

**Dunlop Corridor Improvements Class Environmental Assessment
Cost Estimate
12-May-20**

Alternative Design Solution 1 - Interim Solution

Item No.	Costs		Subtotal
Capital Cost Estimate			
1.1	Dunlop Street - West Project Limit to Fernside Drive	\$	-
1.2	Dunlop Street - Fernside Drive to West MTO Project Limit	\$	448,128
1.3	Dunlop Street - East MTO Project Limit to Anne Street	\$	-
1.4	Dunlop Street - Anne Street to Boys Street	\$	-
1.5	Fernside Drive Intersection Improvements	\$	-
1.6	Anne Street Intersection Improvements	\$	-
1.7	Watermain Renewal	\$	473,734
Subtotal			
2019 to 2020 prices (15% inflation adjustment)			
			\$ 1,060,139
Contingency			
Non-Refundable HST			50% \$ 530,070
			1.76% \$ 27,988
Subtotal Capital Costs			
\$ 2,500,000			
Pre-Design Project Phase			
2.1	Project Management by City	0.25%	\$ 2,650
2.2	Project Management by Consultants	0.25%	\$ 2,650
2.3	Project Plan		\$ 30,000
2.4	City Staff Costs	0.25%	\$ 2,650
2.5	City Consultants	2.50%	\$ 28,803
Subtotal			
			\$ 64,455
Contingency			
Non-Refundable HST			50% \$ 32,227
			1.76% \$ 1,702
Subtotal Pre-Design Project Phase Costs			
\$ 100,000			
Design Project Phase			
3.1	Detailed Design	8.00%	\$ 84,811
3.2	Project Management	2.00%	\$ 21,203
3.3	City Staff Costs	0.25%	\$ 2,650
3.4	Project Plan Update		\$ 10,000
3.5	City Consultants	3.50%	\$ 37,105
Subtotal			
			\$ 155,769
Contingency			
Non-Refundable HST			50% \$ 77,885
			1.76% \$ 1,702
Subtotal Design Project Phase Costs			
\$ 200,000			
Construction Project Phase			
4.1	Contract Administration	2.00%	\$ 21,203
4.2	Field Services/Inspection	4.00%	\$ 42,406
4.3	Project Management	2.00%	\$ 21,203
4.4	City Staff Costs	0.25%	\$ 2,650
4.5	Project Plan Update		\$ 10,000
4.6	City Consultant	1.00%	\$ 10,611
Subtotal			
			\$ 97,482
Contingency			
Non-Refundable HST			50% \$ 48,731
			1.76% \$ 2,573
Subtotal Construction Project Phase Costs			
\$ 100,000			
Miscellaneous Project Phase			
5.1	Property		\$ 300,000
5.2	Utility Relocation	11.50%	\$ 121,916
Subtotal			
			\$ 421,916
Contingency			
Non-Refundable HST			30% \$ 126,575
			1.76% \$ 9,653
Subtotal Miscellaneous Project Phase Costs			
\$ 600,000			
Subtotal Dunlop Street Widening Costs			
\$ 3,500,000			

MTO Contribution

Item No.	Costs		Subtotal
Capital Cost Estimate			
1.1	MTO Contribution for Corridor Widening within MTO Project Limits	\$	10,300,000
Subtotal			
			\$ 10,300,000
2017 to 2018 construction cost inflation			
			1.42% \$ 146,260
2018 to 2019 construction cost inflation			
			6.73% \$ 703,033
2019 to 2020 construction cost inflation			
			15.00% \$ 1,672,394
Subtotal with construction cost inflation adjustment			
			\$ 12,821,687
Contingency			
Non-Refundable HST			50% \$ 6,410,844
			1.76% \$ 338,463
Subtotal Capital Costs			
\$ 19,600,000			
Pre-Design Project Phase			
2.1	Project Management by City	0.25%	\$ 32,054
2.2	Project Management by Consultants	0.00%	\$ -
2.3	Project Plan		\$ 30,000
2.4	City Staff Costs	0.25%	\$ 32,054
2.5	City Consultants	1.00%	\$ 128,217
Subtotal			
			\$ 222,325
Contingency			
Non-Refundable HST			50% \$ 111,163
			1.76% \$ 5,869
Subtotal Pre-Design Project Phase Costs			
\$ 340,000			
Design Project Phase			
3.1	Detailed Design	8.00%	\$ 1,025,735
3.2	Project Management	2.00%	\$ 256,434
3.3	City Staff Costs	0.25%	\$ 32,054
3.4	Project Plan Update		\$ 5,000
3.5	City Consultants	1.00%	\$ 128,217
Subtotal			
			\$ 1,447,440
Contingency			
Non-Refundable HST			50% \$ 723,720
			1.76% \$ 38,212
Subtotal Design Project Phase Costs			
\$ 2,210,000			
Construction Project Phase			
4.1	Contract Administration	2.00%	\$ 256,434
4.2	Field Services/Inspection	4.00%	\$ 512,867
4.3	Project Management	2.00%	\$ 256,434
4.4	City Staff Costs	0.25%	\$ 32,054
4.5	Project Plan Update		\$ 10,000
4.6	City Consultant	1.00%	\$ 128,217
Subtotal			
			\$ 1,196,006
Contingency			
Non-Refundable HST			50% \$ 598,003
			1.76% \$ 31,575
Subtotal Construction Project Phase Costs			
\$ 1,830,000			
Miscellaneous Project Phase			
5.1	Property		\$ -
5.2	Utility Relocation	11.50%	\$ 1,474,494
Subtotal			
			\$ 1,474,494
Contingency			
Non-Refundable HST			30% \$ 442,348
			1.76% \$ 33,736
Subtotal Miscellaneous Project Phase Costs			
\$ 1,960,000			
Subtotal MTO Contribution Costs			
\$ 25,930,000			

Alternative Design Solution 1 - Interim Solution

Total Project Cost \$ 29,430,000

Alternative Design Solution 2 - 2031 Solution

Item No.	Costs		Subtotal
Capital Cost Estimate			
1.1	Dunlop Street - West Project Limit to Fernside Drive	\$	2,316,959
1.2	Dunlop Street - Fernside Drive to West MTO Project Limit	\$	2,034,773
1.3	Dunlop Street - East MTO Project Limit to Anne Street	\$	1,419,058
1.4	Dunlop Street - Anne Street to Boys Street	\$	1,355,789
1.5	Fernside Drive Intersection Improvements	\$	1,777,013
1.6	Anne Street Intersection Improvements	\$	1,766,172
1.7	Watermain Renewal	\$	1,027,728
Subtotal			
			\$ 11,697,492
2019 to 2020 prices (15% inflation adjustment)			
			\$ 13,452,116
Contingency			
Non-Refundable HST			50% \$ 6,726,058
			1.76% \$ 355,136
Subtotal Capital Costs			
\$ 32,200,000			
Pre-Design Project Phase			
2.1	Project Management by City	0.25%	\$ 33,630
2.2	Project Management by Consultants	0.25%	\$ 33,630
2.3	Project Plan		\$ 30,000
2.4	City Staff Costs	0.25%	\$ 33,630
2.5	City Consultants	2.50%	\$ 336,303
Subtotal			
			\$ 467,194
Contingency			
Non-Refundable HST			50% \$ 233,597
			1.76% \$ 12,334
Subtotal Pre-Design Project Phase Costs			
\$ 700,000			
Design Project Phase			
3.1	Detailed Design	8.00%	\$ 1,076,169
3.2	Project Management	2.00%	\$ 269,042
3.3	City Staff Costs	0.25%	\$ 30,000
3.4	Project Plan Update		\$ 10,000
3.5	City Consultants	3.50%	\$ 470,824
Subtotal			
			\$ 1,856,036
Contingency			
Non-Refundable HST			50% \$ 928,018
			1.76% \$ 48,969
Subtotal Design Project Phase Costs			
\$ 2,800,000			
Construction Project Phase			
4.1	Contract Administration	2.00%	\$ 269,042
4.2	Field Services/Inspection	4.00%	\$ 538,085
4.3	Project Management	2.00%	\$ 269,042
4.4	City Staff Costs	0.25%	\$ 33,630
4.5	Project Plan Update		\$ 10,000
4.6	City Consultant	1.00%	\$ 134,521
Subtotal			
			\$ 1,119,800
Contingency			
Non-Refundable HST			50% \$ 559,900
			1.76% \$ 29,563
Subtotal Construction Project Phase Costs			
\$ 1,700,000			
Miscellaneous Project Phase			
5.1	Property		\$ 34,000,000
5.2	Utility Relocation	11.50%	\$ 1,546,993
Subtotal			
			\$ 35,546,993
Contingency			
Non-Refundable HST			30% \$ 10,664,098
			1.76% \$ 913,315
Subtotal Miscellaneous Project Phase Costs			
\$ 47,000,000			
Subtotal Dunlop Street Widening Costs			
\$ 84,400,000			

Alternative Design Solution 2 - 2031 Solution

Total Project Cost \$ 110,330,000

Alternative Design Solution 3 - 2041 Solution

Item No.	Costs		Subtotal
Capital Cost Estimate			
1.1	Dunlop Street - West Project Limit to Fernside Drive	\$	2,749,001
1.2	Dunlop Street - Fernside Drive to West MTO Project Limit	\$	2,352,789
1.3	Dunlop Street - East MTO Project Limit to Anne Street	\$	1,436,055
1.4	Dunlop Street - Anne Street to Boys Street	\$	1,355,789
1.5	Fernside Drive Intersection Improvements	\$	1,777,013
1.6	Anne Street Intersection Improvements	\$	1,766,172
1.7	Watermain Renewal	\$	1,027,728
Subtotal			
			\$ 12,464,548
2019 to 2020 prices (15% inflation adjustment)			
			\$ 14,334,230
Contingency			
Non-Refundable HST			50% \$ 7,167,115
			1.76% \$ 376,424
Subtotal Capital Costs			
\$ 34,300,000			
Pre-Design Project Phase			
2.1	Project Management by City	0.25%	\$ 35,836
2.2	Project Management by Consultants	0.25%	\$ 35,836
2.3	Project Plan		\$ 30,000
2.4	City Staff Costs	0.25%	\$ 35,836
2.5	City Consultants	2.50%	\$ 358,356
Subtotal			
			\$ 495,862
Contingency			
Non-Refundable HST			50% \$ 247,931
			1.76% \$ 13,091
Subtotal Pre-Design Project Phase Costs			
\$ 800,000			
Design Project Phase			
3.1	Detailed Design	8.00%	\$ 1,146,738
3.2	Project Management	2.00%	\$ 286,685
3.3	City Staff Costs	0.25%	\$ 30,000
3.4	Project Plan Update		\$ 10,000
3.5	City Consultants	3.50%	\$ 501,698
Subtotal			
			\$ 1,975,121
Contingency			
Non-Refundable HST			50% \$ 987,561
			1.76% \$ 52,143
Subtotal Design Project Phase Costs			
\$ 3,000,000			
Construction Project Phase			
4.1	Contract Administration	2.00%	\$ 286,685
4.2	Field Services/Inspection	4.00%	\$ 573,369
4.3	Project Management	2.00%	\$ 286,685
4.4	City Staff Costs	0.25%	\$ 35,836
4.5	Project Plan Update		\$ 10,000
4.6	City Consultant	1.00%	\$ 143,342
Subtotal			
			\$ 1,192,574
Contingency			
Non-Refundable HST			50% \$ 596,287
			1.76% \$ 31,484
Subtotal Construction Project Phase Costs			
\$ 1,800,000			
Miscellaneous Project Phase			
5.1	Property		\$ 37,000,000
5.2	Utility Relocation	11.50%	\$ 1,648,438
Subtotal			
			\$ 38,648,438
Contingency			
Non-Refundable HST			30% \$ 11,594,531
			1.76% \$ 884,276
Subtotal Miscellaneous Project Phase Costs			
\$ 51,100,000			
Subtotal Dunlop Street Widening Costs			
\$ 91,000,000			

Alternative Design Solution 3 - 2041 Solution

Total Project Cost \$ 116,930,000

**Dunlop Street Corridor Improvements Class Environmental Assessment
 Cost Estimate
 12-May-20**

MTO Contribution for Additional Bridge/Interchange Widening to 6-lanes

Item No.	Costs	Subtotal
MTO Base Costs from 2018 PDR		
1.1	Road Works	\$ 1,372,697.00
1.2	Earth Works	\$ 457,134.48
1.3	Structures	\$ 19,852,000.00
1.4	Retaining Walls	\$ 1,176,000.00
Subtotal Capital Costs		\$ 22,857,831
Cost Adjustment Based on Structure Width Increase		135%
Adjusted Costs Based on Structure Width Increase		
2.1	Road Works	\$ 1,853,140.95
2.2	Earth Works	\$ 617,131.55
2.3	Structures	\$ 26,800,200.00
2.4	Retaining Walls	\$ 1,587,600.00
Subtotal Adjusted Capital Costs		\$ 30,858,072
Subtotal - Estimated City Contribution		\$ 8,000,241
Municipal Cost Items		
3.1	Street Lighting	\$ 111,269.60
3.2	S-E Ramp Modifications (Allowance)	\$ 1,000,000.00
3.3	Contribution Allowance Dyment's Creek	\$ 1,140,000.00
Subtotal - Direct Municipal Cost Items		\$ 2,251,270
Total Estimated City Contribution		\$ 10,300,000.00

Dunlop Street - Alternative 1 - West

Segment Length	70	WB stop bar @ Sarjeant to east side of Barrie Chrysler driveway
Watermain Length	290	
Watermain Length for Cathodic Protection	0	
Sanitary Length	0	

ROW	41	m	HL1	40	mm	Gran A	150	mm
Proposed Asphalt Width	25.2	m	HL3	0	mm	Gran B	600	mm
Existing Asphalt Width	11	m	HL4/HL8	100	mm			

	Unit	Average Unit Price	Price per metre Reconstruction
REMOVALS (From Scratch)			
Earth Excavation	cu. m.	\$21.98	\$448.37
Average Cost of Removals for 29.2m asphalt road on a 41.0m ROW			\$448.37

REMOVALS (Existing 2-Lane Urban Road)			
Remove Existing Asphalt	sq.m.	\$6.03	\$66.33
Remove Concrete Curb and Gutter	m.	\$9.21	\$18.42
Remove Ex Storm MH	each	\$619.85	\$6.20
Remove Ex Catch basin	each	\$449.38	\$14.98
Remove Ex Storm Sewer	m.	\$73.92	\$62.83
Remove Existing Concrete Sidewalk	sq. m.	\$11.70	\$35.10
Tree Removal	each	\$370.00	\$49.33
Stripping of Topsoil	sq. m.	\$3.48	\$90.60
			\$343.79

