

# Integrated Columbus Part II Planning Act and Municipal Class Environmental Assessment Act Study – Stage 2 Fiscal Impact Analysis City of Oshawa

Report for Discussion Purposes

November 13, 2019

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# Chapter 1

## Introduction



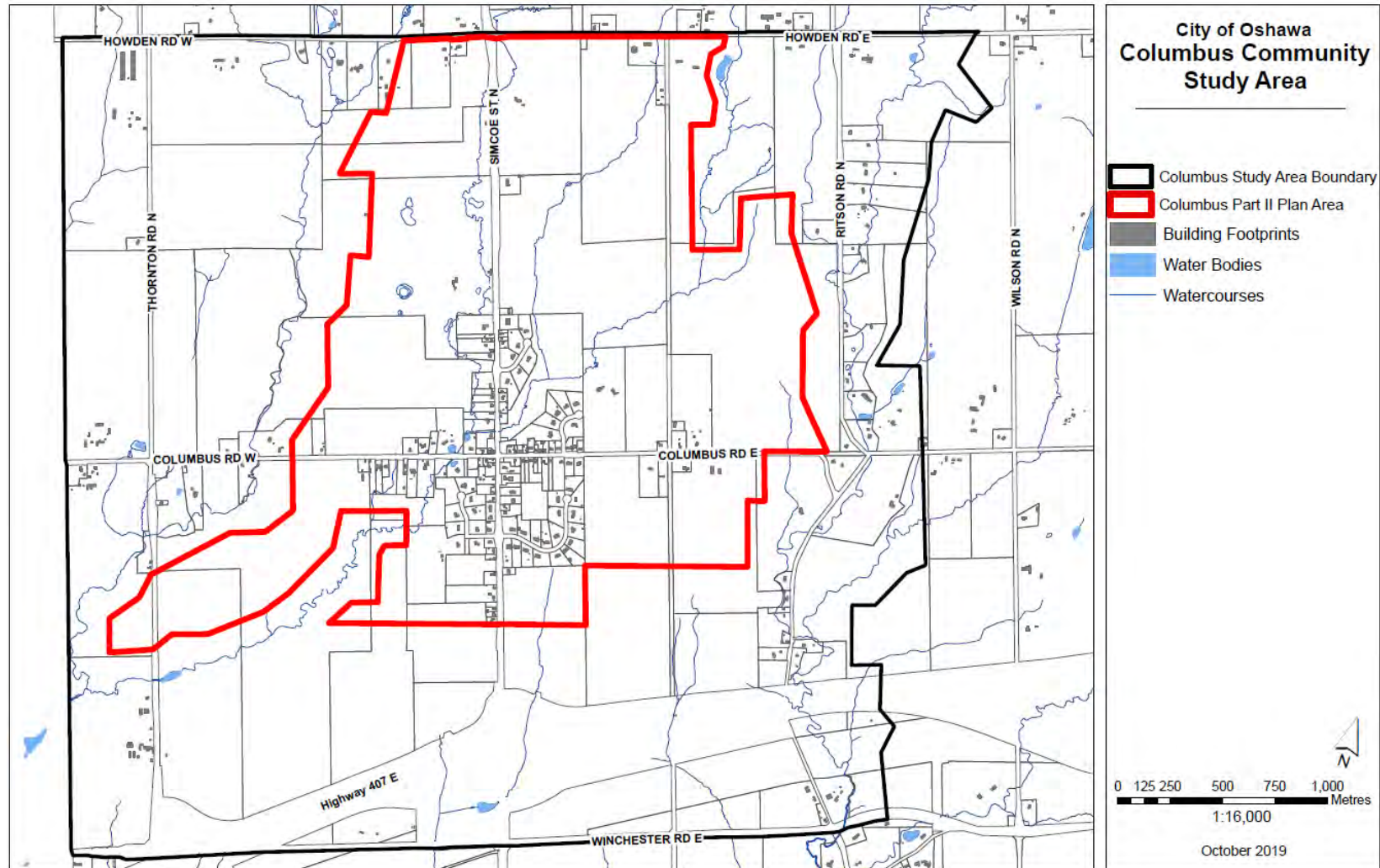
# 1. Introduction

The City of Oshawa is currently undertaking an Integrated Columbus Part II Planning Act and Municipal Class Environmental Assessment Act Study (the Study) for the Columbus area. This Study will satisfy the requirements of both the *Planning Act* and *Municipal Class Environmental Assessment Act*, and will consider lands beyond the limits of the Columbus Part II Planning Area but within the limits of the Study Area boundary. As illustrated in Figure 1-1, the Study Area is generally bounded by Howden Road to the north, the Oshawa-Whitby boundary to the west, Winchester Road to the south and the east branch of the Oshawa creek to the east. The Study will provide a “road map” that addresses the different components of the Study Area related to land use, transportation and urban land needs, natural environment, functional servicing as well as archaeology and built heritage.

As part of the Stage 2, Land Use and Transportation Alternatives, component of the assignment, Watson & Associates Economists Ltd. (Watson) has been retained to prepare a fiscal impact assessment of the three land use and road plan alternatives. The scope of the analysis is to assess the impacts of the proposed capital infrastructure requirements and service demands on the City’s tax base and development charge (D.C.) policy, including the use of area-specific charges. Other capital/operating impacts and associated financing will also be considered, including the impact of the required infrastructure on the City’s Asset Management Plan and financial strategy. In Stage 3 of the assignment, a more detailed fiscal impact analysis of the preferred alternative will be provided.



Figure 1-1  
Columbus Part II Planning Area and Columbus Study Area Boundary





# Chapter 2

## Land Use and Road Plan Alternatives



## 2. Land Use and Road Plan Alternatives

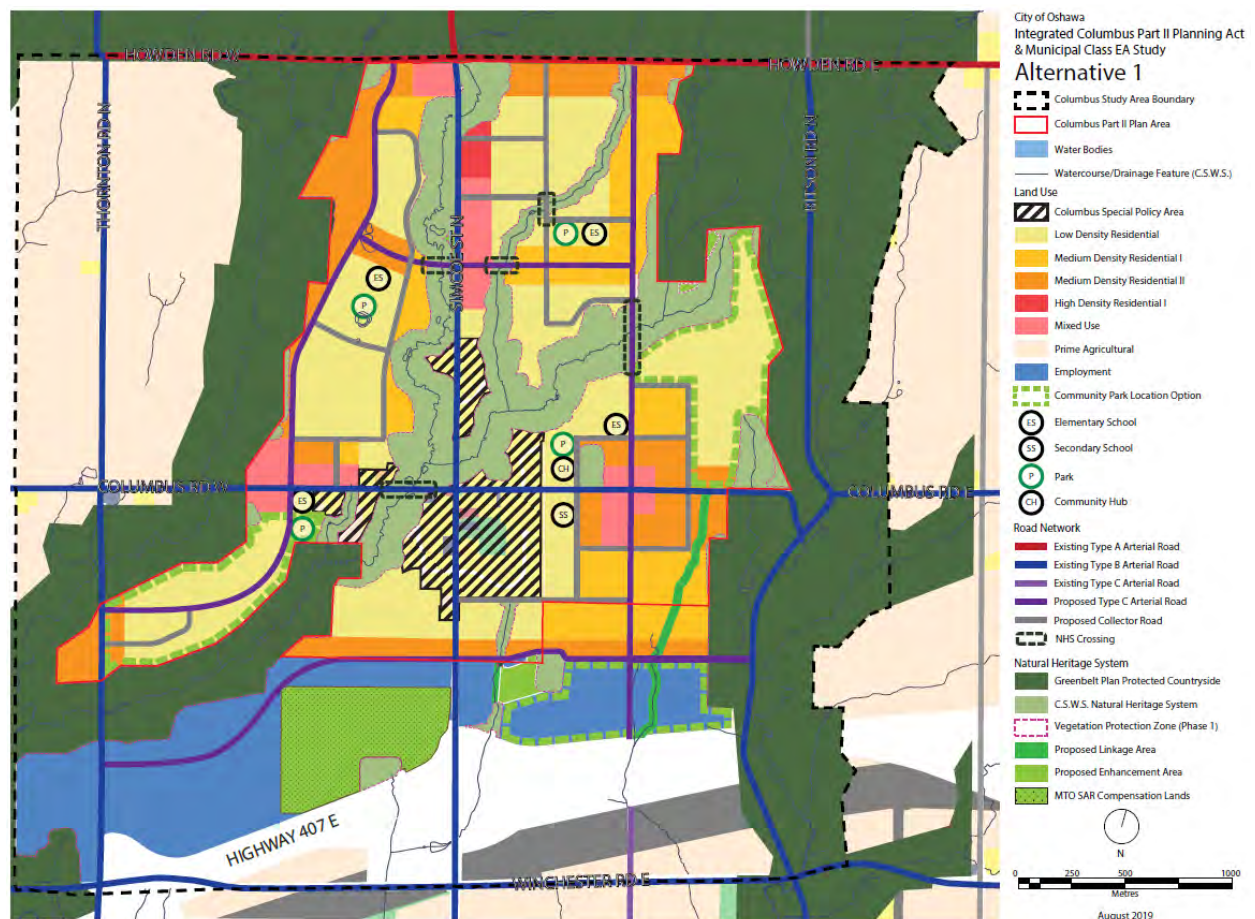
### 2.1 Land Use and Road Plan Alternatives

Stage 2 of the assignment identified three land use and road plan alternatives. These alternatives underlie the fiscal impact analysis contained herein. The following subsections summarize the land use and road plan maps and land budgets for each alternative.

#### 2.1.1 Land Use and Road Plan Alternative 1

Figure 2-1 illustrates Land Use and Road Plan Alternative 1. The proposed land budget for Alternative 1 is summarized in Table 2-1.

Figure 2-1  
Alternative 1





## Table 2-1 Alternative 1 Land Budget

City of Oshawa Integrated Columbus Part II Planning Act & Municipal Class EA Study  
Land Use Concept Alternative 1 August 5, 2019

Land Use	Gross Area (Ha)
<b>Study Area</b>	<b>1563.72</b>

Non-Developable Lands	
Prime Agricultural/Hwy 407	354.92
<b>NHS</b>	
Greenbelt Plan Protected Countryside	469.37
C.S.W.S. NHS	130.48
Proposed Linkage Area	8.25
Proposed Enhancement Area	4.39
MTO SAR Compensation Lands	34.67
<b>Total</b>	<b>1002.09</b>

Land Use	Gross Area (Ha)	Net Area	Units per Net		Units (Res)		PPU	Jobs per hectare	Pop		Jobs		Pop + Jobs (Total)	
			Min	Max	Min	Max			Min	Max	Min	Max	Min	Max
<b>Columbus Special Policy Area</b>	<b>49.20</b>	<b>29.77</b>	5	5	151	156	2.89		437	451	75	75	512	526
Secondary Suites	3.0%	0.00	-	-	5	5	1.71		8	8			8	8
Existing Arterials & Planned Widening		4.83												
Existing Local Roads		2.89												
Proposed Arterial Roads		0.00												
Proposed Collector Roads		0.39												
Proposed Local Roads	20%	9.84												
SWM	3%	1.48												
<b>Low Density Residential</b>	<b>199.87</b>	<b>103.27</b>	26	35	2,685	3,615	3.17		8,506	11,451			8,506	11,451
Existing Arterials & Planned Widening		1.24												
Existing Local Roads		0.26												
Proposed Arterial Roads		4.99												
Proposed Collector Roads		9.94												
Proposed Local Roads	20%	39.97												
Community Hub	1.00	1.00						45			45		45	
Park	1.80	7.20												
Public Elementary School	3.20	9.60						45			135		135	
Separate Elementary School	2.40	2.40						45			45		45	
High School	6.00	6.00						45			45		45	
SWM	7%	13.99												
<b>Medium Density Residential I</b>	<b>75.25</b>	<b>42.35</b>	35	60	1,482	2,541	2.55		3,783	6,485			3,783	6,485
Existing Arterials & Planned Widening		1.24												
Existing Local Roads		0.57												
Proposed Arterial Roads		4.85												
Proposed Collector Roads		4.04												
Proposed Local Roads	23%	16.93												
Park	1.8	0.00												
SWM	7%	5.27												
<b>Medium Density Residential II</b>	<b>96.44</b>	<b>45.67</b>	60	85	2,740	3,882	2.55		6,993	9,907			6,993	9,907
Existing Arterials & Planned Widening		3.33												
Existing Local Roads		0.55												
Proposed Arterial Roads		6.40												
Proposed Collector Roads		3.10												
Proposed Local Roads	25%	21.71												
Park	1.8	0.00												
SWM	7%	6.08												
<b>High Density Residential</b>	<b>8.73</b>	<b>2.60</b>	85	150	221	390	1.71		377	665			377	665
Existing Arterials & Planned Widening		0.27												
Existing Local Roads		0.00												
Proposed Arterial Roads		0.00												
Proposed Collector Roads		0.27												
Proposed Local Roads	10%	0.38												
SWM	7%	0.26												
<b>Mixed Use</b>	<b>10.52</b>	<b>19.98</b>												
Existing Arterials & Planned Widening		3.08												
Existing Local Roads		0.19												
Proposed Arterial Roads		1.48												
Proposed Collector Roads		0.61												
Proposed Local Roads	10%	3.05												
Community Hub	1.0	0.00												
Park	1.8	0.00												
SWM	7%	2.14												
Commercial	25%	4.99						45			225		225	225
Residential	75%	14.98	60	85	899	1,273	1.71		1,533	2,171			1,533	2,171
<b>Undercount</b>	<b>3.1%</b>								670	965			673	967

<b>Total Part II Plan Area Developable Lands</b>	<b>445.47</b>				<b>8,183</b>	<b>11,862</b>			<b>22,307</b>	<b>32,103</b>	<b>570</b>	<b>570</b>	<b>22,609</b>	<b>32,405</b>
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Pop + Jobs/Ha 51 73

Employment	Gross Area (Ha)	Net Area	Units per Net	Units (Res)	PPU	Jobs per hectare	Pop	Jobs	Pop + Jobs (Total)
Existing Arterials & Planned Widening	116.16	87.54							
Existing Local Roads		0.00							
Proposed Arterial Roads		6.27							
Proposed Collector Roads		0.00							
Proposed Local Roads	10%	11.62							
SWM	7%	8.13							
Institutional	3%	2.63				39		102	102
Retail	7%	6.13				72		441	441
Office	20%	17.51				126		2,206	2,206
Industrial	70%	61.78				54		2,083	2,083

<b>Total Developable Lands</b>	<b>561.62</b>				<b>8,183</b>	<b>11,862</b>		<b>22,307</b>	<b>32,103</b>	<b>5,403</b>	<b>5,403</b>	<b>27,442</b>	<b>37,238</b>
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<b>Total Non-Developable &amp; Developable</b>	<b>1563.71</b>											<b>49</b>	<b>66</b>
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Area check 1563.72

