

City of Ottawa Area-specific
Development Charge
Background Study for Feedmill
Creek In-stream Measures

Prepared By:

**City of Ottawa
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LIST OF ACRONYMS AND ABBREVIATIONS

DC	Development Charge
DCA	Development Charges Act
SWM	Stormwater Management
ICI	Industrial, Commercial and Institutional
OPA	Official Plan Amendment
KW	Kanata West
KWOG	Kanata West Owners Group
ASDC	Area-specific Development Charge

1. Introduction

This Background Study has been prepared pursuant to Section 10 of the Development Charges (DC) Act, 1997 and is being made available to the public, as required by the DC Act at least two weeks prior to the public meeting of Council and at least 60 days prior to the passing of the DC by-law. This document encompasses the stream measures recommended in the Feedmill Creek Stream Class Environmental Assessment (EA).

The calculation of the development charges has been undertaken as follows:

- a) The system requirements have been described and costed, with timing estimated.
- b) These requirements have been clustered into defined cost recovery areas which are small enough to reflect related requirements, but large enough to make administration workable.
- c) The benefiting area has been measured with respect to the development potential in terms of the land area, number of residential units by type and the floor area of non-residential development. The costs have been allocated between residential and non-residential development.
- d) The average storm runoff requirement of each residential use has been measured as a means of apportioning the costs between one type of residential use and another.
- e) For residential development, runoff coefficients for each land use type were selected based on published values within City of Ottawa Sewer Design Guidelines. Multiplying the unbuilt land area by the runoff coefficient for each dwelling type, produced the share of total flow and cost attributable to that type of development, which when divided by the number of units to be built ("Actual Units"), produced the appropriate DC by dwelling type. While the unit occupancy is often used as an alternative means of allocating costs by type of development, the above-referenced approach is more precise in the case of stormwater management works.
- f) In the case of non-residential development, runoff coefficients for each land use type were multiplied by the unbuilt net land area to produce the cost attributable to that type of land use, which when divided by the total net area, produced the appropriate DC by land use.
- g) Reference is also made to the City's proposed local service policy for SWM which sets out the requirements of individual subdividers. This policy, which was included in Appendix D of the City of Ottawa's 2014 Development Charge Background study, requires servicing by landowners beyond payment of the DC.

2. Project Description and Development Charge Calculation

The Feedmill Creek Stormwater Management Criteria Study (JFSA, April 30, 2018) identified a series of protection measures along Feedmill Creek required to mitigate the impact of future developments on the creek by providing erosion control and improving the functionality of the creek. The proposed measures include creek re-alignment, rock vanes/weirs to stabilize the creek, re-grading to construct habitat, channel re-shaping, debris removal, bend protection/reinforcement, re-planting, riprap enhancement in culvert, repair of existing structures, bed stabilization, and culvert removal. As illustrated in Schedule 1, the proposed measures are located along Feedmill Creek, from the confluence with Carp River to Maple Grove unopened road allowance. The Class C cost estimate for the proposed in-stream measures is \$1.763 million (excluding tax) including engineering, contingencies, and related City costs. The detailed cost estimate is presented in Appendix B of the Feedmill Creek Stormwater Management Criteria Study prepared by Coldwater Consulting.

Existing Agreement

In 2006, a Class EA was undertaken in response to the recommendations of the Carp River Watershed/Subwatershed Study (Robinson, 2004). The Council-endorsed Class EA included stream measures at four locations along Feedmill Creek east of the urban boundary, north of Highway 417. To date, some of the work recommended in the 2006 EA has already been spent by Kanata West Owners Group (KWOG) as part the KW Pond 6 development area. The estimate for the remaining work (2006 Class EA) on the creek is \$556K and will be funded by KWOG. This amount will be transferred to the City within 30 days upon Council approval of the Feedmill Creek Stream Rehabilitation Measure Class EA report.

The remaining cost of \$1.196 million will be recovered by means of an area-specific development charge (ASDC) within the benefitting area.

In 2017, Potter's Key Subdivision was draft approved with a requirement for a financial contribution towards the stream restoration measures proposed along Feedmill Creek. The Owner acknowledged and agreed to provide a one-time payment to the City to a maximum amount of \$155,000.00 following City Council approval of the subject ASDC.

Calculations

The proposed rates are to be applied to the future development areas draining to Feedmill Creek. These are based on the City's OP and include the vacant AG Reed Industrial area, the expansion lands Area 3, Potter's Key Subdivision (registered), a future residential site located at 6171 Hazeldean Road, a future commercial site located at 6111 Hazeldean Road and a Cavanagh Shenkman Subdivision located at 195 Huntmar Drive. The residential dwelling counts and net areas for Industrial, Commercial and Institutional (ICI) are presented in Schedule 3.

