type)	m	\$462.80	1,000	\$462,799	1,000	\$462,799
Supply and Install Manhole, Maintenance Holes (all sizes)	each	\$6,639.83	10	\$66,398	10	\$66,398
Supply and Install Catchbasins (all types and sizes)	each	\$3,207.85	31	\$98,703	25	\$80,196
Stormceptors (all sizes)	km	\$68,222.12	1	\$68,222	1	\$68,222
Pavement Markings and Symbols (all types)	m	\$6.82	1,000	\$6,822	1,000	\$6,822
Permanent Road Signing	km	\$34,111.06	1	\$34,111	1	\$34,111
Landscaping	\$/km	\$136,444.23	1.00	\$136,444	1.00	\$136,444
Topsoil and Sod	\$/m2	\$20.47	9,000	\$184,200	9,200	\$188,293
Subdrain	\$/m	\$27.29	1,000	\$27,289	1,000	\$27,289
			Subtotal:	\$2,707,857	Subtotal:	\$2,340,633
			Misc (10%)	\$270,786	Misc (10%)	\$234,063
			Total:	\$2,978,643/km	Total:	\$2,574,696/km

Other Road Network Items

Table 2-3 documents additional road-related construction items not included in the “curb-to-curb” road benchmark costs.

Table 2-3. Other Road-Related Construction Unit Prices

Item	Unit	2022 TMP (\$2022)	2019 TMP (\$2018)	% change
Concrete Sidewalk	m2	\$80.42	\$104.04	-23%
Streetlighting	km	\$170,555	\$130,050	31%
Sidewalk on one side	km	\$144,758	\$156,060	-7%
Sidewalk on both sides	km	\$144,758	\$156,060	-7%
Multi-use path (standalone)	km	\$204,666	\$156,060	31%
Multi-use path (with sidewalk on other side)	km	\$349,425	\$312,120	12%
Paved shoulder	km	\$229,441	\$171,395	34%
Bike lanes	km	\$40,933	\$31,212	31%
Bridge (20m span, 10m cross-section)	ea	\$1,770,470	\$1,350,000	31%
Culvert (7m span, 10m cross section)	ea	\$619,665	\$472,500	31%
Land Acquisition	m2	\$47	n/a	n/a

Adjustment Factors

Adjustment factors are applied to the project cost estimates to account for potential planning, design and/or construction challenges that are unforeseen in the early stages of the planning process. An Environmental Assessment (EA) study factor is applied for both road benchmark costs and structures. A utilities adjustment factor is applied for road benchmark costs only. Both an engineering/construction administration and a contingency adjustment factor is applied to all road project related items, including the road benchmark costs, boulevard infrastructure items, and structures.

All adjustment factors are shown in **Table 2-4** and are consistent with HDR’s recent experience in pre-engineering cost estimates for costing programs.

Table 2-4. Adjustment Factors

Adjustment Factor	%
Utilities	10%
Environmental Assessment Study	8%
Engineering + Construction Administration	15%
Contingency	10%

3. Costing Assumptions

Projects costed for the 2051 horizon include major collector roads, minor collector roads, and associated waterbody crossings identified from a desktop review. Along Regional arterial roads, in-boulevard right-of-way elements such as sidewalks, cycling facilities, landscaping and streetlights adjacent to proposed Whitebelt development lands are also included as they are required to support Whitebelt development. Whitebelt development are new areas for the 2051 horizon.

Other costing assumptions for new Town roads include the following:

- **Active Transportation Facilities:** Per Town discussions, major collector roads assumed a multi-use path (MUP) on one side of the road and a sidewalk on the other side of the road. Minor collector roads assumed a painted bike lanes and sidewalks on both sides of the road.
- **Land acquisition:** Land is assumed to be required to achieve a 26m right-of-way (ROW).
- **Structures:** All waterbody crossing structures assumed bridges for conservative costing purposes.

4. Growth / Non-Growth Cost Sharing

Deductions are applied to the projects in the DC program for benefit to existing (non-growth share), post-planning period benefit, and any grants, subsidies or other contributions from developers or other levels of government.

All projects included in the road program are required to serve growth. Where a proposed road project provides a significant benefit to existing (non-growth) development, a benefit to existing deduction is applied to share the cost of the project. The remaining growth component represents the amount fundable through development charges.

The benefit to existing (BTE) and benefit to growth (BTG) ratios used for the 2051 transportation network costing program is summarized in **Table 4-1**.

Table 4-1. Summary of Improvement Types and BTE / BTG Ratio

Improvement Type	Improvement Code	Description	Benefit to Existing (BTE)	Benefit to Growth (BTG)
New construction	NC	No deduction understanding that the need for new construction is entirely driven by the need to accommodate new growth.	0%	100%
Active Transportation (Paved Shoulders, Sidewalks, Bike Lanes, Sharrows...)	AT- Out of Settlement	Where shoulders are in, close to or leading to areas that are expecting significant growth, BTG should take same percentage of the projected new population. Locations with minimal growth will be attributed 40% BTE while locations with significant growth will be allocated 20% BTE.	10%	90%
Streetlighting	SL	Urbanization and growth are related in that the infrastructure standards are higher in locations with increasing population. The addition of streetlights in this instance is acknowledged to serve a growing community.	10%	90%