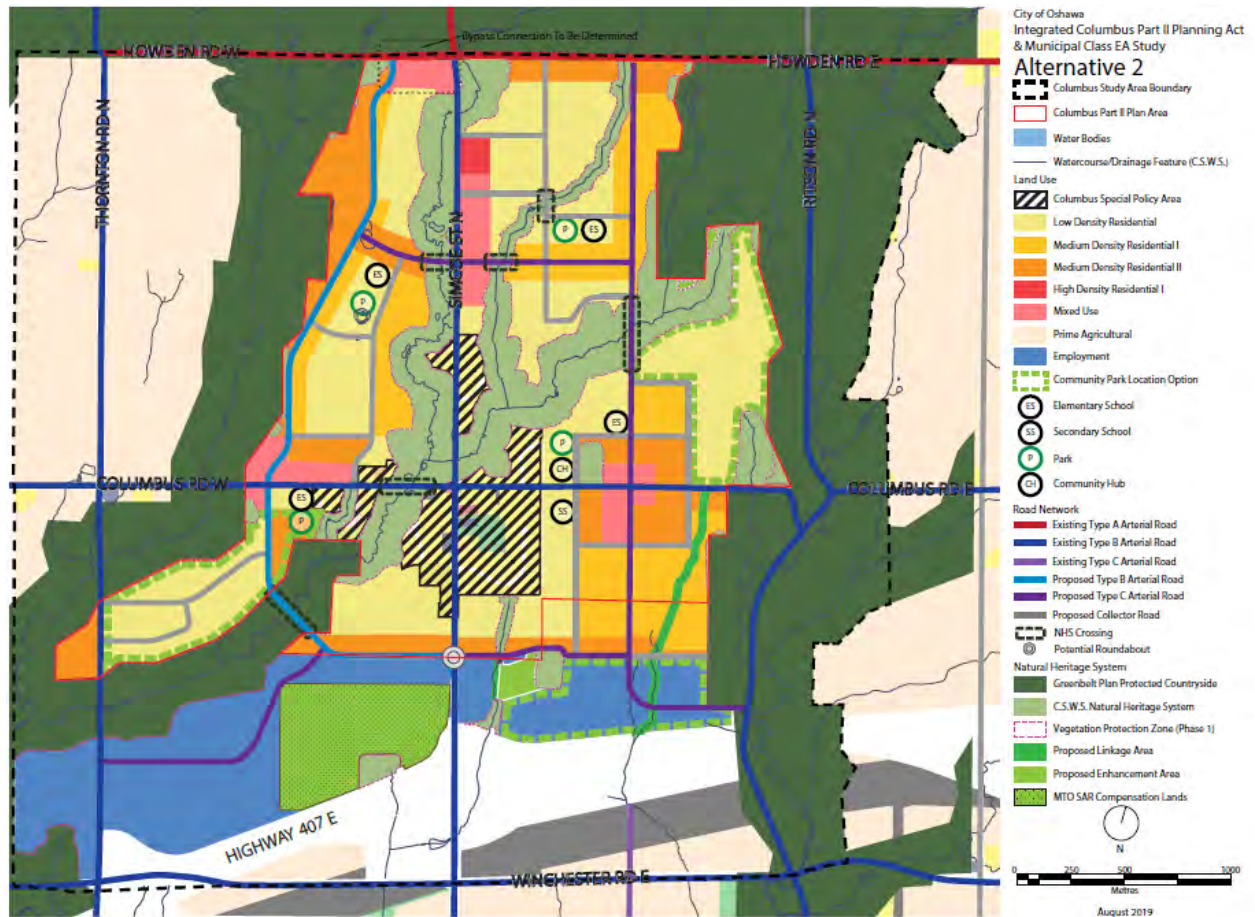




## 2.1.2 Land Use and Road Plan Alternative 2

Figure 2-2 illustrates Land Use and Road Plan Alternative 2. The proposed land budget for Alternative 2 is summarized in Table 2-2.

Figure 2-2  
Alternative 2





## Table 2-2 Alternative 2 Land Budget

City of Oshawa Integrated Columbus Part II Planning Act & Municipal Class EA Study  
Land Use Concept Alternative 2 Aug 5, 2019

Land Use	Gross Area (Ha)
<b>Study Area</b>	<b>1563.72</b>

<b>Non-Developable Lands</b>	
Prime Agricultural/Hwy 407	354.92
NHS	
Greenbelt Plan Protected Countryside	469.37
C.S.W.S. NHS	130.48
Proposed Linkage Area	8.25
Proposed Enhancement Area	4.39
MTD SAR Compensation Lands	34.67
<b>Total</b>	<b>1002.09</b>

Land Use	Gross Area (Ha)	Net Area	Units per Net		Units (Res)		PPU	Jobs per hectare	Pop		Jobs		Pop + Jobs (Total)	
			Min	Max	Min	Max			Min	Max	Min	Max		
<b>Columbus Special Policy Area</b>	<b>49.20</b>	<b>30.08</b>	5	5	151	156	2.89		437	451	75	75	512	526
Secondary Suites	3.0%	0.00	-	-	5	5	1.71		8	8			8	8
Existing Arterials & Planned Widening		4.83												
Existing Local Roads		2.89												
Proposed Arterial Roads		0.00												
Proposed Collector Roads		0.08												
Proposed Local Roads	20%	9.84												
SWM	3%	1.48												
<b>Low Density Residential</b>	<b>197.48</b>	<b>105.45</b>	26	35	2,742	3,691	3.17		8,686	11,692			8,686	11,692
Existing Arterials & Planned Widening		2.48												
Existing Local Roads		0.26												
Proposed Arterial Roads		1.16												
Proposed Collector Roads		10.40												
Proposed Local Roads	20%	39.50												
Community Hub	1.00	1.00						45			45	45		
Park	1.80	5.40												
Public Elementary School	3.20	9.60						45			135	135		
Separate Elementary School	2.40	2.40						45			45	45		
High School	6.00	6.00						45			45	45		
SWM	7%	13.82												
<b>Medium Density Residential I</b>	<b>81.93</b>	<b>44.45</b>	35	60	1,556	2,667	2.55		3,970	6,806			3,970	6,806
Existing Arterials & Planned Widening		2.18												
Existing Local Roads		0.57												
Proposed Arterial Roads		6.88												
Proposed Collector Roads		3.28												
Proposed Local Roads	23%	18.84												
Park	1.8	0.00												
SWM	7%	5.74												
<b>Medium Density Residential II</b>	<b>83.41</b>	<b>41.03</b>	60	85	2,462	3,487	2.55		6,282	8,899			6,282	8,899
Existing Arterials & Planned Widening		3.33												
Existing Local Roads		0.55												
Proposed Arterial Roads		6.98												
Proposed Collector Roads		3.31												
Proposed Local Roads	25%	20.35												
Park	1.8	1.80												
SWM	7%	5.87												
<b>High Density Residential</b>	<b>1.03</b>	<b>2.11</b>	85	150	1,791	3,161	1.71		305	538			305	538
Existing Arterials & Planned Widening		0.27												
Existing Local Roads		0.00												
Proposed Arterial Roads		0.00												
Proposed Collector Roads		0.14												
Proposed Local Roads	10%	0.30												
SWM	7%	0.21												
<b>Mixed Use</b>	<b>30.02</b>	<b>19.27</b>												
Existing Arterials & Planned Widening		2.98												
Existing Local Roads		0.19												
Proposed Arterial Roads		1.98												
Proposed Collector Roads		0.50												
Proposed Local Roads	10%	3.00												
Community Hub	1.0	0.00												
Park	1.8	0.00												
SWM	7%	2.10												
Commercial	25%	4.82						45			217	217	217	217
Residential	75%	14.46			867	1,229	1.71		1,479	2,095			1,479	2,095
<b>Underscount</b>	<b>3.1%</b>								656	945			656	947

<b>Total Part II Plan Area Developable Lands</b>	<b>445.48</b>				<b>7,961</b>	<b>11,550</b>			<b>21,823</b>	<b>31,435</b>	<b>562</b>	<b>562</b>	<b>22,117</b>	<b>31,729</b>
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Pop + Jobs/Ha      50      71

<b>Employment</b>	<b>116.16</b>	<b>86.65</b>												
Existing Arterials & Planned Widening		2.60												
Existing Local Roads		0.00												
Proposed Arterial Roads		6.81												
Proposed Collector Roads		0.35												
Proposed Local Roads	10%	11.62												
SWM	7%	8.13												
Institutional	3%	2.60						39			101	101	101	101
Retail	7%	6.07						72			437	437	437	437
Office	20%	17.33						126			2,184	2,184	2,184	2,184
Industrial	70%	60.65						34			2,062	2,062	2,062	2,062

<b>Total Developable Lands</b>	<b>561.63</b>				<b>7,961</b>	<b>11,550</b>			<b>21,823</b>	<b>31,435</b>	<b>5,346</b>	<b>5,346</b>	<b>26,901</b>	<b>36,513</b>
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acres 1387.23

<b>Total Non-Developable &amp; Developable</b>	<b>1563.72</b>												<b>48</b>	<b>65</b>
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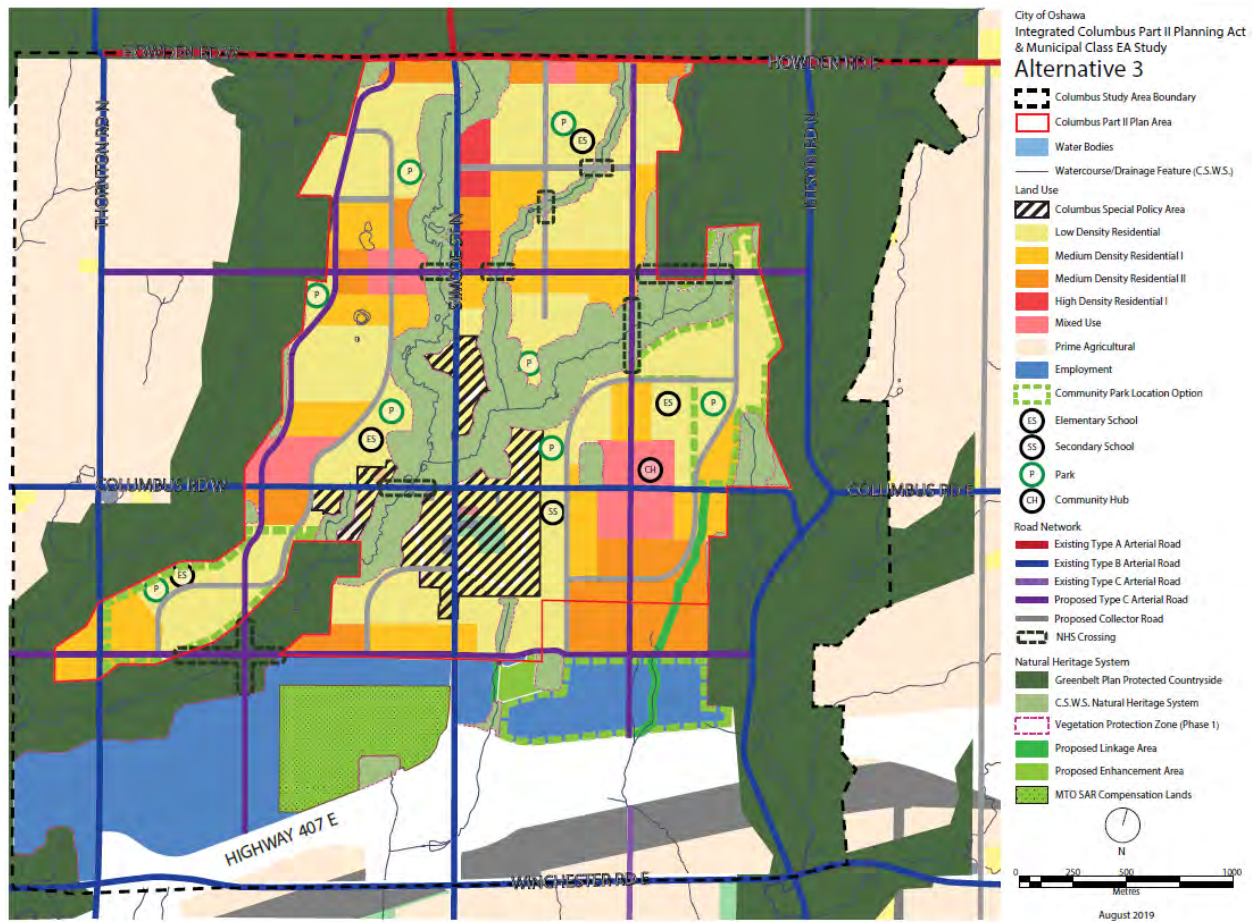
Area check 1563.72



### 2.1.3 Land Use and Road Plan Alternative 3

Figure 2-3 illustrates Land Use and Road Plan Alternative 3. The proposed land budget for Alternative 3 is summarized in Table 2-3.

Figure 2-3  
Alternative 3





## Table 2-3 Alternative 3 Land Budget

City of Oshawa Integrated Columbus Part II Planning Act & Municipal Class EA Study  
Land Use Concept Alternative 3 Aug 5, 2019

Land Use	Gross Area (Ha)
<b>Study Area</b>	<b>1563.72</b>

Non-Developable Lands	
Prime Agricultural/Hwy 407	354.92
<b>NHS</b>	
Greenbelt Plan Protected Countryside	469.37
C.S.W.S. NHS	130.48
Proposed Linage Area	8.25
Proposed Enhancement Area	4.39
MTD SAR Compensation Lands	34.67
<b>Total</b>	<b>1002.09</b>

Land Use	Gross Area (Ha)	Net Area	Units per Net		Units (Res)		PPU	Jobs per hectare	Pop		Jobs		Pop + Jobs (Total)	
			Min	Max	Min	Max			Min	Max	Min	Max	Min	Max
<b>Columbus Special Policy Area</b>	<b>49.20</b>	<b>30.01</b>	5	5	151	156	2.89		437	451	75	75	512	526
Secondary Suites	3.0%	0.00	-	-	5	5	1.71		8	8			8	8
Existing Arterials & Planned Widening		4.83												
Existing Local Roads		2.89												
Proposed Arterial Roads		0.00												
Proposed Collector Roads		0.15												
Proposed Local Roads	20%	9.84												
SWM	3%	1.48												
<b>Low Density Residential</b>	<b>211.01</b>	<b>101.22</b>	26	35	2,632	3,543	3.17		8,337	11,223			8,337	11,223
Existing Arterials & Planned Widening		1.42												
Existing Local Roads		0.46												
Proposed Arterial Roads		6.78												
Proposed Collector Roads		11.76												
Proposed Local Roads	20%	42.29												
Community Hub	1.00	0.00									0	0		
Park	1.80	14.40												
Public Elementary School	3.20	9.60						45			135	135		
Separate Elementary School	2.40	2.40						45			45	45		
High School	6.00	6.00						45			45	45		
SWM	7%	14.77												
<b>Medium Density Residential I</b>	<b>88.31</b>	<b>49.11</b>	35	60	1,719	2,946	2.55		4,386	7,519			4,386	7,519
Existing Arterials & Planned Widening		2.99												
Existing Local Roads		0.51												
Proposed Arterial Roads		5.95												
Proposed Collector Roads		3.70												
Proposed Local Roads	23%	19.87												
Park	1.8	0.00												
SWM	7%	6.18												
<b>Medium Density Residential II</b>	<b>57.63</b>	<b>31.10</b>	60	85	1,866	2,644	2.55		4,762	6,746			4,762	6,746
Existing Arterials & Planned Widening		1.25												
Existing Local Roads		0.19												
Proposed Arterial Roads		4.55												
Proposed Collector Roads		2.11												
Proposed Local Roads	25%	14.43												
Park	1.8	0.00												
SWM	7%	4.04												
<b>High Density Residential</b>	<b>47.0</b>	<b>6.03</b>	85	150	512	904	1.71		873	1,541			873	1,541
Existing Arterials & Planned Widening		0.72												
Existing Local Roads		0.00												
Proposed Arterial Roads		0.18												
Proposed Collector Roads		0.29												
Proposed Local Roads	10%	0.87												
SWM	7%	0.61												
<b>Mixed Use</b>	<b>30.60</b>	<b>19.61</b>												
Existing Arterials & Planned Widening		1.55												
Existing Local Roads		0.40												
Proposed Arterial Roads		2.07												
Proposed Collector Roads		0.77												
Proposed Local Roads	10%	3.06												
Community Hub	1.0	1.00						45			45	45		
Park	1.8	0.00												
SWM	7%	2.14												
Commercial	25%	4.90						45			221	221	221	221
Residential	75%	14.71	60	85	883	1,250	1.71		1,505	2,132			1,505	2,132
<b>Undercount</b>	<b>3.1%</b>								629	918			629	920