CONSTRUCTION			
Granular A - 150 mm	sq. m.	\$8.19	\$222.77
Granular B - 600 mm	sq. m.	\$25.14	\$683.81
Concrete Curb and Gutter	m.	\$46.15	\$92.30
Concrete Barrier Curb	m.	\$56.15	\$112.30
Concrete Centre Median	sq. m.	\$39.80	\$31.84
100 mm Diameter PE Subdrain	m.	\$24.75	\$49.50
HL1 Asphalt - 40 mm	sq. m.	\$8.41	\$211.90
HL 4 or HL 8 Hot Mix or Recycled - 100 mm	sq. m.	\$17.00	\$428.46
Tack Coat	sq. m.	\$0.29	\$7.36
Concrete Sidewalk	sq. m.	\$50.33	\$201.32
Fine Grading, Topsoil & Sod	sq. m.	\$8.66	\$93.54
Mechanical Water Quality Device	each	\$40,250.00	\$78.02
750mm Diameter Storm Sewer	m.	\$488.19	\$488.19
1200mm Diameter Precast Maintenance Hole	each	\$4,950.78	\$49.51
Precast Catch Basin -Single	each	\$2,463.43	\$82.11
250mm Diameter Catch Basin Lead, Flexible	m.	\$341.44	\$143.40
Adjust Existing MH and CB to finished grade	each	\$368.06	\$15.06
Trees	each	\$483.63	\$64.48
			\$3,055.87

MISCELLANEOUS		Reconstruction	
Bonds	L. S.		
Bonds as a percentage of net tender amount		1.80%	\$69.26
Insurance	L. S.		
Insurance as a percentage of net tender amount		1.00%	\$38.48
Garbage and Recyclable Collection	L. S.		
Garbage and Recyclable Collection as a % of net		0.10%	\$3.85
Traffic Control and Signing	L. S.		
Traffic Control and Signing as a % of net		1.24%	\$47.72
Field Office	L. S.		
Field Office as a percentage of net tender amount		0.12%	\$4.62
Schedule of Work	L. S.		
Street Lights	each	\$1,662.38	\$59.37
Street Light Duct Work	m.	\$33.50	\$33.50
Asphalt Driveway Removal and Restoration	sq. m.	\$25.94	\$77.61
			\$338.26

RECONSTRUCTION COST PER M	\$4,186.29
RECONSTRUCTION COST PER M W 15.2% INFLATION TO 2019	\$4,822.60

SEGMENT SPECIFIC COSTS

REMOVALS per M - SANITARY			
Remove Ex. Sanitary Sewer	m.	\$50.00	\$0
Remove Ex. Sanitary MH	each	\$330.00	\$0
Remove Ex. Sanitary Service	each	\$200.00	\$0

SUBTOTAL \$0

REMOVALS per M - WATER				
Remove Ex. Watermain & Appurtenances	m.	\$80.00	1	\$80
Remove Ex. Fire Hydrant	each	\$1,337.00	1	\$15

SUBTOTAL \$95

CONSTRUCTION per M - ROAD

Dewatering	m.	\$420.00	1	\$420
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SUBTOTAL \$420

CONSTRUCTION per M - SANITARY

250mm Diameter Sanitary Sewer (replacement)	m.	\$400.00		\$0
300mm Diameter Sanitary Sewer (replacement)		\$600.00		\$0
600mm Diameter Sanitary Sewer (replacement)	m.	\$2,000.00		\$0
1200mm Diameter Precast Maintenance Hole	each	\$6,500.00		\$0
1500mm Diameter Precast Maintenance Hole	each	\$8,500.00		\$0

SUBTOTAL \$0

CONSTRUCTION per M - WATER

150mm Diameter Watermain (replacement)	m.	\$400.00		\$0
200mm Diameter Watermain (replacement)	m.	\$500.00		\$0
250mm Diameter Watermain (replacement)	m.	\$525.00		\$0
300mm Diameter Watermain (replacement)	m.	\$525.00	1	\$525
400mm Diameter Watermain (replacement, tunnel)	m.	\$1,000.00		\$0
150mm Diameter Watermain valve	each	\$2,000.00		\$0
200mm Diameter Watermain valve	each	\$2,000.00		\$0
250mm Diameter Watermain valve	each	\$3,000.00		\$0
300mm Diameter Watermain valve	each	\$3,000.00	1	\$20
400mm Diameter Watermain valve	each	\$5,000.00		\$0
Cathodic Protection	each	\$870.00		\$0
Fire Hydrant	each	\$6,812.50	1	\$74

SUBTOTAL \$619

SUBTOTAL SEGMENT per M

Subtotal Sanitary Per m	\$0
Subtotal Water Per m	\$714
Subtotal Road Per m	\$420

SEGMENT SPECIFIC COSTS

	Quantit	Unit Cost	Subtotal	
Sanitary Service - 100mm	each	0	\$3,000.00	\$0
Sanitary Service - 150mm	each	0	\$3,000.00	\$0
Water Service - Domestic, 19mm to 25mm	each	4	\$3,550.00	\$14,200
Water Service - Domestic, 38mm to 50mm	each	0	\$8,000.00	\$0
Water Service - Fire, assume 150mm	each	4	\$10,000.00	\$40,000
Water - Cathodic Protection Segment Specific	each	0	\$0.00	\$0
Auxiliary Lane - RTL	each	0	\$57,500.00	\$0
Auxiliary Lane - Double LTL	each	0	\$57,500.00	\$0
Auxiliary Lane - Double LTL Runout	each	0	\$57,500.00	\$0
Auxiliary Lane Property	each	0	\$150,000.00	\$0
Rail Crossing	each	0	\$200,000.00	\$0
Intersection	each	0	\$288,000.00	\$0
LID	sq.m	1764	\$46.00	\$81,144

TOTAL SEGMENT SPECIFIC COSTS

SANITARY	\$0
WATER	\$261,139
ROAD	\$448,126
PROPERTY (ADDITIONAL ASSOCIATED WITH AUXILIARY LANES)	\$0
TOTAL	\$709,265

calculated separately

TOTAL ROAD CAPITAL COSTS (EXCL UTILITY AND PROPERTY)	\$448,126.32
TOTAL WATER/SAN RENEWAL COSTS	\$261,138.64
TOTAL SEGMENT COSTS (EXCL UTILITY AND PROPERTY)	\$709,264.96

Dunlop Street - Alternative 1 - East

Segment Length	0	Constructed by the MTO, no widening in this section	
Watermain Length	250		
Watermain Length for Cathodic Protection	0		
Sanitary Length	0		

ROW	41	m	HL1	40	mm	Gran A	150	mm
Proposed Asphalt Width	25.2	m	HL3	0	mm	Gran B	600	mm
Existing Asphalt Width	11	m	HL4/HL8	100	mm			

	Unit	Average Unit Price	Price per metre Reconstruction
REMOVALS (From Scratch)			
Earth Excavation	cu. m.	\$21.98	\$448.37

Average Cost of Removals for 29.2m asphalt road on a 41.0m ROW \$448.37

REMOVALS (Existing 2-Lane Urban Road)			
Remove Existing Asphalt	sq.m.	\$6.03	\$66.33
Remove Concrete Curb and Gutter	m.	\$9.21	\$18.42
Remove Ex Storm MH	each	\$619.85	\$6.20
Remove Ex Catch basin	each	\$449.38	\$14.98
Remove Ex Storm Sewer	m.	\$73.92	\$62.83
Remove Existing Concrete Sidewalk	sq. m.	\$11.70	\$35.10
Tree Removal	each	\$370.00	\$49.33
Stripping of Topsoil	sq. m.	\$3.48	\$90.60

\$343.79

CONSTRUCTION			
Granular A - 150 mm	sq. m.	\$8.19	\$222.77
Granular B - 600 mm	sq. m.	\$25.14	\$683.81
Concrete Curb and Gutter	m.	\$46.15	\$92.30
Concrete Barrier Curb	m.	\$56.15	\$112.30
Concrete Centre Median	sq. m.	\$39.80	\$31.84
100 mm Diameter PE Subdrain	m.	\$24.75	\$49.50
HL1 Asphalt - 40 mm	sq. m.	\$8.41	\$211.90
HL 4 or HL 8 Hot Mix or Recycled - 100 mm	sq. m.	\$17.00	\$428.46
Tack Coat	sq. m.	\$0.29	\$7.36
Concrete Sidewalk	sq. m.	\$50.33	\$201.32
Fine Grading, Topsoil & Sod	sq. m.	\$8.66	\$93.54
Mechanical Water Quality Device	each	\$40,250.00	\$78.02
750mm Diameter Storm Sewer	m.	\$488.19	\$488.19
1200mm Diameter Precast Maintenance Hole	each	\$4,950.78	\$49.51
Precast Catch Basin -Single	each	\$2,463.43	\$82.11
250mm Diameter Catch Basin Lead, Flexible	m.	\$341.44	\$143.40
Adjust Existing MH and CB to finished grade	each	\$368.06	\$15.06
Trees	each	\$483.63	\$64.48

\$3,055.87

MISCELLANEOUS			Reconstruction
Bonds	L. S.		
Bonds as a percentage of net tender amount		1.80%	\$69.26
Insurance	L. S.		
Insurance as a percentage of net tender amount		1.00%	\$38.48
Garbage and Recyclable Collection	L. S.		
Garbage and Recyclable Collection as a % of net		0.10%	\$3.85
Traffic Control and Signing	L. S.		
Traffic Control and Signing as a % of net		1.24%	\$47.72
Field Office	L. S.		
Field Office as a percentage of net tender amount		0.12%	\$4.62
Schedule of Work	L. S.		
Street Lights	each	\$1,662.38	\$59.37
Street Light Duct Work	m.	\$33.50	\$33.50
Asphalt Driveway Removal and Restoration	sq. m.	\$25.94	\$77.61

\$338.26

RECONSTRUCTION COST PER M \$4,186.29

RECONSTRUCTION COST PER M W 15.2% INFLATION TO 2019 \$4,822.60

SEGMENT SPECIFIC COSTS

REMOVALS per M - SANITARY			
Remove Ex. Sanitary Sewer	m.	\$50.00	\$0
Remove Ex. Sanitary MH	each	\$330.00	\$0
Remove Ex. Sanitary Service	each	\$200.00	\$0

SUBTOTAL \$0

REMOVALS per M - WATER			
Remove Ex. Watermain & Appurtenances	m.	\$80.00	\$80
Remove Ex. Fire Hydrant	each	\$1,337.00	\$15

SUBTOTAL \$95

CONSTRUCTION per M - ROAD

Dewatering	m.	\$420.00	1	\$420
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SUBTOTAL \$420

CONSTRUCTION per M - SANITARY

250mm Diameter Sanitary Sewer (replacement)	m.	\$400.00		\$0
300mm Diameter Sanitary Sewer (replacement)		\$600.00		\$0
600mm Diameter Sanitary Sewer (replacement)	m.	\$2,000.00		\$0
1200mm Diameter Precast Maintenance Hole	each	\$6,500.00		\$0
1500mm Diameter Precast Maintenance Hole	each	\$8,500.00		\$0

SUBTOTAL \$0

CONSTRUCTION per M - WATER

150mm Diameter Watermain (replacement)	m.	\$400.00		\$0
200mm Diameter Watermain (replacement)	m.	\$500.00		\$0
250mm Diameter Watermain (replacement)	m.	\$525.00		\$0
300mm Diameter Watermain (replacement)	m.	\$525.00	1	\$525
400mm Diameter Watermain (replacement, tunnel)	m.	\$1,000.00		\$0
150mm Diameter Watermain valve	each	\$2,000.00		\$0
200mm Diameter Watermain valve	each	\$2,000.00		\$0
250mm Diameter Watermain valve	each	\$3,000.00		\$0
300mm Diameter Watermain valve	each	\$3,000.00	1	\$20
400mm Diameter Watermain valve	each	\$5,000.00		\$0
Cathodic Protection	each	\$870.00		\$0
Fire Hydrant	each	\$6,812.50	1	\$74

SUBTOTAL \$619

SUBTOTAL SEGMENT per M

Subtotal Sanitary Per m	\$0
Subtotal Water Per m	\$714
Subtotal Road Per m	\$420

SEGMENT SPECIFIC COSTS

		Quantit	Unit Cost	Subtotal
Sanitary Service - 100mm	each	0	\$3,000.00	\$0
Sanitary Service - 150mm	each	0	\$3,000.00	\$0
Water Service - Domestic, 19mm to 25mm	each	4	\$3,550.00	\$14,200
Water Service - Domestic, 38mm to 50mm	each	0	\$8,000.00	\$0
Water Service - Fire, assume 150mm	each	2	\$10,000.00	\$20,000
Water - Cathodic Protection Segment Specific	each	0	\$0.00	\$0
Auxiliary Lane - RTL	each	0	\$57,500.00	\$0
Auxiliary Lane - Double LTL	each	0	\$57,500.00	\$0
Auxiliary Lane - Double LTL Runout	each	0	\$57,500.00	\$0
Auxiliary Lane Property	each	0	\$150,000.00	\$0
Rail Crossing	each	0	\$200,000.00	\$0
Intersection	each	0	\$288,000.00	\$0
LID	sq.m	0	\$46.00	\$0

TOTAL SEGMENT SPECIFIC COSTS

SANITARY	\$0
WATER	\$212,595
ROAD	\$0
PROPERTY (ADDITIONAL ASSOCIATED WITH AUXILIARY LANES)	\$0
TOTAL	\$212,595

calculated separately

TOTAL ROAD CAPITAL COSTS (EXCL UTILITY AND PROPERTY)

\$0.00

TOTAL WATER/SAN RENEWAL COSTS

\$212,595.38

TOTAL SEGMENT COSTS (EXCL UTILITY AND PROPERTY)

\$212,595.38

Dunlop Street - Alternative 2 - West Project Limit to Ferndale Drive (includes intersection)

Segment Length	380	east driveway @ 521 Dunlop Street West to east side of Ferndale Drive (includes intersection)
Watermain Length	0	
Watermain Length for Cathodic Protection	470	west driveway @ 521 Dunlop Street West to Ferndale Drive
Sanitary Length	0	

ROW	34	m	HL1	40	mm	Gran A	150	mm
Proposed Asphalt Width	19.5	m	HL3	0	mm	Gran B	600	mm
Existing Asphalt Width	14.5	m	HL4/HL8	100	mm			

	Unit	Average Unit Price	Price per metre Reconstruction
REMOVALS (From Scratch)			
Earth Excavation	cu. m.	\$21.98	\$354.41
Average Cost of Removals for 29.2m asphalt road on a 41.0m ROW			\$354.41

REMOVALS (Existing 2-Lane Urban Road)			
Remove Existing Asphalt	sq.m.	\$6.03	\$87.44
Remove Concrete Curb and Gutter	m.	\$9.21	\$18.42
Remove Ex Storm MH	each	\$619.85	\$6.20
Remove Ex Catch basin	each	\$449.38	\$14.98
Remove Ex Storm Sewer	m.	\$73.92	\$62.83
Remove Existing Concrete Sidewalk	sq. m.	\$11.70	\$35.10
Tree Removal	each	\$370.00	\$49.33
Stripping of Topsoil	sq. m.	\$3.48	\$54.01
			\$328.31