The total cost of \$1.196 million is first divided between the future residential and the ICI lands, based on the impervious net development area (see Table 1 in Schedule 4). The residential DC

is then calculated based on the unbuilt area of each different residential unit type and distributed based on the number of units (see Table 2 in Schedule 4). Similarly, the ICI DC's are calculated based on the net area per land use type (see Table 3 in Schedule 4).

The site located at 200 Westbrook Road (see Schedule 2) received site plan approval in December 2016. Because of its late stage in the approval process, this site is not included in the ASDC calculation.

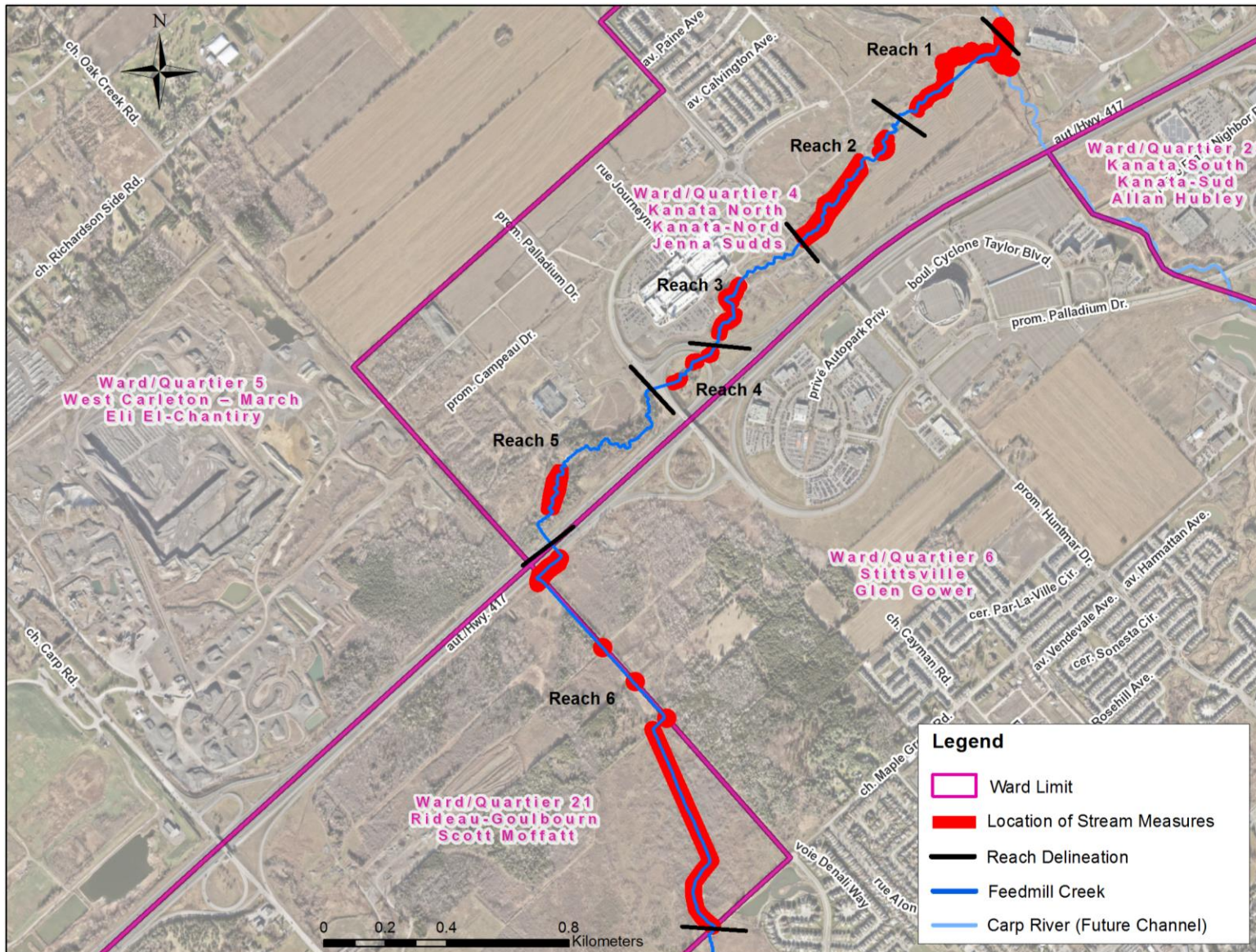
Relevant Studies/By-laws

- Feedmill Creek Stormwater Management Criteria Study (JFSA, April 2018);
- Feedmill Creek Stream Rehabilitation Measures Class Environmental Assessment (City of Ottawa, April 2019);
- Carp River Watershed/Subwatershed Study (Robinson, 2004)
- Kanata West Master Servicing Study (Stantec, June 2006)
- Carp River, Poole Creek and Feedmill Creek Restoration Class Environmental Assessment (TSH, June 2006)