<b>Total Part II Plan Area Developable Lands</b>	<b>445.47</b>				<b>7,767</b>	<b>11,448</b>			<b>20,938</b>	<b>30,539</b>	<b>566</b>	<b>566</b>	<b>21,236</b>	<b>30,837</b>
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Pop + Jobs/Ha 48 69

Employment	Gross Area (Ha)	Net Area	Units per Net	Units (Res)	PPU	Jobs per hectare	Pop	Jobs	Pop + Jobs (Total)
Existing Arterials & Planned Widening	116.18	89.18							
Existing Local Roads		2.60							
Proposed Arterial Roads		0.00							
Proposed Collector Roads		4.30							
Proposed Local Roads		0.35							
SWM	10%	11.62							
SWM	7%	8.13							
Institutional	3%	2.67				39		104	104
Retail	7%	6.24				72		449	449
Office	20%	17.83				126		2,247	2,247
Industrial	70%	62.41				54		2,122	2,122

<b>Total Developable Lands</b>	<b>561.63</b>				<b>7,767</b>	<b>11,448</b>		<b>20,938</b>	<b>30,539</b>	<b>5,488</b>	<b>5,488</b>	<b>26,158</b>	<b>35,759</b>
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acres 1387.23

<b>Total Non-Developable &amp; Developable</b>	<b>1563.72</b>												
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Pop + Jobs/Ha 47 64

Area check	1563.72
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## 2.1.4 Land Use and Road Plan Alternatives for Fiscal Impact Assessment

Based on the foregoing, the land use and road plan alternatives identify a range of development outcomes for the Columbus area over the community buildout. For fiscal impact assessment purposes, mid-point averages have been assumed. Table 2-4 summarizes the population and housing, and employment and non-residential gross floor area growth assumptions underlying the assessment.

Table 2-4  
Columbus Part II Planning Area – Summary of Anticipated Development

### Population and Housing Growth

Description	Estimated Persons Per Unit (P.P.U.)	Alternative 1	Alternative 2	Alternative 3
<b>Population</b>				
Existing		371	371	371
Incremental		25,953	25,399	24,536
<b>Total Population</b>		<b>26,324</b>	<b>25,770</b>	<b>24,907</b>
<b>Housing</b>				
Low Density - Columbus Special Policy Area	2.89	154	154	154
Low Density Residential	3.17	3,150	3,217	3,088
Medium Density Residential I	2.55	2,012	2,112	2,333
Medium Density Residential II	2.55	3,311	2,975	2,255
High Density Residential	1.71	306	248	708
Mixed Use Residential	1.71	1,086	1,048	1,067
Secondary Suites	1.71	5	5	5
<b>Total Housing Units</b>		<b>10,024</b>	<b>9,759</b>	<b>9,610</b>

### Employment and Gross Floor Area (G.F.A.)

Type of Development	Estimated Square Feet/Employee	Alternative 1	Alternative 2	Alternative 3
<b>Employment</b>				
Retail		516	512	524
Mixed Use		225	217	266
Commercial - Office		2,206	2,184	2,247
Industrial		2,083	2,062	2,122
Institutional		372	371	329
<b>Total Employment</b>		<b>5,402</b>	<b>5,346</b>	<b>5,488</b>
<b>Square Feet of G.F.A.</b>				
Retail	450	232,200	230,400	235,800
Mixed Use	600	135,000	130,200	159,600
Commercial - Office	300	661,800	655,200	674,100
Industrial	1,200	2,499,600	2,474,400	2,546,400
Institutional	690	256,680	255,990	227,010
<b>Total G.F.A.</b>		<b>3,785,280</b>	<b>3,746,190</b>	<b>3,842,910</b>



# Chapter 3

## Fiscal Impact Assessment of Land Use and Road Plan Alternatives



## 3. Fiscal Impact Assessment of Land Use and Road Plan Alternatives

### 3.1 Introduction

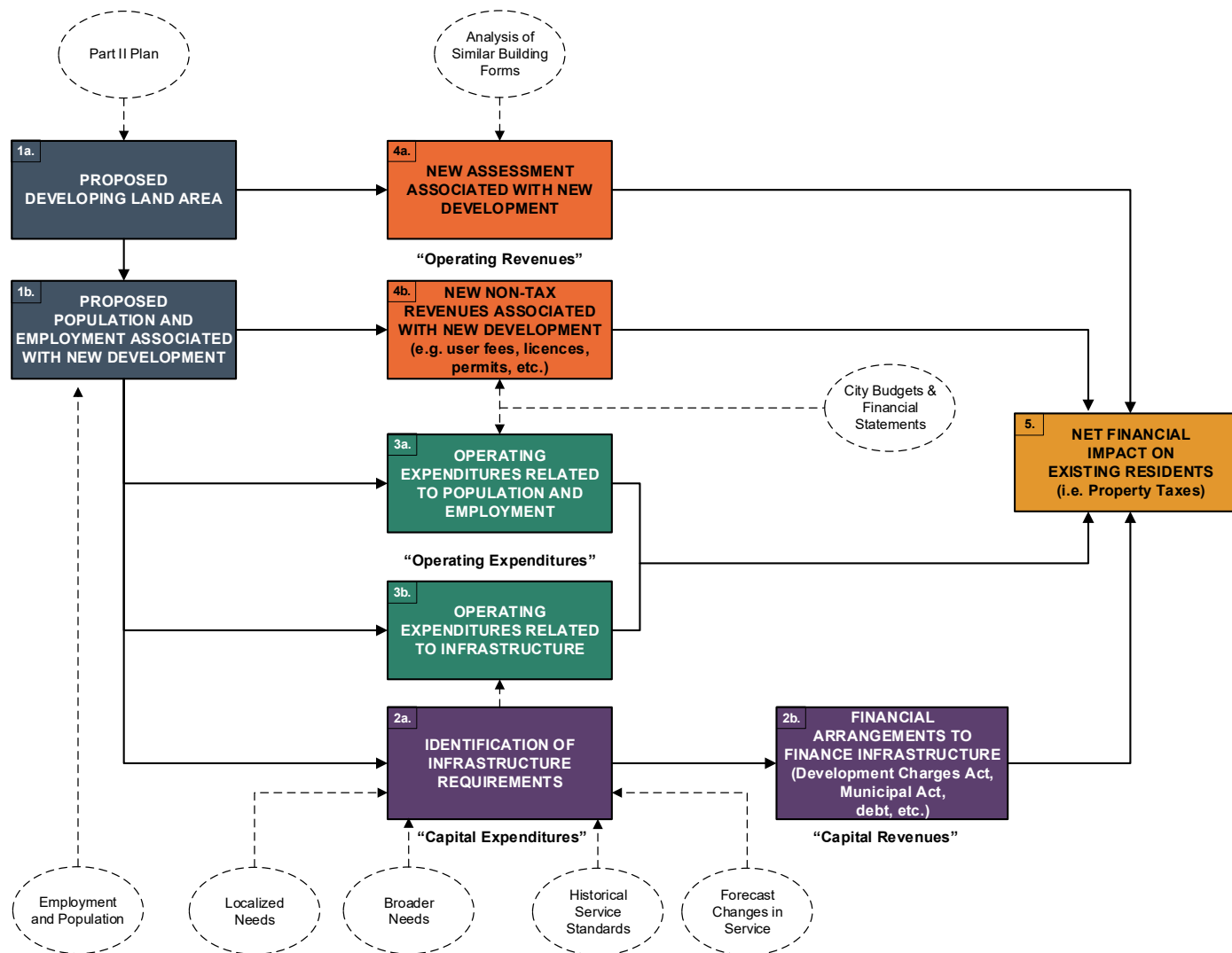
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Figure 3-1 provides a schematic overview of the analysis to be undertaken herein, which is described as follows:

- Dark Blue Boxes (1a. & 1b.) – denote the anticipated development within the Columbus area over the community buildout period. The lower box denotes the long-range growth forecast which was detailed in Chapter 2.
- Purple Boxes (2a. & 2b.) – denote the capital infrastructure needs to service the anticipated development. The capital requirements to support the servicing needs (roads, water, sewer, stormwater) were developed by the various subconsultants as part of the Study Team. The parks and recreation needs were developed from the land budgets provided in Chapter 2 and the City's 2019 D.C. Background Study. The resultant capital needs and funding for these capital costs are discussed in this chapter.
- Green Boxes (3a. & 3b.) – denote the additional operating expenditures anticipated over the buildout of the Columbus area, based on the City's 2019 Budget. These costs have been assessed on two different bases: operating costs related to infrastructure maintenance and operating costs related to population and employment growth. The former identifies the specific operating costs anticipated to be incurred as additional infrastructure (i.e. roads, facilities, etc.) is constructed. The latter identifies program expenditures which are linked to population and employment growth.
- Orange Boxes (4a. & 4b.) – denote anticipated operating revenues commensurate with growth. The upper box identifies the additional assessment anticipated as residential and non-residential building activity occurs over the forecast period. This new assessment gives rise to additional property tax revenue. The lower box identifies non-tax revenues such as user fees, permits, licences, etc., which are anticipated to grow in concert with population and employment growth.
- Gold Box (5.) – denotes the overall financial impact on property taxes over the forecast period.



Figure 3-1  
Fiscal Impact Methodology







## 3.2 Fiscal Impact Assessment

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### 3.2.1 Assessment and Property Tax Revenue

The estimated property tax revenues associated with the buildout of the Columbus area are based on the following market value assessment assumptions, applied to the three land-use and road plan alternatives, and the City's 2019 tax rates. The market value assessment assumptions for each property type were provided by City staff for comparable new developments and Municipal Property Assessment Corporation (M.P.A.C.) assessment records. For assessment purposes, it is assumed that 2-4% of total residential assessment would be for residential rental properties (i.e. approx. 30% of high-density development) and that 2% of non-residential development would be vacant at buildout (consistent with current tax assessment levels).

#### Residential (market value assessment \$/unit)

- Low Density      \$579,800
- Medium Density \$341,600
- High Density     \$247,600

#### Non-Residential (market value assessment \$/sq.ft.)

- Commercial      \$309.50
- Office             \$196.30
- Industrial         \$90.10
- Institutional      \$106.50

Based on the foregoing, the following summarizes the market value assessment growth for each land use and road plan alternative and the corresponding property tax revenues.



**Table 3-1**  
**Columbus Part II Planning Area – Property Tax Revenues Projects by Land Use and Road Plan Alternative**

**Alternative 1**

Type of Development	Property Class	Realty Tax Class (R.T.C.)	Realty Tax Qualifier (R.T.Q.)	Tax Rate	Market Value Assessment	Taxation Revenue
Low and Medium Density Residential	Residential/Farm	R	T	0.590107%	\$ 3,976,495,440	\$ 23,465,578
High Density and Mixed Use Residential	Multi-Residential	M	T	1.101434%	\$ 103,397,760	\$ 1,138,858
	New Multi-Residential	N	T	0.649117%	\$ -	\$ -
Commercial - Retail/Mixed Use	Commercial (Comm.)	C	T	0.855654%	\$ 111,315,209	\$ 952,473
	Comm. Vacant/Excess Land	C	U	0.770089%	\$ 2,333,191	\$ 17,968
Commercial - Office	Office Occupied	D	T	0.855654%	\$ 129,911,340	\$ 1,111,592
	Office Vacant Units	D	U	0.770089%	\$ -	\$ -
Industrial	Industrial Occupied	I	T	1.241584%	\$ 220,188,412	\$ 2,733,824
	Industrial Vacant Units	I	U	1.096691%	\$ 5,025,548	\$ 55,115
Institutional	Exempt	E		0.000000%	\$ 27,336,420	\$ -
<b>Total</b>					<b>\$ 4,576,003,320</b>	<b>\$ 29,475,407</b>

**Alternative 2**

Type of Development	Property Class	R.T.C.	R.T.Q.	Tax Rate	Market Value Assessment	Taxation Revenue
Low and Medium Density Residential	Residential/Farm	R	T	0.590107%	\$ 3,918,085,720	\$ 23,120,898
High Density and Mixed Use Residential	Multi-Residential	M	T	1.101434%	\$ 96,266,880	\$ 1,060,316
	New Multi-Residential	N	T	0.649117%	\$ -	\$ -
Commercial - Retail/Mixed Use	Commercial (Comm.)	C	T	0.855654%	\$ 109,314,445	\$ 935,353
	Comm. Vacant/Excess Land	C	U	0.770089%	\$ 2,291,255	\$ 17,645
Commercial - Office	Office Occupied	D	T	0.855654%	\$ 128,615,760	\$ 1,100,506
	Office Vacant Units	D	U	0.770089%	\$ -	\$ -
Industrial	Industrial Occupied	I	T	1.241584%	\$ 217,968,557	\$ 2,706,263
	Industrial Vacant Units	I	U	1.096691%	\$ 4,974,883	\$ 54,559
Institutional	Exempt	E		0.000000%	\$ 27,262,935	\$ -
<b>Total</b>					<b>\$ 4,504,780,435</b>	<b>\$ 28,995,540</b>

**Alternative 3**

Type of Development	Property Class	R.T.C.	R.T.Q.	Tax Rate	Market Value Assessment	Taxation Revenue
Low and Medium Density Residential	Residential/Farm	R	T	0.590107%	\$ 3,755,853,400	\$ 22,163,554
High Density and Mixed Use Residential	Multi-Residential	M	T	1.101434%	\$ 131,847,000	\$ 1,452,208
	New Multi-Residential	N	T	0.649117%	\$ -	\$ -
Commercial - Retail/Mixed Use	Commercial (Comm.)	C	T	0.855654%	\$ 119,863,926	\$ 1,025,620
	Comm. Vacant/Excess Land	C	U	0.770089%	\$ 2,512,374	\$ 19,348
Commercial - Office	Office Occupied	D	T	0.855654%	\$ 132,325,830	\$ 1,132,251
	Office Vacant Units	D	U	0.770089%	\$ -	\$ -
Industrial	Industrial Occupied	I	T	1.241584%	\$ 224,310,999	\$ 2,785,009
	Industrial Vacant Units	I	U	1.096691%	\$ 5,119,641	\$ 56,147
Institutional	Exempt	E		0.000000%	\$ 24,176,565	\$ -
<b>Total</b>					<b>\$ 4,396,009,735</b>	<b>\$ 28,634,137</b>



### **3.2.2 Capital Needs and Funding**

Capital needs forecast for the three land-use and road plan alternatives were prepared by the consulting team. These forecasts include:

- Integrated Columbus Part II Planning Act and Municipal Class Environmental Assessment Act Study – Phase 2 Transportation Report (Draft), prepared by HDR Inc. (HDR);
- Servicing Concepts for Water and Wastewater – Integrated Columbus Part II Planning Act and Municipal Class Environmental Assessment Act Study, prepared by Wood Canada Limited (Wood); and
- Columbus Area Part II Plan – Preliminary Cost Estimates for Stormwater Management Facilities and Hydraulic Structures Memo, prepared by Wood Canada Limited (Wood).