CONSTRUCTION			
Granular A - 150 mm	sq. m.	\$8.19	\$176.09
Granular B - 600 mm	sq. m.	\$25.14	\$540.51
Concrete Curb and Gutter	m.	\$46.15	\$92.30
Concrete Barrier Curb	m.	\$56.15	\$0.00
Concrete Centre Median	sq. m.	\$39.80	\$0.00
100 mm Diameter PE Subdrain	m.	\$24.75	\$49.50
HL1 Asphalt - 40 mm	sq. m.	\$8.41	\$163.97
HL 4 or HL 8 Hot Mix or Recycled - 100 mm	sq. m.	\$17.00	\$331.54
Tack Coat	sq. m.	\$0.29	\$5.69
Concrete Sidewalk	sq. m.	\$50.33	\$201.32
Fine Grading, Topsoil & Sod	sq. m.	\$8.66	\$82.28
Mechanical Water Quality Device	each	\$40,250.00	\$60.38
750mm Diameter Storm Sewer	m.	\$488.19	\$488.19
1200mm Diameter Precast Maintenance Hole	each	\$4,950.78	\$49.51
Precast Catch Basin -Single	each	\$2,463.43	\$82.11
250mm Diameter Catch Basin Lead, Flexible	m.	\$341.44	\$110.97
Adjust Existing MH and CB to finished grade	each	\$368.06	\$15.06
Trees	each	\$483.63	\$64.48
			\$2,513.90

MISCELLANEOUS			Reconstruction
Bonds	L. S.		
Bonds as a percentage of net tender amount		1.80%	\$57.54
Insurance	L. S.		
Insurance as a percentage of net tender amount		1.00%	\$31.97
Garbage and Recyclable Collection	L. S.		
Garbage and Recyclable Collection as a % of net		0.10%	\$3.20
Traffic Control and Signing	L. S.		
Traffic Control and Signing as a % of net		1.24%	\$39.64
Field Office	L. S.		
Field Office as a percentage of net tender amount		0.12%	\$3.84
Schedule of Work	L. S.		
Street Lights	each	\$1,662.38	\$59.37
Street Light Duct Work	m.	\$33.50	\$33.50
Asphalt Driveway Removal and Restoration	sq. m.	\$25.94	\$62.77
			\$295.02

RECONSTRUCTION COST PER M	\$3,491.64
RECONSTRUCTION COST PER M W 15.2% INFLATION TO 2019	\$4,022.36

SEGMENT SPECIFIC COSTS

REMOVALS per M - SANITARY			
Remove Ex. Sanitary Sewer	m.	\$50.00	\$0
Remove Ex. Sanitary MH	each	\$330.00	\$0
Remove Ex. Sanitary Service	each	\$200.00	\$0

SUBTOTAL \$0

REMOVALS per M - WATER			
Remove Ex. Watermain & Appurtenances	m.	\$80.00	\$0
Remove Ex. Fire Hydrant	each	\$1,337.00	\$0

SUBTOTAL \$0

CONSTRUCTION per M - ROAD

Dewatering	m.	\$420.00	1	\$420
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SUBTOTAL \$420

CONSTRUCTION per M - SANITARY

250mm Diameter Sanitary Sewer (replacement)	m.	\$400.00		\$0
300mm Diameter Sanitary Sewer (replacement)		\$600.00		\$0
600mm Diameter Sanitary Sewer (replacement)	m.	\$2,000.00		\$0
1200mm Diameter Precast Maintenance Hole	each	\$6,500.00		\$0
1500mm Diameter Precast Maintenance Hole	each	\$8,500.00		\$0

SUBTOTAL \$0

CONSTRUCTION per M - WATER

150mm Diameter Watermain (replacement)	m.	\$400.00		\$0
200mm Diameter Watermain (replacement)	m.	\$500.00		\$0
250mm Diameter Watermain (replacement)	m.	\$525.00		\$0
300mm Diameter Watermain (replacement)	m.	\$525.00		\$0
400mm Diameter Watermain (replacement, tunnel)	m.	\$1,000.00		\$0
150mm Diameter Watermain valve	each	\$2,000.00		\$0
200mm Diameter Watermain valve	each	\$2,000.00		\$0
250mm Diameter Watermain valve	each	\$3,000.00		\$0
300mm Diameter Watermain valve	each	\$3,000.00		\$0
400mm Diameter Watermain valve	each	\$5,000.00		\$0
Cathodic Protection	each	\$870.00		\$0
Fire Hydrant	each	\$6,812.50		\$0

SUBTOTAL \$0

SUBTOTAL SEGMENT per M

Subtotal Sanitary Per m		\$0
Subtotal Water Per m		\$0
Subtotal Road Per m		\$420

SEGMENT SPECIFIC COSTS

		Quantit	Unit Cost	Subtotal
Sanitary Service - 100mm	each	0	\$3,000.00	\$0
Sanitary Service - 150mm	each	0	\$3,000.00	\$0
Water Service - Domestic, 19mm to 25mm	each	2	\$3,550.00	\$7,100
Water Service - Domestic, 38mm to 50mm	each	0	\$8,000.00	\$0
Water Service - Fire, assume 150mm	each	2	\$10,000.00	\$20,000
Water - Cathodic Protection Segment Specific	each	0	\$0.00	\$0
Auxiliary Lane - RTL	each	0	\$57,500.00	\$0
Auxiliary Lane - Double LTL	each	0	\$57,500.00	\$0
Auxiliary Lane - Double LTL Runout	each	0	\$57,500.00	\$0
Auxiliary Lane Property	each	0	\$150,000.00	\$0
Rail Crossing	each	0	\$200,000.00	\$0
Intersection	each	1	\$288,000.00	\$288,000
LID	sq.m	7410	\$46.00	\$340,860

TOTAL SEGMENT SPECIFIC COSTS

SANITARY	\$0
WATER	\$27,100
ROAD	\$2,316,959
PROPERTY (ADDITIONAL ASSOCIATED WITH AUXILIARY LANES)	\$0
TOTAL	\$2,344,059

calculated separately

TOTAL ROAD CAPITAL COSTS (EXCL UTILITY AND PROPERTY)	\$2,316,958.54
TOTAL WATER/SAN RENEWAL COSTS	\$27,100.00
TOTAL SEGMENT COSTS (EXCL UTILITY AND PROPERTY)	\$2,344,058.54

Dunlop Street - Alternative 2 - Ferndale Drive (excludes intersection) to east side of Barrie Chrysler (west MTO project limit)

Segment Length	380								
Watermain Length	595	Ferndale Drive to Cedar Pointe Drive							
Watermain Length for Cathodic Protection	0								
Sanitary Length	0								
ROW	34	m	HL1	40	mm	Gran A	150	mm	
Proposed Asphalt Width	19.5	m	HL3	0	mm	Gran B	600	mm	
Existing Asphalt Width	19.5	m	HL4/HL8	100	mm				

	Unit	Average Unit Price	Price per metre Reconstruction
REMOVALS (From Scratch)			
Earth Excavation	cu. m.	\$21.98	\$354.41
Average Cost of Removals for 29.2m asphalt road on a 41.0m ROW			\$354.41

REMOVALS (Existing 2-Lane Urban Road)			
Remove Existing Asphalt	sq.m.	\$6.03	\$117.59
Remove Concrete Curb and Gutter	m.	\$9.21	\$18.42
Remove Ex Storm MH	each	\$619.85	\$6.20
Remove Ex Catch basin	each	\$449.38	\$14.98
Remove Ex Storm Sewer	m.	\$73.92	\$62.83
Remove Existing Concrete Sidewalk	sq. m.	\$11.70	\$35.10
Tree Removal	each	\$370.00	\$49.33
Stripping of Topsoil	sq. m.	\$3.48	\$36.59
			\$341.04

CONSTRUCTION			
Granular A - 150 mm	sq. m.	\$8.19	\$176.09
Granular B - 600 mm	sq. m.	\$25.14	\$540.51
Concrete Curb and Gutter	m.	\$46.15	\$92.30
Concrete Barrier Curb	m.	\$56.15	\$0.00
Concrete Centre Median	sq. m.	\$39.80	\$0.00
100 mm Diameter PE Subdrain	m.	\$24.75	\$49.50
HL1 Asphalt - 40 mm	sq. m.	\$8.41	\$163.97
HL 4 or HL 8 Hot Mix or Recycled - 100 mm	sq. m.	\$17.00	\$331.54
Tack Coat	sq. m.	\$0.29	\$5.69
Concrete Sidewalk	sq. m.	\$50.33	\$201.32
Fine Grading, Topsoil & Sod	sq. m.	\$8.66	\$82.28
Mechanical Water Quality Device	each	\$40,250.00	\$60.38
750mm Diameter Storm Sewer	m.	\$488.19	\$488.19
1200mm Diameter Precast Maintenance Hole	each	\$4,950.78	\$49.51
Precast Catch Basin -Single	each	\$2,463.43	\$82.11
250mm Diameter Catch Basin Lead, Flexible	m.	\$341.44	\$110.97
Adjust Existing MH and CB to finished grade	each	\$368.06	\$15.06
Trees	each	\$483.63	\$64.48
			\$2,513.90

MISCELLANEOUS			Reconstruction
Bonds	L. S.		
Bonds as a percentage of net tender amount		1.80%	\$57.77
Insurance	L. S.		
Insurance as a percentage of net tender amount		1.00%	\$32.09
Garbage and Recyclable Collection	L. S.		
Garbage and Recyclable Collection as a % of net		0.10%	\$3.21
Traffic Control and Signing	L. S.		
Traffic Control and Signing as a % of net		1.24%	\$39.80
Field Office	L. S.		
Field Office as a percentage of net tender amount		0.12%	\$3.85
Schedule of Work	L. S.		
Street Lights	each	\$1,662.38	\$59.37
Street Light Duct Work	m.	\$33.50	\$33.50
Asphalt Driveway Removal and Restoration	sq. m.	\$25.94	\$62.77
			\$295.57

RECONSTRUCTION COST PER M	\$3,504.92
RECONSTRUCTION COST PER M W 15.2% INFLATION TO 2019	\$4,037.67

SEGMENT SPECIFIC COSTS

REMOVALS per M - SANITARY			
Remove Ex. Sanitary Sewer	m.	\$50.00	\$0
Remove Ex. Sanitary MH	each	\$330.00	\$0
Remove Ex. Sanitary Service	each	\$200.00	\$0

SUBTOTAL \$0

REMOVALS per M - WATER				
Remove Ex. Watermain & Appurtenances	m.	\$80.00	1	\$80
Remove Ex. Fire Hydrant	each	\$1,337.00	1	\$15

SUBTOTAL \$95

CONSTRUCTION per M - ROAD

Dewatering	m.	\$420.00	1	\$420
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SUBTOTAL \$420

CONSTRUCTION per M - SANITARY

250mm Diameter Sanitary Sewer (replacement)	m.	\$400.00		\$0
300mm Diameter Sanitary Sewer (replacement)		\$600.00		\$0
600mm Diameter Sanitary Sewer (replacement)	m.	\$2,000.00		\$0
1200mm Diameter Precast Maintenance Hole	each	\$6,500.00		\$0
1500mm Diameter Precast Maintenance Hole	each	\$8,500.00		\$0

SUBTOTAL \$0

CONSTRUCTION per M - WATER

150mm Diameter Watermain (replacement)	m.	\$400.00		\$0
200mm Diameter Watermain (replacement)	m.	\$500.00		\$0
250mm Diameter Watermain (replacement)	m.	\$525.00		\$0
300mm Diameter Watermain (replacement)	m.	\$525.00	1	\$525
400mm Diameter Watermain (replacement, tunnel)	m.	\$1,000.00		\$0
150mm Diameter Watermain valve	each	\$2,000.00		\$0
200mm Diameter Watermain valve	each	\$2,000.00		\$0
250mm Diameter Watermain valve	each	\$3,000.00		\$0
300mm Diameter Watermain valve	each	\$3,000.00	1	\$20
400mm Diameter Watermain valve	each	\$5,000.00		\$0
Cathodic Protection	each	\$870.00	1	\$109
Fire Hydrant	each	\$6,812.50	1	\$74

SUBTOTAL \$728

SUBTOTAL SEGMENT per M

Subtotal Sanitary Per m	\$0
Subtotal Water Per m	\$822
Subtotal Road Per m	\$420

SEGMENT SPECIFIC COSTS

		Quantit	Unit Cost	Subtotal
Sanitary Service - 100mm	each	0	\$3,000.00	\$0
Sanitary Service - 150mm	each	0	\$3,000.00	\$0
Water Service - Domestic, 19mm to 25mm	each	0	\$3,550.00	\$0
Water Service - Domestic, 38mm to 50mm	each	11	\$8,000.00	\$88,000
Water Service - Fire, assume 150mm	each	11	\$10,000.00	\$110,000
Water - Cathodic Protection Segment Specific	each	0	\$0.00	\$0
Auxiliary Lane - RTL	each	0	\$57,500.00	\$0
Auxiliary Lane - Double LTL	each	0	\$57,500.00	\$0
Auxiliary Lane - Double LTL Runout	each	0	\$57,500.00	\$0
Auxiliary Lane Property	each	0	\$150,000.00	\$0
Rail Crossing	each	0	\$200,000.00	\$0
Intersection	each	0	\$288,000.00	\$0
LID	sq.m	7410	\$46.00	\$340,860

TOTAL SEGMENT SPECIFIC COSTS

SANITARY	\$0
WATER	\$622,581
ROAD	\$2,034,773
PROPERTY (ADDITIONAL ASSOCIATED WITH AUXILIARY LANES)	\$0
TOTAL	\$2,657,354

calculated separately

TOTAL ROAD CAPITAL COSTS (EXCL UTILITY AND PROPERTY)	\$2,034,773.05
TOTAL WATER/SAN RENEWAL COSTS	\$622,581.01
TOTAL SEGMENT COSTS (EXCL UTILITY AND PROPERTY)	\$2,657,354.06

Dunlop Street - Alternative 2 - west side of Hart Drive (MTO project limit) to east side of Anne Street

Segment Length	175								
Watermain Length	275								
Watermain Length for Cathodic Protection	0								
Sanitary Length	0								
ROW	51.3	m	HL1	40	mm	Gran A	150	mm	
Proposed Asphalt Width	35.5	m	HL3	0	mm	Gran B	600	mm	
Existing Asphalt Width	15	m	HL4/HL8	100	mm				

	Unit	Average Unit Price	Price per metre Reconstruction
REMOVALS (From Scratch)			
Earth Excavation	cu. m.	\$21.98	\$618.16
Average Cost of Removals for 29.2m asphalt road on a 41.0m ROW			\$618.16