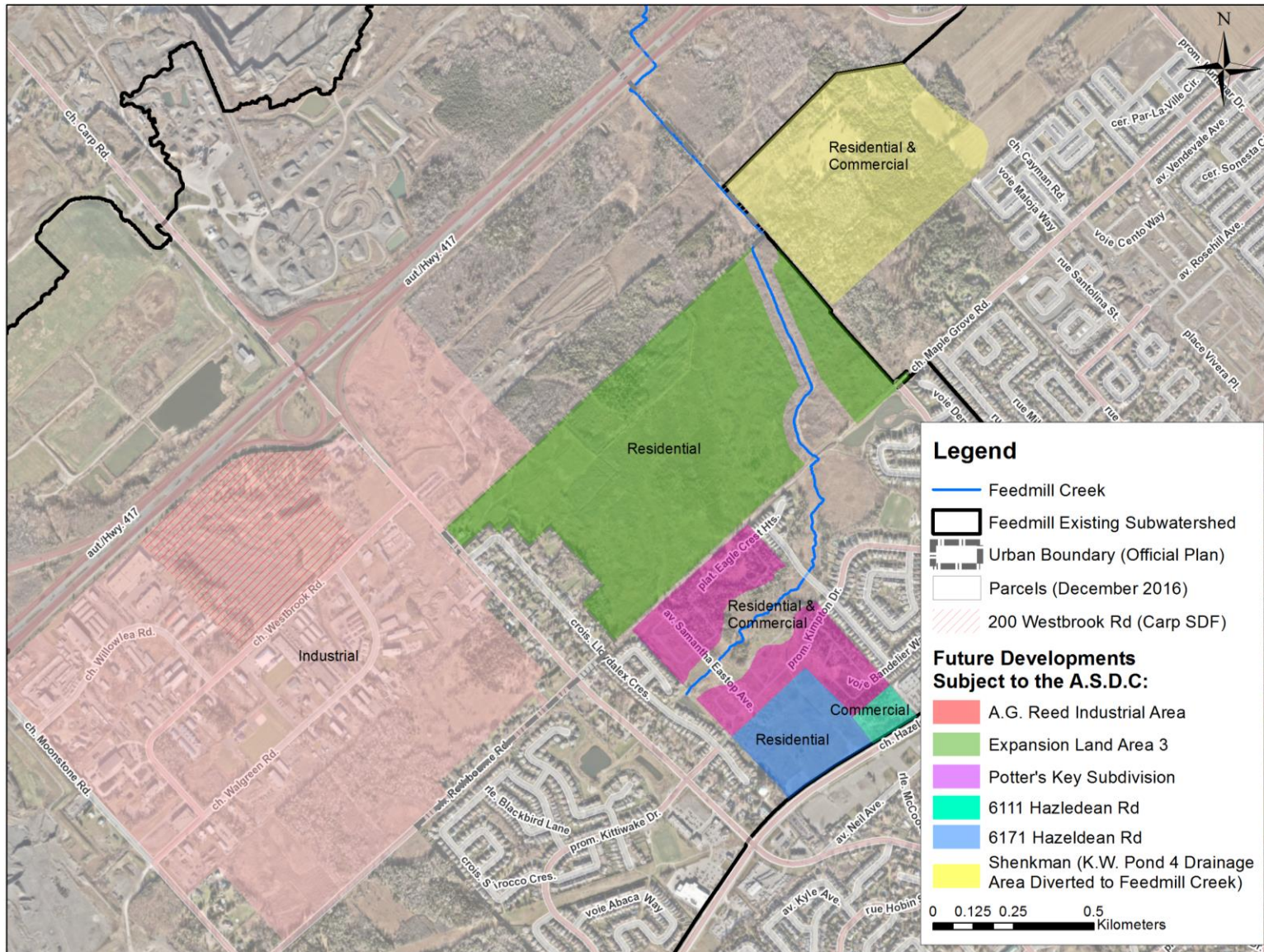
3. Asset Management

The works will require limited annual maintenance expenditures and periodic remediation investment.