In addition to the capital needs forecast provided above, Watson forecasted the incremental parks and recreation capital needs based on the land budgets for each of the land use and road plan alternatives and the City's 2019 D.C. Background Study.

The following subsections, summarize the capital needs forecast for each of these services and the impacts on the City's current D.C. policies, as well as the lifecycle maintenance requirements for the incremental infrastructure, and annualized asset replacement requirements based on sinking fund assumptions.

#### **3.2.2.1 Transportation Services**

The following tables summarize the new road and crossing capital costs estimates for the Columbus area for each land use and road plan alternative. The capital cost estimates are for new road segments and do not include existing road widenings, as these will be further developed by HDR in the subsequent phase of this analysis. Moreover, the crossing identified in the HDR report mirror those identified in the hydraulic structures assessment prepared by Wood. It is anticipated that these represent relatively high estimates which may be further defined with the completion of the subwatershed component of the Study.

The City's 2019 D.C. Background Study, provides the following local service policy with respect to Services Related to a Highway. This local service policy has been



maintained in calculating the D.C. recoverable share of the capital needs as it pertains to the capital costs identified in HDR's report.

A developer is financially responsible for all roads which are necessitated by his development and located within and/or abutting the plan of subdivision, with City contributions as follows:

#### Local Road

- nil

#### Collector Road

- Only the centre strip (1.5 m wide) based on a standard pavement width of 10 m.

#### Type "C" Arterial Road

- Type "C" Arterial Road - Only the centre strip (2.5 m wide) based on a standard pavement width of 11 m and 100% for culverts/bridges, if required.

#### Type "B" Arterial Road

- The City will contribute a fixed payment to the developer for the excess pavement capacity for all Type "B" Arterial roads within or abutting a plan of subdivision on the basis of the difference in width only between a local residential street (8.5 metres wide) and a Type "B" Arterial road (14.5 metres wide)

Moreover, the rules applied in the 2019 D.C. Background Study regarding the benefit to existing deductions for similar infrastructure projects have been applied in this assessment.



**Table 3-2  
Transportation Capital Needs for Alternative 1**

Description	Location	Quantity	Unit Costs	Capital Cost
<u>Type C Arterial Roads (km)</u>				
West Columbus Arterial Road	Thornton Road North to Howden Road West	3.0	\$ 4,789,365	\$ 14,368,095
Bridle Road	North of Highway 407 to Howden Road East	3.0	\$ 4,789,365	\$ 14,368,095
North Columbus Midblock Arterial (ArtC6)	West Columbus Arterial Road to Bridle Road	1.0	\$ 4,789,365	\$ 4,789,365
South Columbus Midblock Arterial (ArtC5)	Thornton Road North to Ritson Road North	3.0	\$ 4,789,365	\$ 14,368,095
<u>Type C Arterial - NHS Crossings</u>				
North Columbus Midblock Arterial (ArtC6)		2.0	\$ 23,200,000	\$ 46,400,000
Bridle Road		1.0	\$ 23,200,000	\$ 23,200,000
Columbus Rd. N.		1.0	\$ 23,200,000	\$ 23,200,000
<u>Collector Roads (km)</u>				
Collector Road - NHS Crossings		1.0	\$ 16,000,000	\$ 16,000,000
<u>Local Roads (km)</u>				
		51.7	\$ 3,587,360	\$ 185,372,947
<b>Total</b>				<b>\$ 382,160,625</b>

Applying the City's 2019 D.C. policies, \$272.5 million of the forecast capital costs would be local service requirement of new development. This includes the local service cost share of the proposed Arterial C and collector roads, as well as the full cost of crossing within collector roads and local roads. There would be no benefit to existing development deducted from the capital cost estimates. As such, the D.C. eligible cost share totals \$109.7 million (29% of gross capital costs). This would equate to an area-specific D.C. of \$11,088 per single detached residential unit (S.D.U.) and \$4.99 per square foot of non-residential gross floor area (sq.ft.). By comparison, the City's 2019 D.C. Background Study calculated charge for the roads component of transportation services is \$12,376/S.D.U. and \$5.70/sq.ft. This would suggest that the City's current D.C. revenues are sufficient on an average cost basis to address the D.C. recoverable capital cost of Alternative 1.

The City's 2019 Operating Budget includes annual road maintenance costs of approximately \$11,230/lane kilometer (based on annual net operating expenditures for Roads Operations and Streetlighting, and Financial Information Return (F.I.R.) reporting on total paved lane kilometres). The HDR report identifies 39 incremental lane kilometres of Arterial C and collector roads in Alternative 1. With a provision for 52 lane kilometres of additional local roads, the incremental annual roads maintenance expenditures at buildout would total approximately \$1.0 million annually.



The City's asset management plan assumes a useful life of 65 years for roads and 80 years for bridges and major structures. Applying a sinking fund calculation for the useful life period would require a lifecycle funding obligation of \$20.2 million annually.

Table 3-3  
Transportation Capital Needs for Alternative 2

Description	Location	Quantity	Unit Costs	Capital Cost
<u>Type B Arterial Roads (km)</u>				
West Columbus Arterial Road	Thornton Road North to Howden Road West	3.5	\$ 4,789,365	\$ 16,762,778
<u>Type B Arterial - Greenbelt Crossings</u>				
West Columbus Arterial Road		1.0	\$ 23,200,000	\$ 23,200,000
<u>Type C Arterial - NHS Crossings</u>				
Bridle Road	North of Highway 407 to Howden Road East	3.5	\$ 4,789,365	\$ 16,762,778
North Columbus Midblock Arterial (ArtC6)	West Columbus Arterial Road to Bridle Road	1.5	\$ 4,789,365	\$ 7,184,048
South Columbus Midblock Arterial (ArtC5)	Thornton Road North to Ritson Road North	2.5	\$ 4,789,365	\$ 11,973,413
<u>Type C Arterial - NHS Crossings</u>				
North Columbus Midblock Arterial (ArtC6)		2.0	\$ 23,200,000	\$ 46,400,000
Bridle Road		1.0	\$ 23,200,000	\$ 23,200,000
Columbus Rd. N.		1.0	\$ 23,200,000	\$ 23,200,000
<u>Collector Roads (km)</u>				
Collector Road - NHS Crossings		1.0	\$ 16,000,000	\$ 16,000,000
<u>Local Roads (km)</u>				
		51.9	\$ 3,587,360	\$ 186,358,020
Total				\$ 415,355,487

Under Alternative 2, \$281.5 million of the forecast capital costs would be local service requirement of new development. This includes the local service cost share of the proposed Arterial B, Arterial C and collector roads, as well as the full cost of crossing within collector roads and local roads. There is no benefit to existing development deducted from the capital cost estimates. The D.C. eligible cost share totals \$133.9 million (32% of gross capital costs). This would equate to an area-specific D.C. of \$13,534 per S.D.U. and \$6.09 per sq.ft. of non-residential. In comparison with the City's 2019 D.C. Background Study calculated charge for the roads component of transportation services, this would suggest that the City's current D.C. revenues are insufficient on an average cost basis to address the D.C. recoverable capital cost of Alternative 2. As such, this would place upward pressure on future D.C. bylaws.

The HDR report identifies 50 incremental lane kilometres of Arterial B, Arterial C and collector roads in Alternative 2. A provision for 52 lane kilometres of additional local



roads has also been assumed. At a current annual road maintenance cost of \$11,230/lane kilometer, the incremental annual roads maintenance expenditures at buildout would total approximately \$1.1 million annually.

Based the City's asset management plan useful life assumptions, the sinking fund lifecycle calculation under Alternative 2 would total \$22.0 million annually.

**Table 3-4  
Transportation Capital Needs for Alternative 3**

Description	Location	Quantity	Unit Costs	Capital Cost
<u>Type C Arterial Roads (km)</u>				
West Columbus Arterial Road	Thornton Road North to Howden Road West	3.5	\$ 4,789,365	\$ 16,762,778
Bridle Road	North of Highway 407 to Howden Road East	3.0	\$ 4,789,365	\$ 14,368,095
North Columbus Midblock Arterial (ArtC6)	West Columbus Arterial Road to Bridle Road	3.5	\$ 4,789,365	\$ 16,762,778
South Columbus Midblock Arterial (ArtC5)	Thornton Road North to Ritson Road North	3.0	\$ 4,789,365	\$ 14,368,095
<u>Type C Arterial - Greenbelt Crossings</u>				
North Columbus Midblock Arterial (ArtC6)		1.0	\$ 23,200,000	\$ 23,200,000
Bridle Road		1.0	\$ 23,200,000	\$ 23,200,000
South Columbus Midblock Arterial (ArtC5)		3.0	\$ 23,200,000	\$ 69,600,000
<u>Type C Arterial - NHS Crossings</u>				
North Columbus Midblock Arterial (ArtC6)		2.0	\$ 23,200,000	\$ 46,400,000
Columbus Rd. N.		1.0	\$ 23,200,000	\$ 23,200,000
<u>Collector Roads (km)</u>				
Collector Road - NHS Crossings		2.0	\$ 16,000,000	\$ 32,000,000
<u>Local Roads (km)</u>				
		50.9	\$ 3,587,360	\$ 182,453,546
Total				\$ 502,409,319

Alternative 3 identifies total capital needs of \$502.4 million, the highest of the three alternatives. Based on the City's D.C. policies, \$297.9 million of the forecast capital costs would be local service requirement of new development. This includes the local service cost share of the proposed Arterial C and collector roads, as well as the full cost of crossing within collector roads and local roads. There is no benefit to existing development deducted from the capital cost estimates. The D.C. eligible cost share totals \$204.5 million (41% of gross capital costs). This would equate to an area-specific D.C. of \$20,674 per S.D.U. and \$9.31 per sq.ft. of non-residential. In comparison, the City's 2019 D.C. Background Study calculated charge for the roads component of transportation services would be insufficient to fund these capital costs. As such, this would place the greatest amount of upward pressure on future D.C. bylaws under all three alternatives, and may indicate the consideration of area-specific charges.



The HDR report identifies 45 incremental lane kilometres of Arterial C and collector roads in Alternative 3. A provision for 51 lane kilometres of additional local roads has also been assumed. At a current annual road maintenance costs, the incremental annual roads maintenance expenditures at buildout would total approximately \$1.1 million annually. Moreover, based on the City's asset management plan useful life assumptions, the sinking fund lifecycle calculation under Alternative 3 would total \$26.8 million annually.

Based on the foregoing, Alternative 1 would produce the smallest impact on the City's D.C. policy and provide the lowest fiscal impact in terms of future lifecycle costs.

### 3.2.2.2 *Water and Wastewater Services*

The Servicing Concepts for Water and Wastewater report prepared by Wood provides preliminary cost estimates for servicing the Columbus area. The following table summarizes the probable capital costs of water and wastewater services identified in the report.

Table 3-5  
Water and Wastewater Capital Needs by Land Use and Road Plan Alternative

Service	Alternative 1	Alternative 2	Alternative 3
Water	\$18.5 million	\$17.4 million	\$18.5 million
Wastewater	\$22.6 million	\$30.1 million	\$31.6 million
Total	\$41.1 million	\$47.5 million	\$50.1 million

The capital cost estimates for water services are generally comparable for each alternative, with a greater amount of difference between Alternative 1 and the other two alternatives for wastewater services. The cost estimates for Alternative 1 are the lowest for water and wastewater services combined at \$41.1 million. As such, this would suggest the lowest fiscal impact (all else being equal). The scope of this fiscal impact assessment is with respect to services provided by City of Oshawa. As the provision of water and wastewater services are within the jurisdiction of the Region of Durham no further assessment of these costs have been provided herein.





### 3.2.2.3 Stormwater Services

The preliminary capital cost estimates for stormwater services for the Columbus area are contained in the Wood report. These cost estimates include stormwater management facilities and hydraulic structures. As noted within the Transportation Services section of this chapter, the hydraulic structures are addressed within the HDR report, which may be revised based on the results of the Subwatershed Study. Moreover, the hydraulic structures identified in the Wood and HDR reports only represent major crossings of regulated watercourses. The Columbus Subwatershed Study – Part II Plan Review, Alternatives Review Memorandum, dated September 12, 2019, prepared by Stantec, also identified 8-10 minor crossings for the three Alternatives. These costs have not been identified at this time and would not represent a significant cost to the overall work. It is anticipated that the some of these minor crossing may be eliminated once the functional grading plan is developed for the area. As such, these crossing will be considered in Stage 3 of the assignment when a more detailed fiscal impact analysis of the preferred alternative will be provided.

With respect to the stormwater management facilities, the Wood report provides the following capital cost estimates, including land.

Table 3-6  
Stormwater Management (S.W.M.) Capital Needs by Land Use and Road Plan Alternative

Service	Alternative 1	Alternative 2	Alternative 3
S.W.M. Facilities	\$37.0 million	\$37.0 million	\$36.9 million
S.W.M. Land	\$92.4 million	\$92.5 million	\$92.3 million
Total	\$129.4 million	\$129.5 million	\$129.2 million

The City's 2019 D.C. Background Study (Appendix D), provides the following local service policy with respect to Watercourse Improvement services. This local service policy has been maintained in calculating the D.C. recoverable share of the capital needs as it pertains to the capital costs identified in Wood's report.



Developers are required to pay for any erosion protection work to adjacent lands they are developing, where erosion works are necessary to protect the development. This work will be determined on a site basis and is over and above any work for which watercourse development charges are collected.

Based on the foregoing, the stormwater management facilities would be a developer's direct responsibility as a local service. As such the capital costs have no implication on the City's D.C. bylaw.

The additional maintenance and lifecycle funding obligations of the stormwater management facilities have been assumed within the engineering services operating budget projections based on the incremental program demands of population and employment within the Columbus area for each land use and road plan alternative.

#### *3.2.2.4 Parks and Recreation Services*

The following tables summarize the new recreation facilities, parks and trails required for each land use and road plan alternative. The capital need forecasts are derived from the land budgets provided in Chapter 2 and the capital costs estimates are taken from the City's 2019 D.C. Background Study for similar projects. The capital cost estimates for trails may not be exhaustive, as they are based on the City's assumed trails within the forecast period to 2029.

The City's 2019 D.C. Background Study (Appendix D), provides the following local service policy with respect to Parkland Development services. This local service policy has been maintained in calculating the D.C. recoverable share of the capital needs.

With respect to parkland dedications, developer responsibilities include preparation of a concept plan and overall grading plan, grading, top soil, sodding, fencing and sub-surface drainage.

Moreover, the rules applied in the 2019 D.C. Background Study regarding the benefit to existing deductions for similar parks and recreation projects have been applied in this assessment.

It should also be noted, that the *More Homes, More Choice Act* received Royal Assent on June 6, 2019. This Act, in part, amends the *Development Charges Act (D.C.A.)* and once fully proclaimed, soft services such as parks and recreation services will no longer be permitted to be included in D.C. bylaws (allowing these services to be eligible to be



funded under a community benefits charge). As at the time of writing the regulations to prescribing this transition have not been passed. As such, this analysis maintains the current D.C. policies as contained in the City's 2019 D.C. Background Study.