REMOVALS (Existing 2-Lane Urban Road)			
Remove Existing Asphalt	sq.m.	\$6.03	\$90.45
Remove Concrete Curb and Gutter	m.	\$9.21	\$18.42
Remove Ex Storm MH	each	\$619.85	\$6.20
Remove Ex Catch basin	each	\$449.38	\$14.98
Remove Ex Storm Sewer	m.	\$73.92	\$62.83
Remove Existing Concrete Sidewalk	sq. m.	\$11.70	\$35.10
Tree Removal	each	\$370.00	\$49.33
Stripping of Topsoil	sq. m.	\$3.48	\$112.55
			\$389.86

CONSTRUCTION			
Granular A - 150 mm	sq. m.	\$8.19	\$307.13
Granular B - 600 mm	sq. m.	\$25.14	\$942.75
Concrete Curb and Gutter	m.	\$46.15	\$92.30
Concrete Barrier Curb	m.	\$56.15	\$112.30
Concrete Centre Median	sq. m.	\$39.80	\$143.28
100 mm Diameter PE Subdrain	m.	\$24.75	\$49.50
HL1 Asphalt - 40 mm	sq. m.	\$8.41	\$298.52
HL 4 or HL 8 Hot Mix or Recycled - 100 mm	sq. m.	\$17.00	\$603.58
Tack Coat	sq. m.	\$0.29	\$10.37
Concrete Sidewalk	sq. m.	\$50.33	\$201.32
Fine Grading, Topsoil & Sod	sq. m.	\$8.66	\$93.54
Mechanical Water Quality Device	each	\$40,250.00	\$109.91
750mm Diameter Storm Sewer	m.	\$488.19	\$488.19
1200mm Diameter Precast Maintenance Hole	each	\$4,950.78	\$49.51
Precast Catch Basin -Single	each	\$2,463.43	\$82.11
250mm Diameter Catch Basin Lead, Flexible	m.	\$341.44	\$202.02
Adjust Existing MH and CB to finished grade	each	\$368.06	\$15.06
Trees	each	\$483.63	\$64.48
			\$3,865.86

MISCELLANEOUS			Reconstruction
Bonds	L. S.		
Bonds as a percentage of net tender amount		1.80%	\$87.73
Insurance	L. S.		
Insurance as a percentage of net tender amount		1.00%	\$48.74
Garbage and Recyclable Collection	L. S.		
Garbage and Recyclable Collection as a % of net		0.10%	\$4.87
Traffic Control and Signing	L. S.		
Traffic Control and Signing as a % of net		1.24%	\$60.44
Field Office	L. S.		
Field Office as a percentage of net tender amount		0.12%	\$5.85
Schedule of Work	L. S.		
Street Lights	each	\$1,662.38	\$59.37
Street Light Duct Work	m.	\$33.50	\$33.50
Asphalt Driveway Removal and Restoration	sq. m.	\$25.94	\$77.61
			\$382.98

RECONSTRUCTION COST PER M	\$5,256.86
RECONSTRUCTION COST PER M W 15.2% INFLATION TO 2019	\$6,055.90

SEGMENT SPECIFIC COSTS

REMOVALS per M - SANITARY			
Remove Ex. Sanitary Sewer	m.	\$50.00	\$0
Remove Ex. Sanitary MH	each	\$330.00	\$0
Remove Ex. Sanitary Service	each	\$200.00	\$0

SUBTOTAL \$0

REMOVALS per M - WATER			
Remove Ex. Watermain & Appurtenances	m.	\$80.00	1 \$80
Remove Ex. Fire Hydrant	each	\$1,337.00	1 \$15

SUBTOTAL \$95

CONSTRUCTION per M - ROAD

Dewatering	m.	\$420.00	1	\$420
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SUBTOTAL \$420

CONSTRUCTION per M - SANITARY

250mm Diameter Sanitary Sewer (replacement)	m.	\$400.00		\$0
300mm Diameter Sanitary Sewer (replacement)		\$600.00		\$0
600mm Diameter Sanitary Sewer (replacement)	m.	\$2,000.00		\$0
1200mm Diameter Precast Maintenance Hole	each	\$6,500.00		\$0
1500mm Diameter Precast Maintenance Hole	each	\$8,500.00		\$0

SUBTOTAL \$0

CONSTRUCTION per M - WATER

150mm Diameter Watermain (replacement)	m.	\$400.00		\$0
200mm Diameter Watermain (replacement)	m.	\$500.00		\$0
250mm Diameter Watermain (replacement)	m.	\$525.00		\$0
300mm Diameter Watermain (replacement)	m.	\$525.00	1	\$525
400mm Diameter Watermain (replacement, tunnel)	m.	\$1,000.00		\$0
150mm Diameter Watermain valve	each	\$2,000.00		\$0
200mm Diameter Watermain valve	each	\$2,000.00		\$0
250mm Diameter Watermain valve	each	\$3,000.00		\$0
300mm Diameter Watermain valve	each	\$3,000.00	1	\$20
400mm Diameter Watermain valve	each	\$5,000.00		\$0
Cathodic Protection	each	\$870.00	1	\$109
Fire Hydrant	each	\$6,812.50	1	\$74

SUBTOTAL \$728

SUBTOTAL SEGMENT per M

Subtotal Sanitary Per m	\$0
Subtotal Water Per m	\$822
Subtotal Road Per m	\$420

SEGMENT SPECIFIC COSTS

		Quantit	Unit Cost	Subtotal
Sanitary Service - 100mm	each	0	\$3,000.00	\$0
Sanitary Service - 150mm	each	0	\$3,000.00	\$0
Water Service - Domestic, 19mm to 25mm	each	0	\$3,550.00	\$0
Water Service - Domestic, 38mm to 50mm	each	4	\$8,000.00	\$32,000
Water Service - Fire, assume 150mm	each	4	\$10,000.00	\$40,000
Water - Cathodic Protection Segment Specific	each	0	\$0.00	\$0
Auxiliary Lane - RTL	each	0	\$57,500.00	\$0
Auxiliary Lane - Double LTL	each	0	\$57,500.00	\$0
Auxiliary Lane - Double LTL Runout	each	0	\$57,500.00	\$0
Auxiliary Lane Property	each	0	\$150,000.00	\$0
Rail Crossing	each	0	\$200,000.00	\$0
Intersection	each	0	\$288,000.00	\$0
LID	sq.m	6213	\$46.00	\$285,775

captured in proposed asphalt width
captured in proposed asphalt width
captured in proposed asphalt width

TOTAL SEGMENT SPECIFIC COSTS

SANITARY	\$0
WATER	\$268,235
ROAD	\$1,419,058
PROPERTY (ADDITIONAL ASSOCIATED WITH AUXILIARY LANES)	\$0
TOTAL	\$1,687,293

calculated separately

TOTAL ROAD CAPITAL COSTS (EXCL UTILITY AND PROPERTY)	\$1,419,058.22
TOTAL WATER/SAN RENEWAL COSTS	\$268,234.92
TOTAL SEGMENT COSTS (EXCL UTILITY AND PROPERTY)	\$1,687,293.14

Dunlop Street - Alternative 2 - east side of Anne Street to west side of Boys Street

Segment Length	230
Watermain Length	0
Watermain Length for Cathodic Protection	0
Sanitary Length	0

ROW	38.4	m	HL1	40	mm	Gran A	150	mm
Proposed Asphalt Width	23	m	HL3	0	mm	Gran B	600	mm
Existing Asphalt Width	14.5	m	HL4/HL8	100	mm			

	Unit	Average Unit Price	Price per metre Reconstruction
REMOVALS (From Scratch)			
Earth Excavation	cu. m.	\$21.98	\$412.11
Average Cost of Removals for 29.2m asphalt road on a 41.0m ROW			\$412.11

REMOVALS (Existing 2-Lane Urban Road)			
Remove Existing Asphalt	sq.m.	\$6.03	\$87.44
Remove Concrete Curb and Gutter	m.	\$9.21	\$18.42
Remove Ex Storm MH	each	\$619.85	\$6.20
Remove Ex Catch basin	each	\$449.38	\$14.98
Remove Ex Storm Sewer	m.	\$73.92	\$62.83
Remove Existing Concrete Sidewalk	sq. m.	\$11.70	\$35.10
Tree Removal	each	\$370.00	\$49.33
Stripping of Topsoil	sq. m.	\$3.48	\$69.34
			\$343.64

CONSTRUCTION			
Granular A - 150 mm	sq. m.	\$8.19	\$204.75
Granular B - 600 mm	sq. m.	\$25.14	\$628.50
Concrete Curb and Gutter	m.	\$46.15	\$92.30
Concrete Barrier Curb	m.	\$56.15	\$0.00
Concrete Centre Median	sq. m.	\$39.80	\$0.00
100 mm Diameter PE Subdrain	m.	\$24.75	\$49.50
HL1 Asphalt - 40 mm	sq. m.	\$8.41	\$193.40
HL 4 or HL 8 Hot Mix or Recycled - 100 mm	sq. m.	\$17.00	\$391.05
Tack Coat	sq. m.	\$0.29	\$6.72
Concrete Sidewalk	sq. m.	\$50.33	\$201.32
Fine Grading, Topsoil & Sod	sq. m.	\$8.66	\$90.07
Mechanical Water Quality Device	each	\$40,250.00	\$71.21
750mm Diameter Storm Sewer	m.	\$488.19	\$488.19
1200mm Diameter Precast Maintenance Hole	each	\$4,950.78	\$49.51
Precast Catch Basin -Single	each	\$2,463.43	\$82.11
250mm Diameter Catch Basin Lead, Flexible	m.	\$341.44	\$130.89
Adjust Existing MH and CB to finished grade	each	\$368.06	\$15.06
Trees	each	\$483.63	\$64.48
			\$2,759.06

MISCELLANEOUS			Reconstruction
Bonds	L. S.		
Bonds as a percentage of net tender amount		1.80%	\$63.27
Insurance	L. S.		
Insurance as a percentage of net tender amount		1.00%	\$35.15
Garbage and Recyclable Collection	L. S.		
Garbage and Recyclable Collection as a % of net		0.10%	\$3.51
Traffic Control and Signing	L. S.		
Traffic Control and Signing as a % of net		1.24%	\$43.58
Field Office	L. S.		
Field Office as a percentage of net tender amount		0.12%	\$4.22
Schedule of Work	L. S.		
Street Lights	each	\$1,662.38	\$59.37
Street Light Duct Work	m.	\$33.50	\$33.50
Asphalt Driveway Removal and Restoration	sq. m.	\$25.94	\$73.05
			\$319.16

RECONSTRUCTION COST PER M	\$3,833.97
RECONSTRUCTION COST PER M W 15.2% INFLATION TO 2019	\$4,416.74

SEGMENT SPECIFIC COSTS

REMOVALS per M - SANITARY			
Remove Ex. Sanitary Sewer	m.	\$50.00	\$0
Remove Ex. Sanitary MH	each	\$330.00	\$0
Remove Ex. Sanitary Service	each	\$200.00	\$0

SUBTOTAL \$0

REMOVALS per M - WATER			
Remove Ex. Watermain & Appurtenances	m.	\$80.00	\$0
Remove Ex. Fire Hydrant	each	\$1,337.00	\$0

SUBTOTAL \$0

CONSTRUCTION per M - ROAD

Dewatering	m.	\$420.00	1	\$420
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SUBTOTAL \$420

CONSTRUCTION per M - SANITARY

250mm Diameter Sanitary Sewer (replacement)	m.	\$400.00		\$0
300mm Diameter Sanitary Sewer (replacement)		\$600.00		\$0
600mm Diameter Sanitary Sewer (replacement)	m.	\$2,000.00		\$0
1200mm Diameter Precast Maintenance Hole	each	\$6,500.00		\$0
1500mm Diameter Precast Maintenance Hole	each	\$8,500.00		\$0

SUBTOTAL \$0

CONSTRUCTION per M - WATER

150mm Diameter Watermain (replacement)	m.	\$400.00		\$0
200mm Diameter Watermain (replacement)	m.	\$500.00		\$0
250mm Diameter Watermain (replacement)	m.	\$525.00		\$0
300mm Diameter Watermain (replacement)	m.	\$525.00		\$0
400mm Diameter Watermain (replacement, tunnel)	m.	\$1,000.00		\$0
150mm Diameter Watermain valve	each	\$2,000.00		\$0
200mm Diameter Watermain valve	each	\$2,000.00		\$0
250mm Diameter Watermain valve	each	\$3,000.00		\$0
300mm Diameter Watermain valve	each	\$3,000.00		\$0
400mm Diameter Watermain valve	each	\$5,000.00		\$0
Cathodic Protection	each	\$870.00		\$0
Fire Hydrant	each	\$6,812.50		\$0

SUBTOTAL \$0

SUBTOTAL SEGMENT per M

Subtotal Sanitary Per m	\$0
Subtotal Water Per m	\$0
Subtotal Road Per m	\$420

SEGMENT SPECIFIC COSTS

	Quantit	Unit Cost	Subtotal
Sanitary Service - 100mm	each	0	\$3,000.00
Sanitary Service - 150mm	each	0	\$3,000.00
Water Service - Domestic, 19mm to 25mm	each	0	\$3,550.00
Water Service - Domestic, 38mm to 50mm	each	0	\$8,000.00
Water Service - Fire, assume 150mm	each	0	\$10,000.00
Water - Cathodic Protection Segment Specific	each	0	\$0.00
Auxiliary Lane - RTL	each	0	\$57,500.00
Auxiliary Lane - Double LTL	each	0	\$57,500.00
Auxiliary Lane - Double LTL Runout	each	0	\$57,500.00
Auxiliary Lane Property	each	0	\$150,000.00
Rail Crossing	each	0	\$200,000.00
Intersection	each	0	\$288,000.00
LID	sq.m	5290	\$46.00

captured in proposed asphalt width
captured in proposed asphalt width
captured in proposed asphalt width

TOTAL SEGMENT SPECIFIC COSTS

SANITARY	\$0
WATER	\$0
ROAD	\$1,355,789
PROPERTY (ADDITIONAL ASSOCIATED WITH AUXILIARY LANES)	\$0
TOTAL	\$1,355,789

calculated separately

TOTAL ROAD CAPITAL COSTS (EXCL UTILITY AND PROPERTY)	\$1,355,789.41
TOTAL WATER/SAN RENEWAL COSTS	\$0.00
TOTAL SEGMENT COSTS (EXCL UTILITY AND PROPERTY)	\$1,355,789.41

Dunlop Street - Alternative 2 - Anne Street Intersection Improvements

Segment Length	294								
Watermain Length	115								
Watermain Length for Cathodic Protection	0								
Sanitary Length	0								
ROW	34	m	HL1	40	mm	Gran A	150	mm	
Proposed Asphalt Width	23.5	m	HL3	0	mm	Gran B	600	mm	
Existing Asphalt Width	16.5	m	HL4/HL8	100	mm				