Schedule 1: Location of the Proposed In-stream Measures on Feedmill Creek



Schedule 2: Future Development Areas Subject to the ASDC



Schedule 3: Projected Growth within Feedmill Creek Subwatershed

Table 1: Future Residential Lands

Unit Type	Potter's Key		6171 Hazeldean Rd		Expansion Area 3		Shenkman		Total	
	Unit ^(A)	Net Ha ^(A)	Unit ^(B)	Net Ha ^(C)	Unit ^(B)	Net Ha ^(D)	Unit ^(E)	Net Ha ^(E)	Unit	Net Ha
Single Detached	236	9.05	90	3.79	584	24.63	155	4.59	1065	42.05
Semi Detached	30	0.75	6	0.17	39	1.08	0	0.00	75	1.99
Row/Town	138	3.16	84	1.77	545	11.49	416	7.51	1183	23.93
Stacked Row	0	0.00	0	0.00	0	0.00	0	0.00	0	0
Apartment	0	0.00	20	0.15	130	1.01	143	1.75	293	2.91
Total [Count]	404	12.96	200	5.87	1299	38.20	714	13.85	2616	70.89

(A) Based on the approved Draft Plan of Subdivision for Potter's Key

(B) Assumed 45% single detached, 3% semi-detached, 42% Row/Town, and 10% apartment

(C) Units per net hectare extracted from the Vacant Urban Residential Land Survey, 2015 Update (not shown in the 2016/2017 Update)

(D) Units per net hectare extracted from the Vacant Urban Residential Land Survey, 2017 Update

(E) Based on the latest concept plan for 195 Huntmar lands provided by DSEL (March, 2019). Only includes the drainage area to Feedmill Creek (see Schedule 2).

Table 2: Future ICI Lands Net Development Area

ICI Type	Potter's Key ^(A)	AG Reed Industrial Area ^(B)	Shenkman ^(C)	Total
Industrial	0.00	48.30	0.00	48.30
Commercial	1.85	0.00	12.15	14.00
Institutional	0.00	0.00	0.00	0.00
Total (Net Ha)	1.85	48.30	12.15	62.30

(A) Based on the City's Research and Forecasting Data, Vacant Urban Residential Land Survey, 2017 Update

(B) Based on the City's Research and Forecasting Data, Vacant Industrial and Business Park Lands Inventory, 2016-2017 Update

(C) Based on the latest concept plan for 195 Huntmar lands provided by DSEL's on March 26, 2019.

Note: the site located at 200 Westbrook Road (see Schedule 2) received site plan approval in December 2016. Because of its late stage in the approval process, this site is not included in the ASDC calculation

Schedule 4: Development Charge Calculation

Table 1: Residential / ICI Share

Land Use Type	Net Area Ha	Runoff Coefficient	Unbuilt Area x Runoff Coefficient	Percentage (rounded)	Residential / ICI Share
Residential	70.89	0.61	43.40	49.8%	\$ 595,789
ICI	62.30	0.70	43.75	50.2%	\$ 600,496
Total	133.19	0.65	87.15	100.0%	\$ 1,196,285

Table 2: Residential Shares

Unit Type	Unbuilt Ha	Runoff Coefficient	Ha x Coefficient	Percentage (rounded)	Residential Share x percentage	Actual Units	Proposed DC per Unit
Single Detached	42.1	0.55	23.13	53.3%	\$ 317,479	1065	\$ 298
Semi Detached	2.0	0.60	1.20	2.8%	\$ 6,419	75	\$ 219
Row/Town	23.9	0.70	16.75	38.6%	\$ 229,926	1183	\$ 194
Stacked Row	0	0.80	0.00	0.0%	-	-	-
Apartment	2.9	0.80	2.33	5.4%	\$ 31,965	293	\$ 109
Total	70.9	0.61	43.40	100.0%	\$ 595,789	2616	

Table 3: ICI Shares

ICI Type	Unbuilt Ha	Runoff Coefficient	Ha x Coefficient	Percentage (rounded)	ICI Share x percentage	Share per Ha
Industrial	48.3	0.66	31.64	72.3%	\$ 434,265	\$ 8,991
Commercial	14.0	0.87	12.11	27.7%	\$ 166,231	\$ 11,874
Institutional	0.0	0.87	0.00	0.0%	-	-
Total	62.3	0.70	43.75	100.0%	\$ 600,496	