Table 3-7  
Parks and Recreation Capital Needs for Alternative 1

Description	Net Hectares	Quantity	Unit Costs	Capital Cost
<u>Indoor Recreation Facilities</u>				
Community Hub (sq.ft.)	1.0	31,050	\$ 379	\$ 11,767,950
<u>Parkland Development</u>				
Low Density Residential Area (neighbourhood parks)	7.2	4.0	\$ 600,000	\$ 2,400,000
Medium Density Residential II Area (neighbourhood parks)	-	-	\$ 600,000	\$ -
<u>Parkland Development</u>				
Link 59 - From Thornton Rd. to Link 62		0.6	\$ 2,840,000	\$ 1,704,000
Link 62 - West of Winchester Rd. and North of Link 59 to South of Columbus Rd.		1.0	\$ 760,000	\$ 760,000
Link 63 - East of Thornton Rd. and South of Columbus Rd. to North of Howden Rd.		1.0	\$ 1,440,000	\$ 1,440,000
<b>Total</b>				<b>\$ 18,071,950</b>

Applying the City's 2019 D.C. policies, \$3.2 million would be deducted from the capital cost estimates as a benefit to existing development. The 10% statutory deduction required under the current D.C.A. totals \$1.5 million. As such, the D.C. eligible cost share totals \$13.3 million (74% of gross capital costs). This would equate to an area-specific D.C. of \$1,548 per S.D.U. and \$0.18 per sq.ft. of non-residential gross floor area. By comparison, the City's 2019 D.C. Background Study calculated charge for the parks and recreation services (excluding works facilities, equipment and studies) is \$7,679/S.D.U. and \$0.34/sq.ft. This would suggest that the City's current D.C. revenues are sufficient on an average cost basis to address the D.C. recoverable capital cost of Alternative 1.

The City's 2019 Operating Budget includes annual parks and recreation maintenance cost of approximately \$6,360/acre and 8.03/sq.ft. (based on annual net operating expenditures for Facility Maintenance Parks and Recreation, and D.C. Background



Study inventories). Alternative 1 identifies 17.8 acres of incremental parkland and community hub space of 31,050 sq.ft. On this basis, the incremental annual parks and recreation maintenance expenditures at buildout would total approximately \$0.4 million annually.

The City's asset management plan assumes a useful life of 50 years for facilities, 20 years for park amenities, and 40 years for trails. Applying a sinking fund calculation for the useful life period would require a lifecycle funding obligation of \$1.0 million annually.

**Table 3-8  
Parks and Recreation Capital Needs for Alternative 2**

Description	Net Hectares	Quantity	Unit Costs	Capital Cost
<u>Indoor Recreation Facilities</u>				
Community Hub (sq.ft.)	1.0	31,050	\$ 379	\$ 11,767,950
<u>Parkland Development</u>				
Low Density Residential Area (neighbourhood parks)	5.4	3.0	\$ 600,000	\$ 1,800,000
Medium Density Residential II Area (neighbourhood parks)	1.8	1.0	\$ 600,000	\$ 600,000
<u>Parkland Development</u>				
Link 59 - From Thornton Rd. to Link 62		0.6	\$ 2,840,000	\$ 1,704,000
Link 62 - West of Winchester Rd. and North of Link 59 to South of Columbus Rd.		1.0	\$ 760,000	\$ 760,000
Link 63 - East of Thornton Rd. and South of Columbus Rd. to North of Howden Rd.		1.0	\$ 1,440,000	\$ 1,440,000
<b>Total</b>				<b>\$ 18,071,950</b>

Under Alternative 2, \$3.2 million would be deducted from the capital cost estimates as a benefit to existing development. The 10% statutory deduction required under the current D.C.A. totals \$1.5 million. The D.C. eligible cost share totals \$13.3 million (74% of gross capital costs). This would equate to an area-specific D.C. of \$1,548 per S.D.U. and \$0.18 per sq.ft. of non-residential, which is within the City's current D.C. revenues on an average cost basis.

Similar to Alternative 1, Alternative 2 identifies 17.8 acres of incremental parkland and community hub space of 31,050 sq.ft. At a current annual parks and recreation



maintenance costs, the incremental annual maintenance expenditures at buildout would total approximately \$0.4 million annually. Also, based the City’s asset management plan useful life assumptions, the sinking fund lifecycle calculation under Alternative 2 would total \$1.0 million annually.

**Table 3-9  
Parks and Recreation Capital Needs for Alternative 3**

Description	Net Hectares	Quantity	Unit Costs	Capital Cost
<u>Indoor Recreation Facilities</u>				
Community Hub (sq.ft.)	1.0	31,050	\$ 379	\$ 11,767,950
<u>Parkland Development</u>				
Low Density Residential Area (neighbourhood parks)	14.4	8.0	\$ 600,000	\$ 4,800,000
Medium Density Residential II Area (neighbourhood parks)	-	-	\$ 600,000	\$ -
<u>Parkland Development</u>				
Link 59 - From Thornton Rd. to Link 62		0.6	\$ 2,840,000	\$ 1,704,000
Link 62 - West of Winchester Rd. and North of Link 59 to South of Columbus Rd.		1.0	\$ 760,000	\$ 760,000
Link 63 - East of Thornton Rd. and South of Columbus Rd. to North of Howden Rd.		1.0	\$ 1,440,000	\$ 1,440,000
<b>Total</b>				<b>\$ 20,471,950</b>

Alternative 3 identifies total capital needs of \$20.5 million, the highest of the three alternatives. Under the City’s D.C. policies, \$3.4 million would be deducted from the capital cost estimates as a benefit to existing development. The 10% statutory deduction required under the current D.C.A. totals \$1.7 million. The D.C. eligible cost share totals \$15.4 million (75% of gross capital costs). This would equate to an area-specific D.C. of \$1,786 per S.D.U. and \$0.20 per sq.ft. of non-residential. Again, well within the City’s 2019 D.C. Background Study calculated charge for the parks and recreation services.

Alternative 3 includes 36.6 acres of incremental parkland and community hub space of 31,050 sq.ft. At a current annual parks and recreation maintenance costs, the incremental annual maintenance expenditures at buildout would total approximately \$0.5 million annually. Also, based the City’s asset management plan useful life



assumptions, the sinking fund lifecycle calculation under Alternative 3 would total \$1.2 million annually.

Based on the foregoing, Alternative 1 and Alternative 2 would produce the smallest impact on the City's D.C. policy and provide the lowest fiscal impact in terms of future lifecycle costs.

### **3.2.3 Net Operating Expenditures**

The net operating expenditure analysis was undertaken using the City's 2019 Operating Budget. The net operating expenditures have been summarized and forecast below, with detail provided in the Appendix to this report. These tables summarize by service department/branch, the net operating costs exclusive of debt charges, transfers to other funds (i.e. capital fund and reserve fund), non-tax revenues, and contributions from reserves. Moreover, annual operating expenditures associated with incremental capital needs, as identified above, have been removed from these calculations. As such, the net operating expenditures being forecast within this subsection reflect the incremental costs of service demands associated with programming or general service provision.

To facilitate these calculations, the net operating expenditures are provided on a per capita and per employee basis. These costs are adjusted for economies of scale and underlying service demands before being applied to the incremental population and employment growth for each land use and road plan alternative. This represents the forecast program/service costs, which are then augmented by the additional incremental asset maintenance and lifecycle replacement costs identified earlier.

Generally, municipal program expenditures will increase with the increase in population and employment; however, the cost associated with a new facilities and infrastructure maintenance and lifecycle capital, would be delayed until the time the additional infrastructure is provided. While this fiscal impact is concerned with the impacts at full buildout of the Columbus area, the more detailed fiscal impact study will consider the timing implications of costs as that information becomes available.

Table 3-10 summarizes the net operating expenditures for each program, based on the population/employment-related benefit. Annual operating expenditures, net of adjustments, are provided at approximately \$318 per capita and \$299 per employee.



**Table 3-10  
Net Operating Expenditure Per Capita and Per Employee Assumptions by Service**

Department/Branch	Net Operating Expenditures <sup>1</sup>	Residential Cost Share	Non-Residential Cost Share	Cost per Capita	Cost per Employee	Adjustment Factor	Cost per Capita	Cost per Employee
Executive and Legislative	1,278,500	985,698	292,802	5.89	5.89	25%	1.47	1.47
Office of the City Manager	5,526,803	4,261,055	1,265,748	25.45	25.45	50%	12.73	12.73
<b>Corporate Services</b>								
Corporate Services (Other)	7,904,267	6,094,032	1,810,235	36.40	36.40	50%	18.20	18.20
Municipal Law Enforcement & Licensing	3,602,558	2,777,501	825,058	16.59	16.59	75%	12.44	12.44
Information Technology Services	5,761,873	4,442,289	1,319,584	26.53	26.53	100%	26.53	26.53
Finance Services	3,609,373	2,782,754	826,618	16.62	16.62	50%	8.31	8.31
Corporate Expenditures	3,171,200	2,444,932	726,268	14.60	14.60	50%	7.30	7.30
External Agencies	35,249	27,176	8,073	0.16	0.16	25%	0.04	0.04
<b>Community Services</b>								
Recreation & Culture Services (net of Facility Maintenance)	4,054,921	3,852,175	202,746	23.01	4.08	100%	23.01	4.08
Strategic and Business Services (net of Street Lighting)	5,695,485	4,391,105	1,304,380	26.23	26.23	75%	19.67	19.67
Operations Services (net of Road and Facility Maintenance)	4,163,298	3,209,820	953,478	19.17	19.17	100%	19.17	19.17
Fire Services	26,839,380	20,692,626	6,146,754	123.60	123.60	100%	123.60	123.60
<b>Development Services</b>								
Engineering Services	3,937,939	3,036,072	901,867	18.13	18.13	100%	18.13	18.13
Development Services (Other)	3,192,328	2,215,634	976,694	32.53	32.53	100%	32.53	32.53
Municipal Parking	(1,141,835)	(880,332)	(261,503)	(5.26)	(5.26)	100%	(5.26)	(5.26)
Airport	402,099	310,010	92,089	1.85	1.85	25%	0.46	0.46
<b>Total</b>	<b>78,033,439</b>	<b>60,642,547</b>	<b>17,390,891</b>	<b>381.53</b>	<b>362.59</b>		<b>318.35</b>	<b>299.42</b>

<sup>1</sup> Net of debt and transfers

In addition to the application of the net operating expenditures for program and services to the forecast population and employment growth, capital-related operating costs have also been forecast based on the capital funding plan for each land use and road plan alternative (see Section 3.2.2 above). These capital related expenditures include provisions for capital asset maintenance, and provision for future capital transfers and/or debt financing of lifecycle needs and are summarized in Table 3-11 below by land use and road plan alternative.

The net operating expenditures at buildout of the Columbus area range from \$9.6 million annually under Alternative 3, to \$10.0 million annually under Alternative 1. A greater share of the annual costs is reflected in the asset maintenance costs and lifecycle capital replacement provisions for the incremental capital to service the area. These costs range for \$22.6 million annually under Alternative 1, to \$29.5 million annually under Alternative 3. Combined the least cost alternative would be Alternative 1 at a total annual cost of \$32.6 million at buildout of the Columbus area.



**Table 3-11  
Net Operating Expenditure Forecast by Land Use and Road Plan Alternative**

Description	Alternative 1	Alternative 2	Alternative 3
<u>Buildout Development</u>			
Population	26,324	25,770	24,907
Employment	5,402	5,346	5,488
<u>Net Operating Expenditure</u>			
Per Capita	\$ 318.35	\$ 318.35	\$ 318.35
Per Employee	\$ 299.42	\$ 299.42	\$ 299.42
<b>Total Annual Net Operating Expenditures</b>	<b>\$ 9,997,851</b>	<b>\$ 9,804,714</b>	<b>\$ 9,572,492</b>
<u>Lifecycle Costs for Transportation Services</u>			
Annual Lifecycle Contributions	\$ 20,213,263	\$ 22,007,883	\$ 26,784,291
Annual Maintenance	\$ 1,018,268	\$ 1,144,882	\$ 1,076,509
<u>Lifecycle Costs for Parks and Recreation Services</u>			
Annual Lifecycle Contributions	\$ 999,193	\$ 999,193	\$ 1,177,593
Annual Maintenance	\$ 362,443	\$ 362,443	\$ 475,587
<b>Total Annual Lifecycle and Maintenance Expenditures</b>	<b>\$ 22,593,167</b>	<b>\$ 24,514,400</b>	<b>\$ 29,513,980</b>
<b>Total Annual Expenditures</b>	<b>\$ 32,591,017</b>	<b>\$ 34,319,115</b>	<b>\$ 39,086,472</b>

### **3.2.4 Fiscal Impact**

Table 3-12 summarizes the fiscal impact to the City, based on the three land use and road plan alternatives. As presented above, Alternative 1 produces the lowest annual operating expenditure impact at buildout of the Columbus area. Moreover, it also produces the growth-related capital needs forecast with the least amount of variance from the City's current D.C. average cost funding.

Based on the forecast development and underlying market value assessment assumptions, Alternative 1 produces the largest amount of forecast property tax revenues, at current tax rates.

As a result of the analysis, the net fiscal impact to the City of the three alternatives ranges from additional net operating expenditures annually of \$3.1 million under Alternative 1 to \$10.5 million annually under Alternative 3. This would suggest that current property tax rates are insufficient to fully fund the costs of service pertaining to the Columbus area. However, to put this in context and recognition of full lifecycle





costing, the incremental property taxation revenues would sufficiently fund the incremental program/service demands of growth, as well as the incremental maintenance costs. Current property tax rate revenues under Alternative 1 would only fund 85% of the annual lifecycle sinking fund capital needs, whereas under Alternative 3 current property tax rate revenues would only fund 63% of the long-term obligation.

Table 3-12  
Columbus Part II Planning Area – Fiscal Impact by Land Use and Road Plan Alternative

Description	Alternative 1	Alternative 2	Alternative 3
<u>Buildout Development</u>			
Population	26,324	25,770	24,907
Employment	5,402	5,346	5,488
<u>Net Operating Expenditure</u>			
Per Capita	\$ 318.35	\$ 318.35	\$ 318.35
Per Employee	\$ 299.42	\$ 299.42	\$ 299.42
<b>Total Annual Net Operating Expenditures</b>	<b>\$ 9,997,851</b>	<b>\$ 9,804,714</b>	<b>\$ 9,572,492</b>
<u>Lifecycle Costs for Transportation Services</u>			
Annual Lifecycle Contributions	\$ 20,213,263	\$ 22,007,883	\$ 26,784,291
Annual Maintenance	\$ 1,018,268	\$ 1,144,882	\$ 1,076,509
<u>Lifecycle Costs for Parks and Recreation Services</u>			
Annual Lifecycle Contributions	\$ 999,193	\$ 999,193	\$ 1,177,593
Annual Maintenance	\$ 362,443	\$ 362,443	\$ 475,587
<b>Total Annual Lifecycle and Maintenance Expenditures</b>	<b>\$ 22,593,167</b>	<b>\$ 24,514,400</b>	<b>\$ 29,513,980</b>
<b>Total Annual Expenditures</b>	<b>\$ 32,591,017</b>	<b>\$ 34,319,115</b>	<b>\$ 39,086,472</b>
<b>Total Annual Taxation Revenue</b>	<b>-\$ 29,475,538</b>	<b>-\$ 28,995,651</b>	<b>-\$ 28,634,374</b>
<b>Total Annual Net Expenditures</b>	<b>\$ 3,115,479</b>	<b>\$ 5,323,464</b>	<b>\$ 10,452,098</b>



# Chapter 4

## Conclusions



## 4. Conclusions

### 4.1 Conclusions

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The Fiscal Impact Study considers three land use and road plan alternatives. On the basis of the land use and road plans, land budgets, market value assessment and property taxation revenues were forecast based on the City's 2019 tax rates. The annual net operating expenditures associated with the full buildout of the Columbus are were forecast based on the City's 2019 Operating budget for incremental programs and service demands. Moreover, based on the preliminary capital needs assessments provided by the Study Team members, and in consultation of the City's 2019 D.C. Background Study, the annual capital-related costs of maintenance and lifecycle capital replacement were forecast based on the incremental capital needs for the Study Area.