	Unit	Average Unit Price	Price per metre Reconstruction
REMOVALS (From Scratch)			
Earth Excavation	cu. m.	\$21.98	\$420.35
Average Cost of Removals for 29.2m asphalt road on a 41.0m ROW			\$420.35

REMOVALS (Existing 2-Lane Urban Road)			
Remove Existing Asphalt	sq.m.	\$6.03	\$99.50
Remove Concrete Curb and Gutter	m.	\$9.21	\$18.42
Remove Ex Storm MH	each	\$619.85	\$6.20
Remove Ex Catch basin	each	\$449.38	\$14.98
Remove Ex Storm Sewer	m.	\$73.92	\$62.83
Remove Existing Concrete Sidewalk	sq. m.	\$11.70	\$35.10
Tree Removal	each	\$370.00	\$49.33
Stripping of Topsoil	sq. m.	\$3.48	\$47.04
			\$333.40

CONSTRUCTION			
Granular A - 150 mm	sq. m.	\$8.19	\$208.85
Granular B - 600 mm	sq. m.	\$25.14	\$641.07
Concrete Curb and Gutter	m.	\$46.15	\$92.30
Concrete Barrier Curb	m.	\$56.15	\$0.00
Concrete Centre Median	sq. m.	\$39.80	\$0.00
100 mm Diameter PE Subdrain	m.	\$24.75	\$49.50
HL1 Asphalt - 40 mm	sq. m.	\$8.41	\$197.61
HL 4 or HL 8 Hot Mix or Recycled - 100 mm	sq. m.	\$17.00	\$399.55
Tack Coat	sq. m.	\$0.29	\$6.86
Concrete Sidewalk	sq. m.	\$50.33	\$201.32
Fine Grading, Topsoil & Sod	sq. m.	\$8.66	\$47.64
Mechanical Water Quality Device	each	\$40,250.00	\$72.76
750mm Diameter Storm Sewer	m.	\$488.19	\$488.19
1200mm Diameter Precast Maintenance Hole	each	\$4,950.78	\$49.51
Precast Catch Basin -Single	each	\$2,463.43	\$82.11
250mm Diameter Catch Basin Lead, Flexible	m.	\$341.44	\$133.73
Adjust Existing MH and CB to finished grade	each	\$368.06	\$15.06
Trees	each	\$483.63	\$64.48
			\$2,750.53

MISCELLANEOUS			Reconstruction
Bonds	L. S.		
Bonds as a percentage of net tender amount		1.80%	\$63.08
Insurance	L. S.		
Insurance as a percentage of net tender amount		1.00%	\$35.04
Garbage and Recyclable Collection	L. S.		
Garbage and Recyclable Collection as a % of net		0.10%	\$3.50
Traffic Control and Signing	L. S.		
Traffic Control and Signing as a % of net		1.24%	\$43.45
Field Office	L. S.		
Field Office as a percentage of net tender amount		0.12%	\$4.21
Schedule of Work	L. S.		
Street Lights	each	\$1,662.38	\$59.37
Street Light Duct Work	m.	\$33.50	\$33.50
Asphalt Driveway Removal and Restoration	sq. m.	\$25.94	\$17.12
			\$262.78

RECONSTRUCTION COST PER M	\$3,767.06
RECONSTRUCTION COST PER M W 15.2% INFLATION TO 2019	\$4,339.65

SEGMENT SPECIFIC COSTS

REMOVALS per M - SANITARY			
Remove Ex. Sanitary Sewer	m.	\$50.00	\$0
Remove Ex. Sanitary MH	each	\$330.00	\$0
Remove Ex. Sanitary Service	each	\$200.00	\$0

SUBTOTAL \$0

REMOVALS per M - WATER				
Remove Ex. Watermain & Appurtenances	m.	\$80.00	1	\$80
Remove Ex. Fire Hydrant	each	\$1,337.00	1	\$15

SUBTOTAL \$95

CONSTRUCTION per M - ROAD

Dewatering	m.	\$420.00	\$0
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SUBTOTAL \$0

CONSTRUCTION per M - SANITARY

250mm Diameter Sanitary Sewer (replacement)	m.	\$400.00	\$0
300mm Diameter Sanitary Sewer (replacement)		\$600.00	\$0
600mm Diameter Sanitary Sewer (replacement)	m.	\$2,000.00	\$0
1200mm Diameter Precast Maintenance Hole	each	\$6,500.00	\$0
1500mm Diameter Precast Maintenance Hole	each	\$8,500.00	\$0

SUBTOTAL \$0

CONSTRUCTION per M - WATER

150mm Diameter Watermain (replacement)	m.	\$400.00	\$0
200mm Diameter Watermain (replacement)	m.	\$500.00	\$0
250mm Diameter Watermain (replacement)	m.	\$525.00	\$0
300mm Diameter Watermain (replacement)	m.	\$525.00	1 \$525
400mm Diameter Watermain (replacement, tunnel)	m.	\$1,000.00	\$0
150mm Diameter Watermain valve	each	\$2,000.00	\$0
200mm Diameter Watermain valve	each	\$2,000.00	\$0
250mm Diameter Watermain valve	each	\$3,000.00	\$0
300mm Diameter Watermain valve	each	\$3,000.00	1 \$20
400mm Diameter Watermain valve	each	\$5,000.00	\$0
Cathodic Protection	each	\$870.00	\$0
Fire Hydrant	each	\$6,812.50	1 \$74

SUBTOTAL \$619

SUBTOTAL SEGMENT per M

Subtotal Sanitary Per m	\$0
Subtotal Water Per m	\$714
Subtotal Road Per m	\$0

SEGMENT SPECIFIC COSTS

	Quantit	Unit Cost	Subtotal
Sanitary Service - 100mm	each	0	\$3,000.00
Sanitary Service - 150mm	each	0	\$3,000.00
Water Service - Domestic, 19mm to 25mm	each	5	\$3,550.00
Water Service - Domestic, 38mm to 50mm	each	0	\$8,000.00
Water Service - Fire, assume 150mm	each	1	\$10,000.00
Water - Cathodic Protection Segment Specific	each	0	\$0.00
Auxiliary Lane - RTL	each	1	\$57,500.00
Auxiliary Lane - Double LTL	each	1	\$57,500.00
Auxiliary Lane - Double LTL Runout	each	1	\$57,500.00
Auxiliary Lane Property	each	3	\$150,000.00
Rail Crossing	each	0	\$200,000.00
Intersection	each	0	\$288,000.00
LID	sq.m	6909	\$46.00

TOTAL SEGMENT SPECIFIC COSTS

SANITARY	\$0
WATER	\$109,812
ROAD	\$1,766,172
PROPERTY (ADDITIONAL ASSOCIATED WITH AUXILIARY LANES)	\$450,000
TOTAL	\$2,325,984

calculated separately

TOTAL ROAD CAPITAL COSTS (EXCL UTILITY AND PROPERTY)	\$1,766,171.84
TOTAL WATER/SAN RENEWAL COSTS	\$109,811.88
TOTAL SEGMENT COSTS (EXCL UTILITY AND PROPERTY)	\$1,875,983.71

Dunlop Street - Alternative 2 - Ferndale Drive Intersection Improvements

Segment Length	296
Watermain Length	0
Watermain Length for Cathodic Protection	0
Sanitary Length	0

ROW	34	m	HL1	40	mm	Gran A	150	mm
Proposed Asphalt Width	23.5	m	HL3	0	mm	Gran B	600	mm
Existing Asphalt Width	16.5	m	HL4/HL8	100	mm			

	Unit	Average Unit Price	Price per metre Reconstruction
REMOVALS (From Scratch)			
Earth Excavation	cu. m.	\$21.98	\$420.35
Average Cost of Removals for 29.2m asphalt road on a 41.0m ROW			\$420.35

REMOVALS (Existing 2-Lane Urban Road)			
Remove Existing Asphalt	sq.m.	\$6.03	\$99.50
Remove Concrete Curb and Gutter	m.	\$9.21	\$18.42
Remove Ex Storm MH	each	\$619.85	\$6.20
Remove Ex Catch basin	each	\$449.38	\$14.98
Remove Ex Storm Sewer	m.	\$73.92	\$62.83
Remove Existing Concrete Sidewalk	sq. m.	\$11.70	\$35.10
Tree Removal	each	\$370.00	\$49.33
Stripping of Topsoil	sq. m.	\$3.48	\$47.04
			\$333.40

CONSTRUCTION			
Granular A - 150 mm	sq. m.	\$8.19	\$208.85
Granular B - 600 mm	sq. m.	\$25.14	\$641.07
Concrete Curb and Gutter	m.	\$46.15	\$92.30
Concrete Barrier Curb	m.	\$56.15	\$0.00
Concrete Centre Median	sq. m.	\$39.80	\$0.00
100 mm Diameter PE Subdrain	m.	\$24.75	\$49.50
HL1 Asphalt - 40 mm	sq. m.	\$8.41	\$197.61
HL 4 or HL 8 Hot Mix or Recycled - 100 mm	sq. m.	\$17.00	\$399.55
Tack Coat	sq. m.	\$0.29	\$6.86
Concrete Sidewalk	sq. m.	\$50.33	\$201.32
Fine Grading, Topsoil & Sod	sq. m.	\$8.66	\$47.64
Mechanical Water Quality Device	each	\$40,250.00	\$72.76
750mm Diameter Storm Sewer	m.	\$488.19	\$488.19
1200mm Diameter Precast Maintenance Hole	each	\$4,950.78	\$49.51
Precast Catch Basin -Single	each	\$2,463.43	\$82.11
250mm Diameter Catch Basin Lead, Flexible	m.	\$341.44	\$133.73
Adjust Existing MH and CB to finished grade	each	\$368.06	\$15.06
Trees	each	\$483.63	\$64.48
			\$2,750.53

MISCELLANEOUS			Reconstruction
Bonds	L. S.		
Bonds as a percentage of net tender amount		1.80%	\$63.08
Insurance	L. S.		
Insurance as a percentage of net tender amount		1.00%	\$35.04
Garbage and Recyclable Collection	L. S.		
Garbage and Recyclable Collection as a % of net		0.10%	\$3.50
Traffic Control and Signing	L. S.		
Traffic Control and Signing as a % of net		1.24%	\$43.45
Field Office	L. S.		
Field Office as a percentage of net tender amount		0.12%	\$4.21
Schedule of Work	L. S.		
Street Lights	each	\$1,662.38	\$59.37
Street Light Duct Work	m.	\$33.50	\$33.50
Asphalt Driveway Removal and Restoration	sq. m.	\$25.94	\$17.12
			\$262.78

RECONSTRUCTION COST PER M	\$3,767.06
RECONSTRUCTION COST PER M W 15.2% INFLATION TO 2019	\$4,339.65

SEGMENT SPECIFIC COSTS

REMOVALS per M - SANITARY			
Remove Ex. Sanitary Sewer	m.	\$50.00	\$0
Remove Ex. Sanitary MH	each	\$330.00	\$0
Remove Ex. Sanitary Service	each	\$200.00	\$0

SUBTOTAL \$0

REMOVALS per M - WATER			
Remove Ex. Watermain & Appurtenances	m.	\$80.00	\$0
Remove Ex. Fire Hydrant	each	\$1,337.00	\$0

SUBTOTAL \$0

CONSTRUCTION per M - ROAD

Dewatering	m.	\$420.00	\$0
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SUBTOTAL \$0

CONSTRUCTION per M - SANITARY

250mm Diameter Sanitary Sewer (replacement)	m.	\$400.00	\$0
300mm Diameter Sanitary Sewer (replacement)		\$600.00	\$0
600mm Diameter Sanitary Sewer (replacement)	m.	\$2,000.00	\$0
1200mm Diameter Precast Maintenance Hole	each	\$6,500.00	\$0
1500mm Diameter Precast Maintenance Hole	each	\$8,500.00	\$0

SUBTOTAL \$0

CONSTRUCTION per M - WATER

150mm Diameter Watermain (replacement)	m.	\$400.00	\$0
200mm Diameter Watermain (replacement)	m.	\$500.00	\$0
250mm Diameter Watermain (replacement)	m.	\$525.00	\$0
300mm Diameter Watermain (replacement)	m.	\$525.00	\$0
400mm Diameter Watermain (replacement, tunnel)	m.	\$1,000.00	\$0
150mm Diameter Watermain valve	each	\$2,000.00	\$0
200mm Diameter Watermain valve	each	\$2,000.00	\$0
250mm Diameter Watermain valve	each	\$3,000.00	\$0
300mm Diameter Watermain valve	each	\$3,000.00	\$0
400mm Diameter Watermain valve	each	\$5,000.00	\$0
Cathodic Protection	each	\$870.00	\$0
Fire Hydrant	each	\$6,812.50	\$0

SUBTOTAL \$0

SUBTOTAL SEGMENT per M

Subtotal Sanitary Per m	\$0
Subtotal Water Per m	\$0
Subtotal Road Per m	\$0

SEGMENT SPECIFIC COSTS

	Quantit	Unit Cost	Subtotal
Sanitary Service - 100mm	each	0	\$3,000.00
Sanitary Service - 150mm	each	0	\$3,000.00
Water Service - Domestic, 19mm to 25mm	each	0	\$3,550.00
Water Service - Domestic, 38mm to 50mm	each	0	\$8,000.00
Water Service - Fire, assume 150mm	each	0	\$10,000.00
Water - Cathodic Protection Segment Specific	each	0	\$0.00
Auxiliary Lane - RTL	each	1	\$57,500.00
Auxiliary Lane - Double LTL	each	1	\$57,500.00
Auxiliary Lane - Double LTL Runout	each	1	\$57,500.00
Auxiliary Lane Property	each	3	\$150,000.00
Rail Crossing	each	0	\$200,000.00
Intersection	each	0	\$288,000.00
LID	sq.m	6956	\$46.00

TOTAL SEGMENT SPECIFIC COSTS

SANITARY	\$0
WATER	\$0
ROAD	\$1,777,013
PROPERTY (ADDITIONAL ASSOCIATED WITH AUXILIARY LANES)	\$450,000
TOTAL	\$2,227,013

calculated separately

TOTAL ROAD CAPITAL COSTS (EXCL UTILITY AND PROPERTY)	\$1,777,013.14
TOTAL WATER/SAN RENEWAL COSTS	\$0.00
TOTAL SEGMENT COSTS (EXCL UTILITY AND PROPERTY)	\$1,777,013.14

Dunlop Street - Alternative 3 - West Project Limit to Ferndale Drive (includes intersection)

Segment Length	380	east driveway @ 521 Dunlop Street West to east side of Ferndale Drive (includes interesection)		
Watermain Length	0			
Watermain Length for Cathodic Protection	470	west driveway @ 521 Dunlop Street West to Ferndale Drive		
Sanitary Length	0			

ROW	37.5	m	HL1	40	mm	Gran A	150	mm
Proposed Asfalt Width	26.5	m	HL3	0	mm	Gran B	600	mm
Existing Asphalt Width	14.5	m	HL4/HL8	100	mm			

	Unit	Average Unit Price	Price per metre Reconstruction
REMOVALS (From Scratch)			
Earth Excavation	cu. m.	\$21.98	\$469.80
Average Cost of Removals for 29.2m asphalt road on a 41.0m ROW			\$469.80

REMOVALS (Existing 2-Lane Urban Road)			
Remove Existing Asphalt	sq.m.	\$6.03	\$87.44
Remove Concrete Curb and Gutter	m.	\$9.21	\$18.42
Remove Ex Storm MH	each	\$619.85	\$6.20
Remove Ex Catch basin	each	\$449.38	\$14.98
Remove Ex Storm Sewer	m.	\$73.92	\$62.83
Remove Existing Concrete Sidewalk	sq. m.	\$11.70	\$35.10
Tree Removal	each	\$370.00	\$49.33
Stripping of Topsoil	sq. m.	\$3.48	\$66.21
			\$340.50

CONSTRUCTION			
Granular A - 150 mm	sq. m.	\$8.19	\$233.42
Granular B - 600 mm	sq. m.	\$25.14	\$716.49
Concrete Curb and Gutter	m.	\$46.15	\$92.30
Concrete Barrier Curb	m.	\$56.15	\$112.30
Concrete Centre Median	sq. m.	\$39.80	\$31.84
100 mm Diameter PE Subdrain	m.	\$24.75	\$49.50
HL1 Asphalt - 40 mm	sq. m.	\$8.41	\$222.84
HL 4 or HL 8 Hot Mix or Recycled - 100 mm	sq. m.	\$17.00	\$450.56
Tack Coat	sq. m.	\$0.29	\$7.74
Concrete Sidewalk	sq. m.	\$50.33	\$201.32
Fine Grading, Topsoil & Sod	sq. m.	\$8.66	\$51.97
Mechanical Water Quality Device	each	\$40,250.00	\$82.05
750mm Diameter Storm Sewer	m.	\$488.19	\$488.19
1200mm Diameter Precast Maintenance Hole	each	\$4,950.78	\$49.51
Precast Catch Basin -Single	each	\$2,463.43	\$82.11
250mm Diameter Catch Basin Lead, Flexible	m.	\$341.44	\$150.80
Adjust Existing MH and CB to finished grade	each	\$368.06	\$15.06
Trees	each	\$483.63	\$64.48
			\$3,102.46

MISCELLANEOUS			Reconstruction
Bonds	L. S.		
Bonds as a percentage of net tender amount		1.80%	\$70.43
Insurance	L. S.		
Insurance as a percentage of net tender amount		1.00%	\$39.13
Garbage and Recyclable Collection	L. S.		
Garbage and Recyclable Collection as a % of net		0.10%	\$3.91
Traffic Control and Signing	L. S.		
Traffic Control and Signing as a % of net		1.24%	\$48.52
Field Office	L. S.		
Field Office as a percentage of net tender amount		0.12%	\$4.70
Schedule of Work	L. S.		
Schedule of Work as a % of net		0.10%	\$3.91
Street Lights	each	\$1,662.38	\$59.37
Street Light Duct Work	m.	\$33.50	\$33.50
Asphalt Driveway Removal and Restoration	sq. m.	\$25.94	\$22.83
			\$286.29

RECONSTRUCTION COST PER M	\$4,199.06
RECONSTRUCTION COST PER M W 15.2% INFLATION TO 2019	\$4,837.32

SEGMENT SPECIFIC COSTS

REMOVALS per M - SANITARY			
Remove Ex. Sanitary Sewer	m.	\$50.00	\$0
Remove Ex. Sanitary MH	each	\$330.00	\$0
Remove Ex. Sanitary Service	each	\$200.00	\$0

SUBTOTAL \$0

REMOVALS per M - WATER			
Remove Ex. Watermain & Appurtenances	m.	\$80.00	\$0
Remove Ex. Fire Hydrant	each	\$1,337.00	\$0

SUBTOTAL \$0

CONSTRUCTION per M - ROAD

Dewatering	m.	\$420.00	1	\$420
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SUBTOTAL \$420

CONSTRUCTION per M - SANITARY

250mm Diameter Sanitary Sewer (replacement)	m.	\$400.00		\$0
300mm Diameter Sanitary Sewer (replacement)		\$600.00		\$0
600mm Diameter Sanitary Sewer (replacement)	m.	\$2,000.00		\$0
1200mm Diameter Precast Maintenance Hole	each	\$6,500.00		\$0
1500mm Diameter Precast Maintenance Hole	each	\$8,500.00		\$0

SUBTOTAL \$0

CONSTRUCTION per M - WATER

150mm Diameter Watermain (replacement)	m.	\$400.00		\$0
200mm Diameter Watermain (replacement)	m.	\$500.00		\$0
250mm Diameter Watermain (replacement)	m.	\$525.00		\$0
300mm Diameter Watermain (replacement)	m.	\$525.00		\$0
400mm Diameter Watermain (replacement, tunnel)	m.	\$1,000.00		\$0
150mm Diameter Watermain valve	each	\$2,000.00		\$0
200mm Diameter Watermain valve	each	\$2,000.00		\$0
250mm Diameter Watermain valve	each	\$3,000.00		\$0
300mm Diameter Watermain valve	each	\$3,000.00		\$0
400mm Diameter Watermain valve	each	\$5,000.00		\$0
Cathodic Protection	each	\$870.00		\$0
Fire Hydrant	each	\$6,812.50		\$0

SUBTOTAL \$0

SUBTOTAL SEGMENT per M

Subtotal Sanitary Per m	\$0
Subtotal Water Per m	\$0
Subtotal Road Per m	\$420

SEGMENT SPECIFIC COSTS

	Quantity	Unit Cost	Subtotal
Sanitary Service - 100mm	each	0	\$3,000.00
Sanitary Service - 150mm	each	0	\$3,000.00
Water Service - Domestic, 19mm to 25mm	each	2	\$3,550.00
Water Service - Domestic, 38mm to 50mm	each	0	\$8,000.00
Water Service - Fire, assume 150mm	each	2	\$10,000.00
Water - Cathodic Protection Segment Specific	each	0	\$0.00
Auxiliary Lane - RTL	each	0	\$57,500.00
Auxiliary Lane - Double LTL	each	0	\$57,500.00
Auxiliary Lane - Double LTL Runout	each	0	\$57,500.00
Auxiliary Lane Property	each	0	\$150,000.00
Rail Crossing	each	0	\$200,000.00
Intersection	each	1	\$288,000.00
LID	sq.m	10070	\$46.00

TOTAL SEGMENT SPECIFIC COSTS

SANITARY	\$0
WATER	\$27,100
ROAD	\$2,749,001
PROPERTY (ADDITIONAL ASSOCIATED WITH AUXILIARY LANES)	\$0
TOTAL	\$2,776,101

calculated separately

TOTAL ROAD CAPITAL COSTS (EXCL UTILITY AND PROPERTY) \$2,749,001.42

TOTAL WATER/SAN RENEWAL COSTS \$27,100.00

TOTAL SEGMENT COSTS (EXCL UTILITY AND PROPERTY) \$2,776,101.42

Dunlop Street - Alternative 3 - Ferndale Drive (excludes intersection) to east side of Barrie Chrysler (west MTO project limit)

Segment Length	380								
Watermain Length	595	Ferndale Drive to Cedar Pointe Drive							
Watermain Length for Cathodic Protection	0								
Sanitary Length	0								
ROW	42.3	m		HL1	40	mm	Gran A	150	mm
Proposed Asphalt Width	23	m		HL3	0	mm	Gran B	600	mm
Existing Asphalt Width	19.5	m		HL4/HL8	100	mm			

	Unit	Average Unit Price	Price per metre Reconstruction
REMOVALS (From Scratch)			
Earth Excavation	cu. m.	\$21.98	\$412.11
Average Cost of Removals for 29.2m asphalt road on a 41.0m ROW			\$412.11

REMOVALS (Existing 2-Lane Urban Road)			
Remove Existing Asphalt	sq.m.	\$6.03	\$117.59
Remove Concrete Curb and Gutter	m.	\$9.21	\$18.42
Remove Ex Storm MH	each	\$619.85	\$6.20
Remove Ex Catch basin	each	\$449.38	\$14.98
Remove Ex Storm Sewer	m.	\$73.92	\$62.83
Remove Existing Concrete Sidewalk	sq. m.	\$11.70	\$35.10
Tree Removal	each	\$370.00	\$49.33
Stripping of Topsoil	sq. m.	\$3.48	\$65.51
			\$369.96

CONSTRUCTION			
Granular A - 150 mm	sq. m.	\$8.19	\$204.75
Granular B - 600 mm	sq. m.	\$25.14	\$628.50
Concrete Curb and Gutter	m.	\$46.15	\$92.30
Concrete Barrier Curb	m.	\$56.15	\$112.30
Concrete Centre Median	sq. m.	\$39.80	\$31.84
100 mm Diameter PE Subdrain	m.	\$24.75	\$49.50
HL1 Asphalt - 40 mm	sq. m.	\$8.41	\$193.40
HL 4 or HL 8 Hot Mix or Recycled - 100 mm	sq. m.	\$17.00	\$391.05
Tack Coat	sq. m.	\$0.29	\$6.72
Concrete Sidewalk	sq. m.	\$50.33	\$201.32
Fine Grading, Topsoil & Sod	sq. m.	\$8.66	\$123.85
Mechanical Water Quality Device	each	\$40,250.00	\$71.21
750mm Diameter Storm Sewer	m.	\$488.19	\$488.19
1200mm Diameter Precast Maintenance Hole	each	\$4,950.78	\$49.51
Precast Catch Basin -Single	each	\$2,463.43	\$82.11
250mm Diameter Catch Basin Lead, Flexible	m.	\$341.44	\$130.89
Adjust Existing MH and CB to finished grade	each	\$368.06	\$15.06
Trees	each	\$483.63	\$64.48
			\$2,936.98

MISCELLANEOUS			Reconstruction
Bonds	L. S.		
Bonds as a percentage of net tender amount		1.80%	\$66.94
Insurance	L. S.		
Insurance as a percentage of net tender amount		1.00%	\$37.19
Garbage and Recyclable Collection	L. S.		
Garbage and Recyclable Collection as a % of net		0.10%	\$3.72
Traffic Control and Signing	L. S.		
Traffic Control and Signing as a % of net		1.24%	\$46.12
Field Office	L. S.		
Field Office as a percentage of net tender amount		0.12%	\$4.46
Schedule of Work	L. S.		
Street Lights	each	\$1,662.38	\$59.37
Street Light Duct Work	m.	\$33.50	\$33.50
Asphalt Driveway Removal and Restoration	sq. m.	\$25.94	\$117.56
			\$372.58

RECONSTRUCTION COST PER M	\$4,091.62
RECONSTRUCTION COST PER M W 15.2% INFLATION TO 2019	\$4,713.55

SEGMENT SPECIFIC COSTS

REMOVALS per M - SANITARY			
Remove Ex. Sanitary Sewer	m.	\$50.00	\$0
Remove Ex. Sanitary MH	each	\$330.00	\$0
Remove Ex. Sanitary Service	each	\$200.00	\$0

SUBTOTAL \$0

REMOVALS per M - WATER				
Remove Ex. Watermain & Appurtenances	m.	\$80.00	1	\$80
Remove Ex. Fire Hydrant	each	\$1,337.00	1	\$15

SUBTOTAL \$95

CONSTRUCTION per M - ROAD

Dewatering	m.	\$420.00	1	\$420
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SUBTOTAL \$420

CONSTRUCTION per M - SANITARY

250mm Diameter Sanitary Sewer (replacement)	m.	\$400.00		\$0
300mm Diameter Sanitary Sewer (replacement)		\$600.00		\$0
600mm Diameter Sanitary Sewer (replacement)	m.	\$2,000.00		\$0
1200mm Diameter Precast Maintenance Hole	each	\$6,500.00		\$0
1500mm Diameter Precast Maintenance Hole	each	\$8,500.00		\$0

SUBTOTAL \$0

CONSTRUCTION per M - WATER

150mm Diameter Watermain (replacement)	m.	\$400.00		\$0
200mm Diameter Watermain (replacement)	m.	\$500.00		\$0
250mm Diameter Watermain (replacement)	m.	\$525.00		\$0
300mm Diameter Watermain (replacement)	m.	\$525.00	1	\$525
400mm Diameter Watermain (replacement, tunnel)	m.	\$1,000.00		\$0
150mm Diameter Watermain valve	each	\$2,000.00		\$0
200mm Diameter Watermain valve	each	\$2,000.00		\$0
250mm Diameter Watermain valve	each	\$3,000.00		\$0
300mm Diameter Watermain valve	each	\$3,000.00	1	\$20
400mm Diameter Watermain valve	each	\$5,000.00		\$0
Cathodic Protection	each	\$870.00	1	\$109
Fire Hydrant	each	\$6,812.50	1	\$74

SUBTOTAL \$728

SUBTOTAL SEGMENT per M

Subtotal Sanitary Per m	\$0
Subtotal Water Per m	\$822
Subtotal Road Per m	\$420

SEGMENT SPECIFIC COSTS

		Quantit	Unit Cost	Subtotal
Sanitary Service - 100mm	each	0	\$3,000.00	\$0
Sanitary Service - 150mm	each	0	\$3,000.00	\$0
Water Service - Domestic, 19mm to 25mm	each	0	\$3,550.00	\$0
Water Service - Domestic, 38mm to 50mm	each	11	\$8,000.00	\$88,000
Water Service - Fire, assume 150mm	each	11	\$10,000.00	\$110,000
Water - Cathodic Protection Segment Specific	each	0	\$0.00	\$0
Auxiliary Lane - RTL	each	0	\$57,500.00	\$0
Auxiliary Lane - Double LTL	each	0	\$57,500.00	\$0
Auxiliary Lane - Double LTL Runout	each	0	\$57,500.00	\$0
Auxiliary Lane Property	each	0	\$150,000.00	\$0
Rail Crossing	each	0	\$200,000.00	\$0
Intersection	each	0	\$288,000.00	\$0
LID	sq.m	8740	\$46.00	\$402,040

TOTAL SEGMENT SPECIFIC COSTS

SANITARY	\$0
WATER	\$622,581
ROAD	\$2,352,789
PROPERTY (ADDITIONAL ASSOCIATED WITH AUXILIARY LANES)	\$0
TOTAL	\$2,975,370

calculated separately

TOTAL ROAD CAPITAL COSTS (EXCL UTILITY AND PROPERTY)	\$2,352,789.00
TOTAL WATER/SAN RENEWAL COSTS	\$622,581.01
TOTAL SEGMENT COSTS (EXCL UTILITY AND PROPERTY)	\$2,975,370.00

Dunlop Street - Alternative 3 - west side of Hart Drive (MTO project limit) to east side of Anne Street