On the basis of this full lifecycle cost assessment, it was determined that at the City's current (2019) tax rates, the incremental development provided for the Study Area would not sufficiently address these full lifecycle costs. While all property tax revenues generated under each land use and road plan alternative at 2019 tax rates would sufficiently fund the annual program/service cost demands and maintenance of incremental infrastructure, current rates would be deficient to fund the long-term lifecycle capital obligations of the incremental assets. In this regard, Alternative 1 funds approximately 85% of this long-term obligation, where Alternative 3 would fund approximately 63% of the obligation.

Based on this fiscal impact assessment, Alternative 1 would provide the least fiscal impact to the City of Oshawa.



# Appendix A - Fiscal Impact Calculation Tables



**Table 1**  
**City of Oshawa**  
**Basis of Assessment Estimates – Columbus Part II Plan**

**RESIDENTIAL:**

Determination of Average Assessment Per Unit

1.1 Low Density

	Typical Assm/Unit	% of Total Unit Type	Average Assessment
Single Detached - 42'	591,727	95%	562,141
Semi-Detached - 25'	353,400	5%	17,670
<b>Total</b>		<b>100%</b>	<b>579,800</b>

1.2 Medium Density

	Typical Assm/Unit	% of Total Unit Type	Average Assessment
Row/Townhouse	341,600	100%	341,600
<b>Total</b>	<b>-</b>	<b>100%</b>	<b>341,600</b>

1.3 High Density

	Typical Assm/Unit	% of Total Unit Type	Average Assessment
Highrise Condo	247,639	100%	247,639
<b>Total</b>	<b>-</b>	<b>100%</b>	<b>247,600</b>

**NON-RESIDENTIAL:**

2.1 Commercial

	Per Sq. Ft. GFA	% of Total Usage	Average Assm/Sq. Ft.
Retail	309.54	100%	309.54
<b>Total</b>	<b>-</b>	<b>100%</b>	<b>309.50</b>

2.2 Commercial - Office

	Per Sq. Ft. GFA	% of Total Usage	Average Assm/Sq. Ft.
Industrial	196.30	100%	196.30
<b>Total</b>	<b>-</b>	<b>100%</b>	<b>196.30</b>

2.3 Industrial

	Per Sq. Ft. GFA	% of Total Usage	Average Assm/Sq. Ft.
Industrial	90.08	100%	90.08
<b>Total</b>	<b>-</b>	<b>100%</b>	<b>90.10</b>

2.4 Institutional

	Per Sq. Ft. GFA	% of Total Usage	Average Assm/Sq. Ft.
Institutional	106.48	100%	106.48
<b>Total</b>	<b>-</b>	<b>100%</b>	<b>106.50</b>



**Table 2  
City of Oshawa  
2019 Net Operating Expenditures by Department**

Department	Branch	Program #	Program	SWB	Materials & Supplies	Facility Related	Equipment Related	Vehicle Related	Contracted Services	Transfers	Contributions	Debt	Taxation	Grants-Payment In Lieu	Own Source Revenues	Interest	Total	Net Operating Expenditures
Executive and Legislative	Executive and Legislative	001	Office of the Mayor	393,300	21,500	-	-	-	-	-	-	-	-	-	-	-	414,800	414,800
Executive and Legislative	Executive and Legislative	002	City Council Expenditures	-	12,400	-	-	-	-	-	-	-	-	-	-	-	12,400	12,400
Executive and Legislative	Executive and Legislative	003	Councillors' Expenditures	794,500	56,800	-	-	-	-	-	-	-	-	-	-	-	851,300	851,300
<b>Executive and Legislative Total</b>				<b>1,187,800</b>	<b>90,700</b>	-	-	-	-	-	-	-	-	-	-	-	<b>1,278,500</b>	<b>1,278,500</b>
Office of the City Manager	City Manager's Office	010	City Manager's Admin	846,300	37,900	(100,000)	-	-	-	-	-	-	-	-	-	-	784,200	784,200
Office of the City Manager	Innovation and Transformation	015	Innovation and Transformation	582,548	175,500	-	-	-	-	(4,827)	-	-	-	-	(62,500)	-	690,721	695,548
Office of the City Manager	Legal Services	025	Legal Services	919,858	119,000	-	-	-	-	(9,658)	-	-	-	-	(43,000)	-	986,200	995,858
Office of the City Manager	Human Resource Services	040	Human Resource Services	2,295,226	713,100	-	42,872	-	-	1,574	-	-	-	-	-	-	3,052,772	3,051,198
<b>Office of the City Manager Total</b>				<b>4,643,932</b>	<b>1,045,499</b>	<b>(100,000)</b>	<b>42,872</b>	-	-	<b>(12,911)</b>	-	-	-	-	<b>(105,500)</b>	-	<b>5,513,892</b>	<b>5,526,803</b>
Corporate Services	Corporate Communications	012	Communication - Admin	651,861	62,600	-	-	-	-	(961)	-	-	-	-	-	-	713,500	714,461
Corporate Services	City Clerk Services	030	City Clerk - Admin	1,015,427	57,250	-	-	-	-	(4,827)	-	-	-	-	-	-	1,067,850	1,072,677
Corporate Services	City Clerk Services	033	Corporate Records	280,200	7,400	-	900	-	15,300	-	-	-	-	-	(7,000)	-	296,800	296,800
Corporate Services	City Clerk Services	041	Service Oshawa	1,682,382	26,000	-	-	-	17,900	7,018	4,900	-	-	-	(62,800)	-	1,675,400	1,663,482
Corporate Services	Facilities Management Services	340	Facility Management Admin	1,083,960	63,700	-	-	-	-	(5,910)	-	-	-	-	(24,300)	-	1,117,450	1,123,360
Corporate Services	Facilities Management Services	341	Operat'l Maint-City Facilities	612,900	18,700	2,401,919	28,868	-	5,100	6,200	-	-	-	-	(34,000)	-	3,039,687	3,033,487
<b>Corporate Services (Other)</b>				<b>5,326,730</b>	<b>235,650</b>	<b>2,401,919</b>	<b>29,768</b>	-	<b>38,300</b>	<b>1,520</b>	<b>4,900</b>	-	-	-	<b>(128,100)</b>	-	<b>7,910,687</b>	<b>7,904,267</b>
Corporate Services	Municipal Law Enforcement & Licensing	034	Licensing and Standards	622,300	47,300	-	24,715	-	-	1,200	-	-	-	-	(1,056,900)	-	(361,385)	(362,585)
Corporate Services	Municipal Law Enforcement & Licensing	086	Corporate Security	-	995,100	-	18,000	-	-	-	-	-	-	-	-	-	1,013,100	1,013,100
Corporate Services	Municipal Law Enforcement & Licensing	564	Municipal Law Enforcement	2,200,800	180,400	-	204,500	-	40,000	3,900	-	-	-	-	(1,311,000)	-	1,318,600	1,314,700
Corporate Services	Municipal Law Enforcement & Licensing	569	Municipal Law Enforce Admin	1,470,360	117,434	115,100	2,700	-	-	(5,210)	22,268	-	-	-	(68,250)	-	1,654,401	1,637,343
<b>Municipal Law Enforcement &amp; Licensing</b>				<b>4,293,460</b>	<b>1,340,234</b>	<b>115,100</b>	<b>249,915</b>	-	<b>40,000</b>	<b>(110)</b>	<b>22,268</b>	-	-	-	<b>(2,436,150)</b>	-	<b>3,624,716</b>	<b>3,602,558</b>
Corporate Services	Information Technology Services	080	ITS - Admin	434,027	81,600	-	-	-	-	(1,827)	-	-	-	-	-	-	513,800	515,627
Corporate Services	Information Technology Services	081	ITS Application Support	1,351,146	-	-	-	-	-	(1,545)	-	-	-	-	-	-	1,349,601	1,351,146
Corporate Services	Information Technology Services	083	ITS Infrastructure Support	918,600	-	-	-	-	-	-	-	-	-	-	-	-	918,600	918,600
Corporate Services	Information Technology Services	084	Corporate Technology	-	458,500	-	2,518,000	-	-	-	-	-	-	-	-	-	2,976,500	2,976,500
<b>Information Technology Services</b>				<b>2,703,773</b>	<b>540,100</b>	-	<b>2,518,000</b>	-	-	<b>(3,372)</b>	-	-	-	-	-	-	<b>5,758,501</b>	<b>5,761,873</b>
<b>Corporate Services Total</b>				<b>12,323,963</b>	<b>2,115,984</b>	<b>2,517,019</b>	<b>2,797,683</b>	-	<b>78,300</b>	<b>(1,962)</b>	<b>27,168</b>	-	-	-	<b>(2,564,250)</b>	-	<b>17,293,905</b>	<b>17,268,699</b>
Finance Services	Purchasing Services	037	Printing and Mail Services	141,600	186,100	-	16,000	-	-	-	-	-	-	-	(6,200)	-	337,500	337,500
Finance Services	Purchasing Services	075	Purchasing	649,282	13,600	-	-	-	-	(1,082)	-	-	-	-	-	-	661,800	662,882
Finance Services	Financial Services	050	Financial Services	2,355,881	45,551	-	-	-	20,000	(881)	-	-	-	-	-	-	2,420,551	2,421,432
Finance Services	Taxation Services	063	Tax Billing and Collection	562,761	110,599	-	-	-	5,200	(361)	600	-	-	-	(491,000)	-	187,799	187,560
<b>Finance Services Total</b>				<b>3,709,524</b>	<b>355,849</b>	-	<b>16,000</b>	-	<b>25,200</b>	<b>(2,324)</b>	<b>600</b>	-	-	-	<b>(497,200)</b>	-	<b>3,607,649</b>	<b>3,609,373</b>
Corporate Expenditures	Corporate Expenditures	100	Corporate Expenditures	-	401,400	-	-	-	8,700	-	-	-	-	-	-	-	410,100	410,100
Corporate Expenditures	Corporate Expenditures	102	Consulting and Audit Fees	-	1,044,300	-	-	-	-	-	-	-	-	-	-	-	1,044,300	1,044,300
Corporate Expenditures	Corporate Expenditures	104	City Memberships	-	59,000	-	-	-	-	-	-	-	-	-	-	-	59,000	59,000
Corporate Expenditures	Corporate Expenditures	105	Financial Charges	-	168,600	-	-	-	-	(860,800)	420,000	11,478,934	-	-	(1,451,200)	-	9,755,534	(1,282,600)
Corporate Expenditures	Corporate Expenditures	107	Taxes Written Off	-	40,000	-	-	-	-	(400,000)	3,358,100	-	-	-	-	-	2,998,100	40,000
Corporate Expenditures	Corporate Expenditures	108	Contingency	-	-	-	-	-	-	-	100,000	-	-	-	-	-	100,000	-
Corporate Expenditures	Corporate Expenditures	109	Allowances	-	10,000	-	-	-	-	-	20,000	-	-	-	-	-	30,000	10,000
Corporate Expenditures	Corporate Expenditures	110	Contributions to Reserves	-	-	-	-	-	-	14,645,600	-	-	-	-	-	-	14,645,600	-
Corporate Expenditures	Corporate Expenditures	111	Retiree Benefits	804,000	-	-	-	-	-	-	-	-	-	-	(36,200)	-	767,800	767,800
Corporate Expenditures	Corporate Expenditures	113	Workers' Compensation	800,000	-	-	-	-	-	-	-	-	-	-	-	-	800,000	800,000
Corporate Expenditures	Corporate Expenditures	114	Insurance	-	-	1,365,700	-	-	-	184,900	-	-	-	-	(160,100)	-	1,390,500	1,205,600
Corporate Expenditures	Corporate Expenditures	116	Grants	-	-	117,000	-	-	-	-	1,002,400	-	-	-	-	-	1,119,400	117,000
<b>Corporate Expenditures Total</b>				<b>1,604,000</b>	<b>1,723,300</b>	<b>1,482,700</b>	-	-	<b>8,700</b>	<b>13,569,700</b>	<b>4,900,500</b>	<b>11,478,934</b>	-	-	<b>(1,647,500)</b>	-	<b>33,120,334</b>	<b>3,171,200</b>
External Agencies	External Agencies	117	External Agencies	-	-	-	-	-	-	-	12,538,039	-	-	-	-	-	12,538,039	-
External Agencies	External Agencies	120	Advisory Committees of Council	-	37,949	-	-	-	300	-	-	-	-	(3,000)	-	-	35,249	35,249
<b>External Agencies Total</b>				-	<b>37,949</b>	-	-	-	<b>300</b>	-	<b>12,538,039</b>	-	-	<b>(3,000)</b>	-	-	<b>12,573,288</b>	<b>35,249</b>



Table 2 (cont'd)  
City of Oshawa  
2019 Net Operating Expenditures by Department