Segment Length	175								
Watermain Length	275								
Watermain Length for Cathodic Protection	0								
Sanitary Length	0								
ROW	54.8	m	HL1	40	mm	Gran A	150	mm	
Proposed Asphalt Width	35.5	m	HL3	0	mm	Gran B	600	mm	
Existing Asphalt Width	15	m	HL4/HL8	100	mm				

	Unit	Average Unit Price	Price per metre Reconstruction
REMOVALS (From Scratch)			
Earth Excavation	cu. m.	\$21.98	\$618.16
Average Cost of Removals for 29.2m asphalt road on a 41.0m ROW			\$618.16

REMOVALS (Existing 2-Lane Urban Road)			
Remove Existing Asphalt	sq.m.	\$6.03	\$90.45
Remove Concrete Curb and Gutter	m.	\$9.21	\$18.42
Remove Ex Storm MH	each	\$619.85	\$6.20
Remove Ex Catch basin	each	\$449.38	\$14.98
Remove Ex Storm Sewer	m.	\$73.92	\$62.83
Remove Existing Concrete Sidewalk	sq. m.	\$11.70	\$35.10
Tree Removal	each	\$370.00	\$49.33
Stripping of Topsoil	sq. m.	\$3.48	\$124.75
			\$402.06

CONSTRUCTION			
Granular A - 150 mm	sq. m.	\$8.19	\$307.13
Granular B - 600 mm	sq. m.	\$25.14	\$942.75
Concrete Curb and Gutter	m.	\$46.15	\$92.30
Concrete Barrier Curb	m.	\$56.15	\$112.30
Concrete Centre Median	sq. m.	\$39.80	\$143.28
100 mm Diameter PE Subdrain	m.	\$24.75	\$49.50
HL1 Asphalt - 40 mm	sq. m.	\$8.41	\$298.52
HL 4 or HL 8 Hot Mix or Recycled - 100 mm	sq. m.	\$17.00	\$603.58
Tack Coat	sq. m.	\$0.29	\$10.37
Concrete Sidewalk	sq. m.	\$50.33	\$201.32
Fine Grading, Topsoil & Sod	sq. m.	\$8.66	\$123.85
Mechanical Water Quality Device	each	\$40,250.00	\$109.91
750mm Diameter Storm Sewer	m.	\$488.19	\$488.19
1200mm Diameter Precast Maintenance Hole	each	\$4,950.78	\$49.51
Precast Catch Basin -Single	each	\$2,463.43	\$82.11
250mm Diameter Catch Basin Lead, Flexible	m.	\$341.44	\$202.02
Adjust Existing MH and CB to finished grade	each	\$368.06	\$15.06
Trees	each	\$483.63	\$64.48
			\$3,896.17

MISCELLANEOUS			Reconstruction
Bonds	L. S.		
Bonds as a percentage of net tender amount		1.80%	\$88.49
Insurance	L. S.		
Insurance as a percentage of net tender amount		1.00%	\$49.16
Garbage and Recyclable Collection	L. S.		
Garbage and Recyclable Collection as a % of net		0.10%	\$4.92
Traffic Control and Signing	L. S.		
Traffic Control and Signing as a % of net		1.24%	\$60.96
Field Office	L. S.		
Field Office as a percentage of net tender amount		0.12%	\$5.90
Schedule of Work	L. S.		
Street Lights	each	\$1,662.38	\$59.37
Street Light Duct Work	m.	\$33.50	\$33.50
Asphalt Driveway Removal and Restoration	sq. m.	\$25.94	\$117.56
			\$424.79

RECONSTRUCTION COST PER M	\$5,341.17
RECONSTRUCTION COST PER M W 15.2% INFLATION TO 2019	\$6,153.03

SEGMENT SPECIFIC COSTS

REMOVALS per M - SANITARY			
Remove Ex. Sanitary Sewer	m.	\$50.00	\$0
Remove Ex. Sanitary MH	each	\$330.00	\$0
Remove Ex. Sanitary Service	each	\$200.00	\$0

SUBTOTAL \$0

REMOVALS per M - WATER				
Remove Ex. Watermain & Appurtenances	m.	\$80.00	1	\$80
Remove Ex. Fire Hydrant	each	\$1,337.00	1	\$15

SUBTOTAL \$95

CONSTRUCTION per M - ROAD

Dewatering	m.	\$420.00	1	\$420
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SUBTOTAL \$420

CONSTRUCTION per M - SANITARY

250mm Diameter Sanitary Sewer (replacement)	m.	\$400.00		\$0
300mm Diameter Sanitary Sewer (replacement)		\$600.00		\$0
600mm Diameter Sanitary Sewer (replacement)	m.	\$2,000.00		\$0
1200mm Diameter Precast Maintenance Hole	each	\$6,500.00		\$0
1500mm Diameter Precast Maintenance Hole	each	\$8,500.00		\$0

SUBTOTAL \$0

CONSTRUCTION per M - WATER

150mm Diameter Watermain (replacement)	m.	\$400.00		\$0
200mm Diameter Watermain (replacement)	m.	\$500.00		\$0
250mm Diameter Watermain (replacement)	m.	\$525.00		\$0
300mm Diameter Watermain (replacement)	m.	\$525.00	1	\$525
400mm Diameter Watermain (replacement, tunnel)	m.	\$1,000.00		\$0
150mm Diameter Watermain valve	each	\$2,000.00		\$0
200mm Diameter Watermain valve	each	\$2,000.00		\$0
250mm Diameter Watermain valve	each	\$3,000.00		\$0
300mm Diameter Watermain valve	each	\$3,000.00	1	\$20
400mm Diameter Watermain valve	each	\$5,000.00		\$0
Cathodic Protection	each	\$870.00	1	\$109
Fire Hydrant	each	\$6,812.50	1	\$74

SUBTOTAL \$728

SUBTOTAL SEGMENT per M

Subtotal Sanitary Per m	\$0
Subtotal Water Per m	\$822
Subtotal Road Per m	\$420

SEGMENT SPECIFIC COSTS

	Quantit	Unit Cost	Subtotal
Sanitary Service - 100mm	each	0	\$3,000.00
Sanitary Service - 150mm	each	0	\$3,000.00
Water Service - Domestic, 19mm to 25mm	each	0	\$3,550.00
Water Service - Domestic, 38mm to 50mm	each	4	\$8,000.00
Water Service - Fire, assume 150mm	each	4	\$10,000.00
Water - Cathodic Protection Segment Specific	each	0	\$0.00
Auxiliary Lane - RTL	each	0	\$57,500.00
Auxiliary Lane - Double LTL	each	0	\$57,500.00
Auxiliary Lane - Double LTL Runout	each	0	\$57,500.00
Auxiliary Lane Property	each	0	\$150,000.00
Rail Crossing	each	0	\$200,000.00
Intersection	each	0	\$288,000.00
LID	sq.m	6213	\$46.00

captured in proposed asphalt width
captured in proposed asphalt width
captured in proposed asphalt width

TOTAL SEGMENT SPECIFIC COSTS

SANITARY	\$0
WATER	\$268,235
ROAD	\$1,436,055
PROPERTY (ADDITIONAL ASSOCIATED WITH AUXILIARY LANES)	\$0
TOTAL	\$1,704,290

calculated separately

TOTAL ROAD CAPITAL COSTS (EXCL UTILITY AND PROPERTY)	\$1,436,055.17
TOTAL WATER/SAN RENEWAL COSTS	\$268,234.92
TOTAL SEGMENT COSTS (EXCL UTILITY AND PROPERTY)	\$1,704,290.08

Dunlop Street - Alternative 3 - east side of Anne Street to west side of Boys Street

Segment Length	230
Watermain Length	0
Watermain Length for Cathodic Protection	0
Sanitary Length	0

ROW	38.4	m	HL1	40	mm	Gran A	150	mm
Proposed Asphalt Width	23	m	HL3	0	mm	Gran B	600	mm
Existing Asphalt Width	14.5	m	HL4/HL8	100	mm			

	Unit	Average Unit Price	Price per metre Reconstruction
REMOVALS (From Scratch)			
Earth Excavation	cu. m.	\$21.98	\$412.11
Average Cost of Removals for 29.2m asphalt road on a 41.0m ROW			\$412.11

REMOVALS (Existing 2-Lane Urban Road)			
Remove Existing Asphalt	sq.m.	\$6.03	\$87.44
Remove Concrete Curb and Gutter	m.	\$9.21	\$18.42
Remove Ex Storm MH	each	\$619.85	\$6.20
Remove Ex Catch basin	each	\$449.38	\$14.98
Remove Ex Storm Sewer	m.	\$73.92	\$62.83
Remove Existing Concrete Sidewalk	sq. m.	\$11.70	\$35.10
Tree Removal	each	\$370.00	\$49.33
Stripping of Topsoil	sq. m.	\$3.48	\$69.34
			\$343.64

CONSTRUCTION			
Granular A - 150 mm	sq. m.	\$8.19	\$204.75
Granular B - 600 mm	sq. m.	\$25.14	\$628.50
Concrete Curb and Gutter	m.	\$46.15	\$92.30
Concrete Barrier Curb	m.	\$56.15	\$0.00
Concrete Centre Median	sq. m.	\$39.80	\$0.00
100 mm Diameter PE Subdrain	m.	\$24.75	\$49.50
HL1 Asphalt - 40 mm	sq. m.	\$8.41	\$193.40
HL 4 or HL 8 Hot Mix or Recycled - 100 mm	sq. m.	\$17.00	\$391.05
Tack Coat	sq. m.	\$0.29	\$6.72
Concrete Sidewalk	sq. m.	\$50.33	\$201.32
Fine Grading, Topsoil & Sod	sq. m.	\$8.66	\$90.07
Mechanical Water Quality Device	each	\$40,250.00	\$71.21
750mm Diameter Storm Sewer	m.	\$488.19	\$488.19
1200mm Diameter Precast Maintenance Hole	each	\$4,950.78	\$49.51
Precast Catch Basin -Single	each	\$2,463.43	\$82.11
250mm Diameter Catch Basin Lead, Flexible	m.	\$341.44	\$130.89
Adjust Existing MH and CB to finished grade	each	\$368.06	\$15.06
Trees	each	\$483.63	\$64.48
			\$2,759.06

MISCELLANEOUS			Reconstruction
Bonds	L. S.		
Bonds as a percentage of net tender amount		1.80%	\$63.27
Insurance	L. S.		
Insurance as a percentage of net tender amount		1.00%	\$35.15
Garbage and Recyclable Collection	L. S.		
Garbage and Recyclable Collection as a % of net		0.10%	\$3.51
Traffic Control and Signing	L. S.		
Traffic Control and Signing as a % of net		1.24%	\$43.58
Field Office	L. S.		
Field Office as a percentage of net tender amount		0.12%	\$4.22
Schedule of Work	L. S.		
Street Lights	each	\$1,662.38	\$59.37
Street Light Duct Work	m.	\$33.50	\$33.50
Asphalt Driveway Removal and Restoration	sq. m.	\$25.94	\$73.05
			\$319.16

RECONSTRUCTION COST PER M	\$3,833.97
RECONSTRUCTION COST PER M W 15.2% INFLATION TO 2019	\$4,416.74

SEGMENT SPECIFIC COSTS

REMOVALS per M - SANITARY			
Remove Ex. Sanitary Sewer	m.	\$50.00	\$0
Remove Ex. Sanitary MH	each	\$330.00	\$0
Remove Ex. Sanitary Service	each	\$200.00	\$0

SUBTOTAL \$0

REMOVALS per M - WATER			
Remove Ex. Watermain & Appurtenances	m.	\$80.00	\$0
Remove Ex. Fire Hydrant	each	\$1,337.00	\$0

SUBTOTAL \$0

CONSTRUCTION per M - ROAD

Dewatering	m.	\$420.00	1	\$420
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SUBTOTAL \$420

CONSTRUCTION per M - SANITARY

250mm Diameter Sanitary Sewer (replacement)	m.	\$400.00		\$0
300mm Diameter Sanitary Sewer (replacement)		\$600.00		\$0
600mm Diameter Sanitary Sewer (replacement)	m.	\$2,000.00		\$0
1200mm Diameter Precast Maintenance Hole	each	\$6,500.00		\$0
1500mm Diameter Precast Maintenance Hole	each	\$8,500.00		\$0

SUBTOTAL \$0

CONSTRUCTION per M - WATER

150mm Diameter Watermain (replacement)	m.	\$400.00		\$0
200mm Diameter Watermain (replacement)	m.	\$500.00		\$0
250mm Diameter Watermain (replacement)	m.	\$525.00		\$0
300mm Diameter Watermain (replacement)	m.	\$525.00		\$0
400mm Diameter Watermain (replacement, tunnel)	m.	\$1,000.00		\$0
150mm Diameter Watermain valve	each	\$2,000.00		\$0
200mm Diameter Watermain valve	each	\$2,000.00		\$0
250mm Diameter Watermain valve	each	\$3,000.00		\$0
300mm Diameter Watermain valve	each	\$3,000.00		\$0
400mm Diameter Watermain valve	each	\$5,000.00		\$0
Cathodic Protection	each	\$870.00		\$0
Fire Hydrant	each	\$6,812.50		\$0

SUBTOTAL \$0

SUBTOTAL SEGMENT per M

Subtotal Sanitary Per m	\$0
Subtotal Water Per m	\$0
Subtotal Road Per m	\$420

SEGMENT SPECIFIC COSTS

	Quantit	Unit Cost	Subtotal
Sanitary Service - 100mm	each	0	\$3,000.00
Sanitary Service - 150mm	each	0	\$3,000.00
Water Service - Domestic, 19mm to 25mm	each	0	\$3,550.00
Water Service - Domestic, 38mm to 50mm	each	0	\$8,000.00
Water Service - Fire, assume 150mm	each	0	\$10,000.00
Water - Cathodic Protection Segment Specific	each	0	\$0.00
Auxiliary Lane - RTL	each	0	\$57,500.00
Auxiliary Lane - Double LTL	each	0	\$57,500.00
Auxiliary Lane - Double LTL Runout	each	0	\$57,500.00
Auxiliary Lane Property	each	0	\$150,000.00
Rail Crossing	each	0	\$200,000.00
Intersection	each	0	\$288,000.00
LID	sq.m	5290	\$46.00

captured in proposed asphalt width
 captured in proposed asphalt width
 captured in proposed asphalt width

TOTAL SEGMENT SPECIFIC COSTS

SANITARY	\$0
WATER	\$0
ROAD	\$1,355,789
PROPERTY (ADDITIONAL ASSOCIATED WITH AUXILIARY LANES)	\$0
TOTAL	\$1,355,789

calculated separately

TOTAL ROAD CAPITAL COSTS (EXCL UTILITY AND PROPERTY)	\$1,355,789.41
TOTAL WATER/SAN RENEWAL COSTS	\$0.00
TOTAL SEGMENT COSTS (EXCL UTILITY AND PROPERTY)	\$1,355,789.41

Dunlop Street - Alternative 3 - Anne Street Intersection Improvements

Segment Length	294								
Watermain Length	115								
Watermain Length for Cathodic Protection	0								
Sanitary Length	0								
ROW	34	m	HL1	40	mm	Gran A	150	mm	
Proposed Asphalt Width	23.5	m	HL3	0	mm	Gran B	600	mm	
Existing Asphalt Width	16.5	m	HL4/HL8	100	mm				

	Unit	Average Unit Price	Price per metre Reconstruction
REMOVALS (From Scratch)			
Earth Excavation	cu. m.	\$21.98	\$420.35
Average Cost of Removals for 29.2m asphalt road on a 41.0m ROW			\$420.35

REMOVALS (Existing 2-Lane Urban Road)			
Remove Existing Asphalt	sq.m.	\$6.03	\$99.50
Remove Concrete Curb and Gutter	m.	\$9.21	\$18.42
Remove Ex Storm MH	each	\$619.85	\$6.20
Remove Ex Catch basin	each	\$449.38	\$14.98
Remove Ex Storm Sewer	m.	\$73.92	\$62.83
Remove Existing Concrete Sidewalk	sq. m.	\$11.70	\$35.10
Tree Removal	each	\$370.00	\$49.33
Stripping of Topsoil	sq. m.	\$3.48	\$47.04
			\$333.40

CONSTRUCTION			
Granular A - 150 mm	sq. m.	\$8.19	\$208.85
Granular B - 600 mm	sq. m.	\$25.14	\$641.07
Concrete Curb and Gutter	m.	\$46.15	\$92.30
Concrete Barrier Curb	m.	\$56.15	\$0.00
Concrete Centre Median	sq. m.	\$39.80	\$0.00
100 mm Diameter PE Subdrain	m.	\$24.75	\$49.50
HL1 Asphalt - 40 mm	sq. m.	\$8.41	\$197.61
HL 4 or HL 8 Hot Mix or Recycled - 100 mm	sq. m.	\$17.00	\$399.55
Tack Coat	sq. m.	\$0.29	\$6.86
Concrete Sidewalk	sq. m.	\$50.33	\$201.32
Fine Grading, Topsoil & Sod	sq. m.	\$8.66	\$47.64
Mechanical Water Quality Device	each	\$40,250.00	\$72.76
750mm Diameter Storm Sewer	m.	\$488.19	\$488.19
1200mm Diameter Precast Maintenance Hole	each	\$4,950.78	\$49.51
Precast Catch Basin -Single	each	\$2,463.43	\$82.11
250mm Diameter Catch Basin Lead, Flexible	m.	\$341.44	\$133.73
Adjust Existing MH and CB to finished grade	each	\$368.06	\$15.06
Trees	each	\$483.63	\$64.48
			\$2,750.53

MISCELLANEOUS			Reconstruction
Bonds	L. S.		
Bonds as a percentage of net tender amount		1.80%	\$63.08
Insurance	L. S.		
Insurance as a percentage of net tender amount		1.00%	\$35.04
Garbage and Recyclable Collection	L. S.		
Garbage and Recyclable Collection as a % of net		0.10%	\$3.50
Traffic Control and Signing	L. S.		
Traffic Control and Signing as a % of net		1.24%	\$43.45
Field Office	L. S.		
Field Office as a percentage of net tender amount		0.12%	\$4.21
Schedule of Work	L. S.		
Street Lights	each	\$1,662.38	\$59.37
Street Light Duct Work	m.	\$33.50	\$33.50
Asphalt Driveway Removal and Restoration	sq. m.	\$25.94	\$17.12
			\$262.78

RECONSTRUCTION COST PER M	\$3,767.06
RECONSTRUCTION COST PER M W 15.2% INFLATION TO 2019	\$4,339.65

SEGMENT SPECIFIC COSTS

REMOVALS per M - SANITARY			
Remove Ex. Sanitary Sewer	m.	\$50.00	\$0
Remove Ex. Sanitary MH	each	\$330.00	\$0
Remove Ex. Sanitary Service	each	\$200.00	\$0

SUBTOTAL \$0

REMOVALS per M - WATER				
Remove Ex. Watermain & Appurtenances	m.	\$80.00	1	\$80
Remove Ex. Fire Hydrant	each	\$1,337.00	1	\$15

SUBTOTAL \$95

CONSTRUCTION per M - ROAD

Dewatering	m.	\$420.00	\$0
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SUBTOTAL \$0

CONSTRUCTION per M - SANITARY

250mm Diameter Sanitary Sewer (replacement)	m.	\$400.00	\$0
300mm Diameter Sanitary Sewer (replacement)		\$600.00	\$0
600mm Diameter Sanitary Sewer (replacement)	m.	\$2,000.00	\$0
1200mm Diameter Precast Maintenance Hole	each	\$6,500.00	\$0
1500mm Diameter Precast Maintenance Hole	each	\$8,500.00	\$0

SUBTOTAL \$0

CONSTRUCTION per M - WATER

150mm Diameter Watermain (replacement)	m.	\$400.00	\$0
200mm Diameter Watermain (replacement)	m.	\$500.00	\$0
250mm Diameter Watermain (replacement)	m.	\$525.00	\$0
300mm Diameter Watermain (replacement)	m.	\$525.00	1 \$525
400mm Diameter Watermain (replacement, tunnel)	m.	\$1,000.00	\$0
150mm Diameter Watermain valve	each	\$2,000.00	\$0
200mm Diameter Watermain valve	each	\$2,000.00	\$0
250mm Diameter Watermain valve	each	\$3,000.00	\$0
300mm Diameter Watermain valve	each	\$3,000.00	1 \$20
400mm Diameter Watermain valve	each	\$5,000.00	\$0
Cathodic Protection	each	\$870.00	\$0
Fire Hydrant	each	\$6,812.50	1 \$74

SUBTOTAL \$619

SUBTOTAL SEGMENT per M

Subtotal Sanitary Per m	\$0
Subtotal Water Per m	\$714
Subtotal Road Per m	\$0

SEGMENT SPECIFIC COSTS

	Quantit	Unit Cost	Subtotal
Sanitary Service - 100mm	each	0	\$3,000.00
Sanitary Service - 150mm	each	0	\$3,000.00
Water Service - Domestic, 19mm to 25mm	each	5	\$3,550.00
Water Service - Domestic, 38mm to 50mm	each	0	\$8,000.00
Water Service - Fire, assume 150mm	each	1	\$10,000.00
Water - Cathodic Protection Segment Specific	each	0	\$0.00
Auxiliary Lane - RTL	each	1	\$57,500.00
Auxiliary Lane - Double LTL	each	1	\$57,500.00
Auxiliary Lane - Double LTL Runout	each	1	\$57,500.00
Auxiliary Lane Property	each	3	\$150,000.00
Rail Crossing	each	0	\$200,000.00
Intersection	each	0	\$288,000.00
LID	sq.m	6909	\$46.00

TOTAL SEGMENT SPECIFIC COSTS

SANITARY	\$0
WATER	\$109,812
ROAD	\$1,766,172
PROPERTY (ADDITIONAL ASSOCIATED WITH AUXILIARY LANES)	\$450,000
TOTAL	\$2,325,984

calculated separately

TOTAL ROAD CAPITAL COSTS (EXCL UTILITY AND PROPERTY)	\$1,766,171.84
TOTAL WATER/SAN RENEWAL COSTS	\$109,811.88
TOTAL SEGMENT COSTS (EXCL UTILITY AND PROPERTY)	\$1,875,983.71

Dunlop Street - Alternative 2 - Ferndale Drive Intersection Improvements

Segment Length	296
Watermain Length	0
Watermain Length for Cathodic Protection	0
Sanitary Length	0

ROW	34	m	HL1	40	mm	Gran A	150	mm
Proposed Asphalt Width	23.5	m	HL3	0	mm	Gran B	600	mm
Existing Asphalt Width	16.5	m	HL4/HL8	100	mm			

	Unit	Average Unit Price	Price per metre Reconstruction
REMOVALS (From Scratch)			
Earth Excavation	cu. m.	\$21.98	\$420.35
Average Cost of Removals for 29.2m asphalt road on a 41.0m ROW			\$420.35

REMOVALS (Existing 2-Lane Urban Road)			
Remove Existing Asphalt	sq.m.	\$6.03	\$99.50
Remove Concrete Curb and Gutter	m.	\$9.21	\$18.42
Remove Ex Storm MH	each	\$619.85	\$6.20
Remove Ex Catch basin	each	\$449.38	\$14.98
Remove Ex Storm Sewer	m.	\$73.92	\$62.83
Remove Existing Concrete Sidewalk	sq. m.	\$11.70	\$35.10
Tree Removal	each	\$370.00	\$49.33
Stripping of Topsoil	sq. m.	\$3.48	\$47.04
			\$333.40

CONSTRUCTION			
Granular A - 150 mm	sq. m.	\$8.19	\$208.85
Granular B - 600 mm	sq. m.	\$25.14	\$641.07
Concrete Curb and Gutter	m.	\$46.15	\$92.30
Concrete Barrier Curb	m.	\$56.15	\$0.00
Concrete Centre Median	sq. m.	\$39.80	\$0.00
100 mm Diameter PE Subdrain	m.	\$24.75	\$49.50
HL1 Asphalt - 40 mm	sq. m.	\$8.41	\$197.61
HL 4 or HL 8 Hot Mix or Recycled - 100 mm	sq. m.	\$17.00	\$399.55
Tack Coat	sq. m.	\$0.29	\$6.86
Concrete Sidewalk	sq. m.	\$50.33	\$201.32
Fine Grading, Topsoil & Sod	sq. m.	\$8.66	\$47.64
Mechanical Water Quality Device	each	\$40,250.00	\$72.76
750mm Diameter Storm Sewer	m.	\$488.19	\$488.19
1200mm Diameter Precast Maintenance Hole	each	\$4,950.78	\$49.51
Precast Catch Basin -Single	each	\$2,463.43	\$82.11
250mm Diameter Catch Basin Lead, Flexible	m.	\$341.44	\$133.73
Adjust Existing MH and CB to finished grade	each	\$368.06	\$15.06
Trees	each	\$483.63	\$64.48
			\$2,750.53

MISCELLANEOUS			Reconstruction
Bonds	L. S.		
Bonds as a percentage of net tender amount		1.80%	\$63.08
Insurance	L. S.		
Insurance as a percentage of net tender amount		1.00%	\$35.04
Garbage and Recyclable Collection	L. S.		
Garbage and Recyclable Collection as a % of net		0.10%	\$3.50
Traffic Control and Signing	L. S.		
Traffic Control and Signing as a % of net		1.24%	\$43.45
Field Office	L. S.		
Field Office as a percentage of net tender amount		0.12%	\$4.21
Schedule of Work	L. S.		
Street Lights	each	\$1,662.38	\$59.37
Street Light Duct Work	m.	\$33.50	\$33.50
Asphalt Driveway Removal and Restoration	sq. m.	\$25.94	\$17.12
			\$262.78

RECONSTRUCTION COST PER M	\$3,767.06
RECONSTRUCTION COST PER M W 15.2% INFLATION TO 2019	\$4,339.65

SEGMENT SPECIFIC COSTS

REMOVALS per M - SANITARY			
Remove Ex. Sanitary Sewer	m.	\$50.00	\$0
Remove Ex. Sanitary MH	each	\$330.00	\$0
Remove Ex. Sanitary Service	each	\$200.00	\$0

SUBTOTAL \$0

REMOVALS per M - WATER			
Remove Ex. Watermain & Appurtenances	m.	\$80.00	\$0
Remove Ex. Fire Hydrant	each	\$1,337.00	\$0

SUBTOTAL \$0

CONSTRUCTION per M - ROAD

Dewatering	m.	\$420.00	\$0
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SUBTOTAL \$0

CONSTRUCTION per M - SANITARY

250mm Diameter Sanitary Sewer (replacement)	m.	\$400.00	\$0
300mm Diameter Sanitary Sewer (replacement)		\$600.00	\$0
600mm Diameter Sanitary Sewer (replacement)	m.	\$2,000.00	\$0
1200mm Diameter Precast Maintenance Hole	each	\$6,500.00	\$0
1500mm Diameter Precast Maintenance Hole	each	\$8,500.00	\$0

SUBTOTAL \$0

CONSTRUCTION per M - WATER

150mm Diameter Watermain (replacement)	m.	\$400.00	\$0
200mm Diameter Watermain (replacement)	m.	\$500.00	\$0
250mm Diameter Watermain (replacement)	m.	\$525.00	\$0
300mm Diameter Watermain (replacement)	m.	\$525.00	\$0
400mm Diameter Watermain (replacement, tunnel)	m.	\$1,000.00	\$0
150mm Diameter Watermain valve	each	\$2,000.00	\$0
200mm Diameter Watermain valve	each	\$2,000.00	\$0
250mm Diameter Watermain valve	each	\$3,000.00	\$0
300mm Diameter Watermain valve	each	\$3,000.00	\$0
400mm Diameter Watermain valve	each	\$5,000.00	\$0
Cathodic Protection	each	\$870.00	\$0
Fire Hydrant	each	\$6,812.50	\$0

SUBTOTAL \$0

SUBTOTAL SEGMENT per M

Subtotal Sanitary Per m	\$0
Subtotal Water Per m	\$0
Subtotal Road Per m	\$0

SEGMENT SPECIFIC COSTS

	Quantit	Unit Cost	Subtotal
Sanitary Service - 100mm	each	0	\$3,000.00
Sanitary Service - 150mm	each	0	\$3,000.00
Water Service - Domestic, 19mm to 25mm	each	0	\$3,550.00
Water Service - Domestic, 38mm to 50mm	each	0	\$8,000.00
Water Service - Fire, assume 150mm	each	0	\$10,000.00
Water - Cathodic Protection Segment Specific	each	0	\$0.00
Auxiliary Lane - RTL	each	1	\$57,500.00
Auxiliary Lane - Double LTL	each	1	\$57,500.00
Auxiliary Lane - Double LTL Runout	each	1	\$57,500.00
Auxiliary Lane Property	each	3	\$150,000.00
Rail Crossing	each	0	\$200,000.00
Intersection	each	0	\$288,000.00
LID	sq.m	6956	\$46.00

TOTAL SEGMENT SPECIFIC COSTS

SANITARY	\$0
WATER	\$0
ROAD	\$1,777,013
PROPERTY (ADDITIONAL ASSOCIATED WITH AUXILIARY LANES)	\$450,000
TOTAL	\$2,227,013

calculated separately

TOTAL ROAD CAPITAL COSTS (EXCL UTILITY AND PROPERTY)	\$1,777,013.14
TOTAL WATER/SAN RENEWAL COSTS	\$0.00
TOTAL SEGMENT COSTS (EXCL UTILITY AND PROPERTY)	\$1,777,013.14