Department	Branch	Program #	Program	SWB	Materials & Supplies	Facility Related	Equipment Related	Vehicle Related	Contracted Services	Transfers	Contributions	Debt	Taxation	Grants-Payment In Lieu	Own Source Revenues	Interest	Total	Net Operating Expenditures	
Community Services	Recreation & Culture Services	013	Facility Sponsorsh Advertising	127,600	7,100	3,300	-	-	13,200	-	-	-	-	-	(435,200)	-	(284,000)	(284,000)	
Community Services	Recreation & Culture Services	321	Recreational Programs	7,057,999	301,550	-	45,618	-	172,408	-	100,000	-	-	(28,833)	(5,578,529)	-	2,070,213	1,970,213	
Community Services	Recreation & Culture Services	332	Special Events	358,500	143,249	-	-	500	182,500	(200)	-	-	-	(20,000)	(167,200)	-	497,349	497,549	
Community Services	Recreation & Culture Services	345	Recreation - Admin	627,148	21,450	-	-	-	-	(4,248)	-	-	-	-	-	-	644,350	648,598	
Community Services	Recreation & Culture Services	349	Business and Customer Services	799,700	144,600	-	-	-	4,500	-	-	-	-	-	(49,700)	-	899,100	899,100	
Community Services	Recreation & Culture Services	350	Culture	227,100	25,261	-	-	-	73,100	(7,000)	-	-	-	(2,000)	-	-	316,461	323,461	
			<b>Recreation &amp; Culture Services (net of Facility Maintenance)</b>	<b>9,198,047</b>	<b>643,210</b>	<b>3,300</b>	<b>45,618</b>	<b>500</b>	<b>445,708</b>	<b>(11,448)</b>	<b>100,000</b>	<b>-</b>	<b>-</b>	<b>(50,833)</b>	<b>(6,230,629)</b>	<b>-</b>	<b>4,143,473</b>	<b>4,054,921</b>	
Community Services	Recreation & Culture Services	310	Facility Maint. Recreation	4,949,645	26,860	4,659,237	329,040	7,599	146,900	38,400	3,300	-	-	-	(2,845,520)	-	7,315,460	7,273,760	
			<b>Recreation &amp; Culture Services</b>	<b>14,147,692</b>	<b>670,070</b>	<b>4,662,537</b>	<b>374,658</b>	<b>8,098</b>	<b>592,608</b>	<b>26,952</b>	<b>103,300</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(50,833)</b>	<b>(9,076,149)</b>	<b>-</b>	<b>11,458,933</b>	<b>11,328,681</b>
Community Services	Strategic and Business Services	200	Strategic and Business Svcs	2,782,361	317,700	-	-	-	-	(11,392)	-	-	-	-	-	-	3,088,669	3,100,061	
Community Services	Strategic and Business Services	230	Traffic and Parking - Admin	473,107	7,500	21,800	-	-	182,134	9,918	-	-	-	-	-	-	694,459	684,541	
Community Services	Strategic and Business Services	234	Crossing Guards	1,300,100	11,200	-	-	-	-	-	-	-	-	-	-	-	1,311,300	1,311,300	
Community Services	Strategic and Business Services	319	Animal Care	587,703	73,201	-	14,284	-	119,500	-	-	-	-	-	(232,700)	-	561,988	561,988	
Community Services	Strategic and Business Services	320	Union Cemetery Admin	104,047	11,270	57,800	81,498	-	34,680	700	-	-	-	-	(251,700)	(15,400)	22,895	37,595	
			<b>Strategic and Business Services (net of Street Lighting)</b>	<b>5,247,318</b>	<b>420,871</b>	<b>79,600</b>	<b>95,782</b>	<b>-</b>	<b>336,314</b>	<b>(774)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(484,400)</b>	<b>(15,400)</b>	<b>5,679,311</b>	<b>5,695,485</b>	
Community Services	Strategic and Business Services	233	Street Lighting	-	5,000	1,460,200	-	-	174,200	-	-	-	-	-	(11,900)	-	1,627,500	1,627,500	
			<b>Strategic and Business Services</b>	<b>5,247,318</b>	<b>425,871</b>	<b>1,539,800</b>	<b>95,782</b>	<b>-</b>	<b>510,514</b>	<b>(774)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(496,300)</b>	<b>(15,400)</b>	<b>7,306,811</b>	<b>7,322,985</b>	
Community Services	Operations Services	246	Waste Collection and Env. Prgs	1,922,880	56,300	6,800	1,404,203	-	836,115	-	-	-	-	-	(63,000)	-	4,163,298	4,163,298	
			<b>Operations Services (net of Road and Facility Maintenance)</b>	<b>1,922,880</b>	<b>56,300</b>	<b>6,800</b>	<b>1,404,203</b>	<b>-</b>	<b>836,115</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(63,000)</b>	<b>-</b>	<b>4,163,298</b>	<b>4,163,298</b>	
Community Services	Operations Services	240	Roads Operations - Admin	6,238,220	53,579	1,264,043	2,765,734	82,934	2,451,193	14,100	-	-	-	-	(369,375)	-	12,500,428	12,486,328	
Community Services	Operations Services	309	Facilities Maintenance - Parks	5,086,454	486,240	431,250	1,397,160	6,700	2,211,670	(60,932)	3,100	-	-	(24,900)	(436,200)	-	9,100,542	9,158,374	
			<b>Operations Services</b>	<b>13,247,554</b>	<b>596,119</b>	<b>1,702,094</b>	<b>5,567,097</b>	<b>89,634</b>	<b>5,498,978</b>	<b>(46,832)</b>	<b>3,100</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(24,900)</b>	<b>(868,575)</b>	<b>-</b>	<b>25,764,269</b>	<b>25,808,001</b>
Community Services	Fire Services	390	Fire - Admin	637,162	242,830	-	-	-	-	(2,237)	-	-	-	-	-	-	877,755	879,992	
Community Services	Fire Services	391	Fire Prevention	1,363,200	39,000	-	-	-	2,000	-	-	-	-	-	(68,000)	-	1,336,200	1,336,200	
Community Services	Fire Services	392	Training	461,400	6,200	-	-	-	-	-	-	-	-	-	-	-	467,600	467,600	
Community Services	Fire Services	393	Fire Fighting	22,207,100	287,100	8,000	-	97,650	16,000	-	-	-	-	-	(120,000)	-	22,495,850	22,495,850	
Community Services	Fire Services	394	Mechanical	272,100	100	2,000	8,500	82,000	-	-	-	-	-	-	-	-	364,700	364,700	
Community Services	Fire Services	395	Operational Maintenance	-	-	357,800	30,000	-	-	10,000	-	-	-	-	-	-	397,800	387,800	
Community Services	Fire Services	396	Dispatch Services	2,009,900	47,601	3,500	130,000	-	-	-	-	-	-	-	(1,283,762)	-	907,239	907,239	
			<b>Fire Services</b>	<b>26,950,862</b>	<b>622,831</b>	<b>371,300</b>	<b>168,500</b>	<b>179,650</b>	<b>18,000</b>	<b>7,763</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(1,471,762)</b>	<b>-</b>	<b>26,847,143</b>	<b>26,839,380</b>	
<b>Community Services Total</b>				<b>59,593,426</b>	<b>2,314,891</b>	<b>8,275,730</b>	<b>6,206,037</b>	<b>277,382</b>	<b>6,620,100</b>	<b>(12,891)</b>	<b>106,400</b>	<b>-</b>	<b>-</b>	<b>(75,733)</b>	<b>(11,912,786)</b>	<b>(15,400)</b>	<b>71,377,156</b>	<b>71,299,047</b>	
Development Services	Engineering Services	210	Engineering Services	4,546,809	54,180	-	116,950	-	-	1,048	-	-	-	-	(780,000)	-	3,938,987	3,937,939	
Development Services	Engineering Services	212	Water Resources	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Development Services	Engineering Services	213	Growth and Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			<b>Engineering Services</b>	<b>4,546,809</b>	<b>54,180</b>	<b>-</b>	<b>116,950</b>	<b>-</b>	<b>-</b>	<b>1,048</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(780,000)</b>	<b>-</b>	<b>3,938,987</b>	<b>3,937,939</b>	
Development Services	Economic Development	500	Economic Development	707,327	167,380	-	-	-	-	(4,827)	-	-	-	-	(8,500)	-	861,380	866,207	
Development Services	DS Administration Services	550	DS - Support Services	815,800	94,500	-	-	-	-	600	-	-	-	-	-	-	910,900	910,300	
Development Services	Building Permit & Inspec Serv	560	Building Services	2,518,730	40,900	-	78,993	-	-	(143,630)	-	-	-	-	(2,614,300)	-	(119,307)	24,323	
Development Services	Planning Services	574	Planning Services	1,846,247	75,050	-	300	-	9,000	(6,197)	-	-	-	-	(539,100)	-	1,385,300	1,391,497	
			<b>Development Services (Other)</b>	<b>5,888,104</b>	<b>377,831</b>	<b>-</b>	<b>79,293</b>	<b>-</b>	<b>9,000</b>	<b>(154,054)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(3,161,900)</b>	<b>-</b>	<b>3,038,274</b>	<b>3,192,328</b>	
<b>Development Services Total</b>				<b>10,434,913</b>	<b>432,011</b>	<b>-</b>	<b>196,243</b>	<b>-</b>	<b>9,000</b>	<b>(153,006)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(3,941,900)</b>	<b>-</b>	<b>6,977,261</b>	<b>7,130,267</b>	
<b>Municipal Parking</b>	<b>Municipal Parking</b>	<b>232</b>	<b>Municipal Parking</b>	<b>428,200</b>	<b>279,900</b>	<b>1,019,129</b>	<b>80,186</b>	<b>-</b>	<b>5,000</b>	<b>-</b>	<b>551,212</b>	<b>133,000</b>	<b>-</b>	<b>-</b>	<b>(2,954,250)</b>	<b>-</b>	<b>(457,623)</b>	<b>(1,141,835)</b>	
<b>Airport</b>	<b>Airport</b>	<b>381</b>	<b>Airport Operations</b>	<b>-</b>	<b>1,029,500</b>	<b>1,934,799</b>	<b>5,800</b>	<b>-</b>	<b>-</b>	<b>(100,000)</b>	<b>101,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(2,568,000)</b>	<b>-</b>	<b>403,099</b>	<b>402,099</b>	
<b>Total</b>				<b>93,925,758</b>	<b>9,425,582</b>	<b>15,129,377</b>	<b>9,344,821</b>	<b>277,382</b>	<b>6,746,600</b>	<b>13,286,606</b>	<b>18,224,919</b>	<b>11,611,934</b>	<b>-</b>	<b>(78,733)</b>	<b>(26,191,386)</b>	<b>(15,400)</b>	<b>151,687,461</b>	<b>108,579,402</b>	



**Table 3  
Columbus Part II Plan  
Transportation Infrastructure Requirements (Land Use and Road Plan Alternative 1)**

Description	Location	Quantity	Unit Costs	Capital Cost	Benefit to Existing	Local Service	DC Eligible	Residential Cost Share	Non-Res. Cost Share	Population Growth	Non-Res. GFA (sq.ft.)	D.C. per SDU	D.C. per Non-Res. GFA	Est. Useful Life	Annual Lifecycle Cost	Lane km	Annual Maintenance Cost
<b>Type C Arterial Roads (km)</b>																	
West Columbus Arterial Road	Thornton Road North to Howden Road West	3.0	\$ 4,789,365	\$ 14,368,095	\$ -	\$ 10,551,221	\$ 3,816,874	\$ 3,159,280	\$ 657,595	25,953	3,785,280	\$ 386	\$ 0.17	65	\$ 748,393	6	\$ 67,380
Bridle Road	North of Highway 407 to Howden Road East	3.0	\$ 4,789,365	\$ 14,368,095	\$ -	\$ 11,307,271	\$ 3,060,824	\$ 2,533,487	\$ 527,338	25,953	3,785,280	\$ 309	\$ 0.14	65	\$ 748,393	6	\$ 67,380
North Columbus Midblock Arterial (ArtC6)	West Columbus Arterial Road to Bridle Road	1.0	\$ 4,789,365	\$ 4,789,365	\$ -	\$ 4,237,624	\$ 551,741	\$ 456,684	\$ 95,057	25,953	3,785,280	\$ 56	\$ 0.03	65	\$ 249,464	2	\$ 22,460
South Columbus Midblock Arterial (ArtC5)	Thornton Road North to Ritson Road North	3.0	\$ 4,789,365	\$ 14,368,095	\$ -	\$ 9,158,895	\$ 5,209,200	\$ 4,311,727	\$ 897,473	25,953	3,785,280	\$ 527	\$ 0.24	65	\$ 748,393	6	\$ 67,380
<b>Type C Arterial - NHS Crossings</b>																	
North Columbus Midblock Arterial (ArtC6)		2.0	\$ 23,200,000	\$ 46,400,000	\$ -	\$ -	\$ 46,400,000	\$ 38,405,922	\$ 7,994,078	25,953	3,785,280	\$ 4,691	\$ 2.11	80	\$ 2,548,033		
Bridle Road		1.0	\$ 23,200,000	\$ 23,200,000	\$ -	\$ -	\$ 23,200,000	\$ 19,202,961	\$ 3,997,039	25,953	3,785,280	\$ 2,346	\$ 1.06	80	\$ 1,274,016		
Columbus Rd. N.		1.0	\$ 23,200,000	\$ 23,200,000	\$ -	\$ -	\$ 23,200,000	\$ 19,202,961	\$ 3,997,039	25,953	3,785,280	\$ 2,346	\$ 1.06	80	\$ 1,274,016		
<b>Collector Roads (km)</b>																	
Collector Road - NHS Crossings		9.5	\$ 4,220,424	\$ 40,094,028	\$ -	\$ 35,861,337	\$ 4,232,691	\$ 3,503,457	\$ 729,234	25,953	3,785,280	\$ 428	\$ 0.19	65	\$ 2,088,382	19	\$ 213,370
Collector Road - NHS Crossings		1.0	\$ 16,000,000	\$ 16,000,000	\$ -	\$ 16,000,000	\$ -	\$ -	\$ -	25,953	3,785,280	\$ -	\$ -	80	\$ 878,632		
<b>Local Roads (km)</b>																	
Local Roads (km)		51.7	\$ 3,587,360	\$ 185,372,947	\$ -	\$ 185,372,947	\$ -	\$ -	\$ -	25,953	3,785,280	\$ -	\$ -	65	\$ 9,655,541	52	\$ 580,298
<b>Total</b>				\$ 382,160,625	\$ -	\$ 272,489,294	\$ 109,671,331	\$ 90,776,477	\$ 18,894,854			\$ 11,088	\$ 4.99		\$ 20,213,263	\$ 11,230	\$ 1,018,268

Source: Integrated Columbus Part II Planning Act and Municipal Class Environmental Assessment Act Study, prepared by HDR (with updated capital costs)

**Table 4  
Columbus Part II Plan  
Transportation Infrastructure Requirements (Land Use and Road Plan Alternative 2)**

Description	Location	Quantity	Unit Costs	Capital Cost	Benefit to Existing	Local Service	DC Eligible	Residential Cost Share	Non-Res. Cost Share	Population Growth	Non-Res. GFA (sq.ft.)	D.C. per SDU	D.C. per Non-Res. GFA	Est. Useful Life	Annual Lifecycle Cost	Lane km	Annual Maintenance Cost
<b>Type B Arterial Roads (km)</b>																	
West Columbus Arterial Road	Thornton Road North to Howden Road West	3.5	\$ 4,789,365	\$ 16,762,778	\$ -	\$ 12,309,757	\$ 4,453,020	\$ 3,685,826	\$ 767,194	25,953	3,785,280	\$ 450	\$ 0.20	65	\$ 873,125	14	\$ 157,220
<b>Type B Arterial - Greenbelt Crossings</b>																	
West Columbus Arterial Road		1.0	\$ 23,200,000	\$ 23,200,000	\$ -	\$ -	\$ 23,200,000	\$ 19,202,961	\$ 3,997,039	25,953	3,785,280	\$ 2,346	\$ 1.06	80	\$ 1,274,016		
<b>Type C Arterial Roads (km)</b>																	
Bridle Road	North of Highway 407 to Howden Road East	3.5	\$ 4,789,365	\$ 16,762,778	\$ -	\$ 13,191,816	\$ 3,570,962	\$ 2,955,734	\$ 615,227	25,953	3,785,280	\$ 361	\$ 0.16	65	\$ 873,125	7	\$ 78,610
North Columbus Midblock Arterial (ArtC6)	West Columbus Arterial Road to Bridle Road	1.5	\$ 4,789,365	\$ 7,184,048	\$ -	\$ 6,356,435	\$ 827,612	\$ 685,025	\$ 142,586	25,953	3,785,280	\$ 84	\$ 0.04	65	\$ 374,196	3	\$ 33,690
South Columbus Midblock Arterial (ArtC5)	Thornton Road North to Ritson Road North	2.5	\$ 4,789,365	\$ 11,973,413	\$ -	\$ 7,632,413	\$ 4,341,000	\$ 3,593,106	\$ 747,894	25,953	3,785,280	\$ 439	\$ 0.20	65	\$ 623,660	5	\$ 56,150
<b>Type C Arterial - NHS Crossings</b>																	
North Columbus Midblock Arterial (ArtC6)		2.0	\$ 23,200,000	\$ 46,400,000	\$ -	\$ -	\$ 46,400,000	\$ 38,405,922	\$ 7,994,078	25,953	3,785,280	\$ 4,691	\$ 2.11	80	\$ 2,548,033		
Bridle Road		1.0	\$ 23,200,000	\$ 23,200,000	\$ -	\$ -	\$ 23,200,000	\$ 19,202,961	\$ 3,997,039	25,953	3,785,280	\$ 2,346	\$ 1.06	80	\$ 1,274,016		
Columbus Rd. N.		1.0	\$ 23,200,000	\$ 23,200,000	\$ -	\$ -	\$ 23,200,000	\$ 19,202,961	\$ 3,997,039	25,953	3,785,280	\$ 2,346	\$ 1.06	80	\$ 1,274,016		
<b>Collector Roads (km)</b>																	
Collector Road - NHS Crossings		10.5	\$ 4,220,424	\$ 44,314,452	\$ -	\$ 39,636,215	\$ 4,678,237	\$ 3,872,241	\$ 805,996	25,953	3,785,280	\$ 473	\$ 0.21	65	\$ 2,308,212	21	\$ 235,830
Collector Road - NHS Crossings		1.0	\$ 16,000,000	\$ 16,000,000	\$ -	\$ 16,000,000	\$ -	\$ -	\$ -	25,953	3,785,280	\$ -	\$ -	80	\$ 878,632		
<b>Local Roads (km)</b>																	
Local Roads (km)		51.9	\$ 3,587,360	\$ 186,358,020	\$ -	\$ 186,358,020	\$ -	\$ -	\$ -	25,953	3,785,280	\$ -	\$ -	65	\$ 9,706,851	52	\$ 583,382
<b>Total</b>				\$ 415,355,487	\$ -	\$ 281,484,656	\$ 133,870,831	\$ 110,806,738	\$ 23,064,093			\$ 13,534	\$ 6.09		\$ 22,007,883	\$ 11,230	\$ 1,144,882

Source: Integrated Columbus Part II Planning Act and Municipal Class Environmental Assessment Act Study, prepared by HDR (with updated capital costs)





**Table 5  
Columbus Part II Plan  
Transportation Infrastructure Requirements (Land Use and Road Plan Alternative 3)**

Description	Location	Quantity	Unit Costs	Capital Cost	Benefit to Existing	Local Service	DC Eligible	Residential Cost Share	Non-Res. Cost Share	Population Growth	Non-Res. GFA (sq.ft.)	D.C. per SDU	D.C. per Non-Res. GFA	Est. Useful Life	Annual Lifecycle Cost	Lane km	Annual Maintenance Cost
<b>Type C Arterial Roads (km)</b>																	
West Columbus Arterial Road	Thornton Road North to Howden Road West	3.5	\$ 4,789,365	\$ 16,762,778	\$ -	\$ 12,309,757	\$ 4,453,020	\$ 3,685,826	\$ 767,194	25,953	3,785,280	\$ 450	\$ 0.20	65	\$ 873,125	7	\$ 78,610
Bridle Road	North of Highway 407 to Howden Road East	3.0	\$ 4,789,365	\$ 14,368,095	\$ -	\$ 11,307,271	\$ 3,060,824	\$ 2,533,487	\$ 527,338	25,953	3,785,280	\$ 309	\$ 0.14	65	\$ 748,393	6	\$ 67,380
North Columbus Midblock Arterial (ArtC6)	West Columbus Arterial Road to Bridle Road	3.5	\$ 4,789,365	\$ 16,762,778	\$ -	\$ 14,831,683	\$ 1,931,095	\$ 1,598,394	\$ 332,701	25,953	3,785,280	\$ 195	\$ 0.09	65	\$ 873,125	7	\$ 78,610
South Columbus Midblock Arterial (ArtC5)	Thornton Road North to Ritson Road North	3.0	\$ 4,789,365	\$ 14,368,095	\$ -	\$ 9,158,895	\$ 5,209,200	\$ 4,311,727	\$ 897,473	25,953	3,785,280	\$ 527	\$ 0.24	65	\$ 748,393	6	\$ 67,380
<b>Type C Arterial - Greenbelt Crossings</b>																	
North Columbus Midblock Arterial (ArtC6)		1.0	\$ 23,200,000	\$ 23,200,000	\$ -	\$ -	\$ 23,200,000	\$ 19,202,961	\$ 3,997,039	25,953	3,785,280	\$ 2,346	\$ 1.06	80	\$ 1,274,016		
Bridle Road		1.0	\$ 23,200,000	\$ 23,200,000	\$ -	\$ -	\$ 23,200,000	\$ 19,202,961	\$ 3,997,039	25,953	3,785,280	\$ 2,346	\$ 1.06	80	\$ 1,274,016		
South Columbus Midblock Arterial (ArtC5)		3.0	\$ 23,200,000	\$ 69,600,000	\$ -	\$ -	\$ 69,600,000	\$ 57,608,882	\$ 11,991,118	25,953	3,785,280	\$ 7,037	\$ 3.17	80	\$ 3,822,049		
<b>Type C Arterial - NHS Crossings</b>																	
North Columbus Midblock Arterial (ArtC6)		2.0	\$ 23,200,000	\$ 46,400,000	\$ -	\$ -	\$ 46,400,000	\$ 38,405,922	\$ 7,994,078	25,953	3,785,280	\$ 4,691	\$ 2.11	80	\$ 2,548,033		
Columbus Rd. N.		1.0	\$ 23,200,000	\$ 23,200,000	\$ -	\$ -	\$ 23,200,000	\$ 19,202,961	\$ 3,997,039	25,953	3,785,280	\$ 2,346	\$ 1.06	80	\$ 1,274,016		
<b>Collector Roads (km)</b>																	
Collector Road - NHS Crossings		2.0	\$ 16,000,000	\$ 32,000,000	\$ -	\$ 32,000,000	\$ -	\$ -	\$ -	25,953	3,785,280	\$ -	\$ -	80	\$ 1,757,264		
Local Roads (km)		50.9	\$ 3,587,360	\$ 182,453,546	\$ -	\$ 182,453,546	\$ -	\$ -	\$ -	25,953	3,785,280	\$ -	\$ -	65	\$ 9,503,478	51	\$ 571,159
<b>Total</b>				\$ 502,409,319	\$ -	\$ 297,922,490	\$ 204,486,830	\$ 169,256,576	\$ 35,230,253			\$ 20,674	\$ 9.31		\$ 26,784,291	\$ 11,230	\$ 1,076,509

Source: Integrated Columbus Part II Planning Act and Municipal Class Environmental Assessment Act Study, prepared by HDR (with updated capital costs)



**Table 6  
Columbus Part II Plan  
Parks and Recreation Infrastructure Requirements (Land Use and Road Plan Alternative 1)**

Description	Net Hectares	Quantity	Unit Costs	Capital Cost	Benefit to Existing	Local Service	10% Statutory Deduction	DC Eligible	Residential Cost Share	Non-Res. Cost Share	Population Growth	Non-Res. GFA (sq.ft.)	D.C. per SDU	D.C. per Non-Res. GFA	Est. Useful Life	Annual Lifecycle Cost	Annual Operating Cost per Quantity	Annual Maintenance Cost	
<b>Indoor Recreation Facilities</b>																			
Community Hub (sq.ft.)	1.0	31,050	\$ 379	\$ 11,767,950	\$ 1,176,795	\$ -	\$ 1,059,116	\$ 9,532,040	\$ 9,055,438	\$ 476,602	25,953	3,785,280	\$ 1,106	\$ 0.13	50	\$ 609,955	\$ 8.03	\$ 249,298	
<b>Parkland Development</b>																			
Low Density Residential Area (neighbourhood parks)	7.2	4.0	\$ 600,000	\$ 2,400,000	\$ 120,000	\$ -	\$ 228,000	\$ 2,052,000	\$ 1,949,400	\$ 102,600	25,953	3,785,280	\$ 238	\$ 0.03	20	\$ 178,401	\$ 6,360	\$ 113,144	
Medium Density Residential II Area (neighbourhood parks)	-	-	\$ 600,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	25,953	3,785,280	\$ -	\$ -	20	\$ -	\$ 6,360	\$ -	
<b>Recreational Trails</b>																			
Link 59 - From Thornton Rd. to Link 62		0.6	\$ 2,840,000	\$ 1,704,000	\$ 852,000	\$ -	\$ 85,200	\$ 766,800	\$ 728,460	\$ 38,340	25,953	3,785,280	\$ 89	\$ 0.01	40	\$ 92,025			
Link 62 - West of Winchester Rd. and North of Link 59 to South of Columbus Rd.		1.0	\$ 760,000	\$ 760,000	\$ 380,000	\$ -	\$ 38,000	\$ 342,000	\$ 324,900	\$ 17,100	25,953	3,785,280	\$ 40	\$ 0	40	\$ 41,044			
Link 63 - East of Thornton Rd. and South of Columbus Rd. to North of Howden Rd.		1.0	\$ 1,440,000	\$ 1,440,000	\$ 720,000	\$ -	\$ 72,000	\$ 648,000	\$ 615,600	\$ 32,400	25,953	3,785,280	\$ 75	\$ 0	40	\$ 77,768			
<b>Total</b>				\$ 18,071,950	\$ 3,248,795	\$ -	\$ 1,482,316	\$ 13,340,840	\$ 12,673,798	\$ 667,042			\$ 1,548	\$ 0.18		\$ 999,193		\$ 362,443	

Source: City of Oshawa Integrated Columbus Part II Planning Act & Municipal Class EA Study, Land Use Concept Alternatives (August 5, 2019)

**Table 7  
Columbus Part II Plan  
Parks and Recreation Infrastructure Requirements (Land Use and Road Plan Alternative 2)**

Description	Net Hectares	Quantity	Unit Costs	Capital Cost	Benefit to Existing	Local Service	10% Statutory Deduction	DC Eligible	Residential Cost Share	Non-Res. Cost Share	Population Growth	Non-Res. GFA (sq.ft.)	D.C. per SDU	D.C. per Non-Res. GFA	Est. Useful Life	Annual Lifecycle Cost	Annual Operating Cost per Quantity	Annual Maintenance Cost	
<b>Indoor Recreation Facilities</b>																			
Community Hub (sq.ft.)	1.0	31,050	\$ 379	\$ 11,767,950	\$ 1,176,795	\$ -	\$ 1,059,116	\$ 9,532,040	\$ 9,055,438	\$ 476,602	25,953	3,785,280	\$ 1,106	\$ 0.13	50	\$ 609,955	\$ 8.03	\$ 249,298	
<b>Parkland Development</b>																			
Low Density Residential Area (neighbourhood parks)	5.4	3.0	\$ 600,000	\$ 1,800,000	\$ 90,000	\$ -	\$ 171,000	\$ 1,539,000	\$ 1,462,050	\$ 76,950	25,953	3,785,280	\$ 179	\$ 0.02	20	\$ 133,800	\$ 6,360	\$ 84,858	
Medium Density Residential II Area (neighbourhood parks)	1.8	1.0	\$ 600,000	\$ 600,000	\$ 30,000	\$ -	\$ 57,000	\$ 513,000	\$ 487,350	\$ 25,650	25,953	3,785,280	\$ 60	\$ 0.01	20	\$ 44,600	\$ 6,360	\$ 28,286	
<b>Recreational Trails</b>																			
Link 59 - From Thornton Rd. to Link 62		0.6	\$ 2,840,000	\$ 1,704,000	\$ 852,000	\$ -	\$ 85,200	\$ 766,800	\$ 728,460	\$ 38,340	25,953	3,785,280	\$ 89	\$ 0.01	40	\$ 92,025			
Link 62 - West of Winchester Rd. and North of Link 59 to South of Columbus Rd.		1.0	\$ 760,000	\$ 760,000	\$ 380,000	\$ -	\$ 38,000	\$ 342,000	\$ 324,900	\$ 17,100	25,953	3,785,280	\$ 40	\$ 0	40	\$ 41,044			
Link 63 - East of Thornton Rd. and South of Columbus Rd. to North of Howden Rd.		1.0	\$ 1,440,000	\$ 1,440,000	\$ 720,000	\$ -	\$ 72,000	\$ 648,000	\$ 615,600	\$ 32,400	25,953	3,785,280	\$ 75	\$ 0	40	\$ 77,768			
<b>Total</b>				\$ 18,071,950	\$ 3,248,795	\$ -	\$ 1,482,316	\$ 13,340,840	\$ 12,673,798	\$ 667,042			\$ 1,548	\$ 0.18		\$ 999,193	\$ 11,230	\$ 362,443	

Source: City of Oshawa Integrated Columbus Part II Planning Act & Municipal Class EA Study, Land Use Concept Alternatives (August 5, 2019)



**Table 8**  
**Columbus Part II Plan**  
**Parks and Recreation Infrastructure Requirements (Land Use and Road Plan Alternative 3)**

Description	Net Hectares	Quantity	Unit Costs	Capital Cost	Benefit to Existing	Local Service	10% Statutory Deduction	DC Eligible	Residential Cost Share	Non-Res. Cost Share	Population Growth	Non-Res. GFA (sq.ft.)	D.C. per SDU	D.C. per Non-Res. GFA	Est. Useful Life	Annual Lifecycle Cost	Annual Operating Cost per Quantity	Annual Maintenance Cost
<b>Indoor Recreation Facilities</b>																		
Community Hub (sq.ft.)	1.0	31,050	\$ 379	\$ 11,767,950	\$ 1,176,795	\$ -	\$ 1,059,116	\$ 9,532,040	\$ 9,055,438	\$ 476,602	25,953	3,785,280	\$ 1,106	\$ 0.13	50	\$ 609,955	\$ 8.03	\$ 249,298
<b>Parkland Development</b>																		
Low Density Residential Area (neighbourhood parks)	14.4	8.0	\$ 600,000	\$ 4,800,000	\$ 240,000	\$ -	\$ 456,000	\$ 4,104,000	\$ 3,898,800	\$ 205,200	25,953	3,785,280	\$ 476	\$ 0.05	20	\$ 356,801	\$ 6,360	\$ 226,289
Medium Density Residential II Area (neighbourhood parks)	-	-	\$ 600,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	25,953	3,785,280	\$ -	\$ -	20	\$ -	\$ 6,360	\$ -
<b>Recreational Trails</b>																		
Link 59 - From Thornton Rd. to Link 62		0.6	\$ 2,840,000	\$ 1,704,000	\$ 852,000	\$ -	\$ 85,200	\$ 766,800	\$ 728,460	\$ 38,340	25,953	3,785,280	\$ 89	\$ 0.01	40	\$ 92,025		
Link 62 - West of Winchester Rd. and North of Link 59 to South of Columbus Rd.		1.0	\$ 760,000	\$ 760,000	\$ 380,000	\$ -	\$ 38,000	\$ 342,000	\$ 324,900	\$ 17,100	25,953	3,785,280	\$ 40	\$ 0	40	\$ 41,044		
Link 63 - East of Thornton Rd. and South of Columbus Rd. to North of Howden Rd.		1.0	\$ 1,440,000	\$ 1,440,000	\$ 720,000	\$ -	\$ 72,000	\$ 648,000	\$ 615,600	\$ 32,400	25,953	3,785,280	\$ 75	\$ 0	40	\$ 77,768		
<b>Total</b>				\$ 20,471,950	\$ 3,368,795	\$ -	\$ 1,710,316	\$ 15,392,840	\$ 14,623,198	\$ 769,642			\$ 1,786	\$ 0.20		\$ 1,177,593	\$ 11,230	\$ 475,587

Source: City of Oshawa Integrated Columbus Part II Planning Act & Municipal Class EA Study, Land Use Concept Alternatives (August 5, 2019)