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TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON NOVEMBER 3, 2015
FROM:	JOHN BRAAM, P. ENG. MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER
SUBJECT:	APPOINTMENT OF CONSULTING ENGINEERS FOR DESIGN AND CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES

RECOMMENDATION

(a) That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the appointment of Consulting Engineers for the 2015 Stormwater Management Facility (SWMF) Design and Construction program in accordance with the 2016 Growth Management Implementation Strategy (GMIS):

- (i) AECOM Canada Ltd. **BE APPOINTED** Consulting Engineers to complete the Detailed Design, Inspection, Monitoring and General Construction Administration of the Tributary C SWMFs (ES3020-RVBTC) in the total amount of \$930,052 (plus a further \$206,005 for contingency, provisional items and allowances), excluding HST;
- (ii) Matrix Solutions Inc. **BE APPOINTED** Consulting Engineers to provide project support for the finalization of Tributary C SWMFs (ES3020-RVBTC), in the total amount of \$8,680 (plus a further \$82,722 for contingency, provisional items and allowances), excluding HST;
- (iii) Ecosystem Recovery Inc. **BE APPOINTED** Consulting Engineers to complete the Functional Design, Detailed Design, Inspection and General Construction Administration of the Dingman Creek Tributary B4 SWMF (ESSWM-DCB4), in the total amount of \$297,548 (plus a further \$29,755 for contingency, provisional items and allowances), excluding HST;
- (iv) IBI Group **BE APPOINTED** Consulting Engineers to complete a retrofit design of the existing Applegate SWMF (ES6089 & ES2428-14), in the total amount of \$31,205 (plus a further \$6,241 for contingency), excluding HST;

it being noted that the consulting fees for the projects identified in (a) above are in accordance with the estimates on file, which are based upon the Fee Guideline for Professional Engineering Services, 2015, recommended by the Ontario Society of Professional Engineers; and in accordance with Section 15.2 (e) of the Procurement of Goods and Services Policy;

(b) CH2M Hill Company **BE APPOINTED** Consulting Engineers to complete the coordination of detailed floodplain mapping for the Mud Creek East Branch SWM Improvements (ES2681), in the total amount of \$96,540, excluding HST, in accordance with the estimate on file, which is based upon the Fee Guideline for Professional Engineering Services, 2015, recommended by the Ontario Society of Professional Engineers, and in accordance with Section 15.2 (g) of the Procurement of Goods and Services Policy;

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- (c) AECOM Canada Ltd. **BE APPOINTED** Consulting Engineers to complete the General Construction Administration of the Wickerson S-B SWMFs (ESSWM-SB), in the total amount of \$141,860 (plus a further \$14,186 for contingency, provisional items and allowances), excluding HST, in accordance with the estimate on file, which is based upon the Fee Guideline for Professional Engineering Services, 2015, recommended by the Ontario Society of Professional Engineers, and in accordance with Section 15.2 (g) of the Procurement of Goods and Services Policy;
- (d) the financing for these works **BE APPROVED** in accordance with the “Sources of Financing Report” attached hereto as Appendix “A”;
- (e) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with these works;
- (f) the approvals given herein **BE CONDITIONAL** upon the Corporation entering into a formal contracts with these consultants for the works; and
- (g) the Mayor and City Clerk **BE AUTHORIZED** to execute any contracts or other documents, if required, to give effect to these recommendations.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

SPPC – May 11, 2015. “Growth Management Implementation Strategy (GMIS): 2016 Annual Review and Update.”

SPPC – June 23, 2014. “Approval of 2014 Development Charges By-law and DC Background Study.”

CWC – September 22, 2014. “Appointment of Consulting Engineer for the Detailed Design of Wickerson No. S-B SWM Facility.”

CWC – August 25, 2014. “Mud Creek Municipal Class Environmental Assessment.”

2015-2019 CORPORATE STRATEGIC PLAN ALIGNMENT

The Stormwater Management Facilities Design and Construction program aligns with the Corporate Strategic Plan goal of providing new stormwater servicing to facilitate future growth across London (BUILDING A SUSTAINABLE CITY: 5. B. Responsible growth).

BACKGROUND

Purpose

Recommendation (a) appoints four qualified engineering consultants to conduct the design and supervise construction of stormwater management infrastructure. These facilities are identified in the 2014 Development Charges Study Update and 2016 Growth Management Implementation Strategy to be constructed in 2016 or 2017.

Recommendations (b) and (c) appoint consultants under section 15.2(g) of the Procurement of Goods and Services Policy: AECOM to complete the construction administration of the Wickerson S-B facility; and CH2M to coordinate floodplain modelling with the UTRCA prior to finalizing the Mud Creek EA.

The consulting work outlined above will allow for the construction of an estimated \$21.6M of capital stormwater infrastructure and will facilitate approximately 268 hectares of mixed residential and commercial development.

The appointment of these Consultants allows the scheduling requirements of the 2016 Growth Management Implementation Strategy (GMIS) to be met, and follows a PricewaterhouseCooper’s 2014 audit recommendation to undertake one comprehensive Expression of Interest (EOI) for stormwater servicing projects. Due to the overall number of projects, the consultant appointments will be brought forward over two committee meetings. The second set of assignments will be submitted to the December meeting of the Civic Works Committee.

Context

In 2014, PricewaterhouseCooper undertook an audit of the stormwater service area and made several recommendations to improve administrative efficiency. One of these recommendations was to group projects of a similar nature into one large Expression of Interest (EOI) for approval by the Municipal Council. In response to this recommendation, the Stormwater Engineering Division has undertaken a two phase Request for Qualifications and Request for Proposal process for eight (8) stormwater servicing projects of a similar nature.

In the past, it was the practice to issue separate assignments for the two and sometimes three project phases of a stormwater pond design. In order to both improve efficiency and ensure alignment with the tight time lines of the Stormwater Management Facility “Just-in-Time” Design and Construction commitment, the various design phases have been combined into a single project assignment. Each assignment starts with the preliminary design and finishes with pond construction.

This new process has resulted in an overall reduction of eight separate procurement processes and 10 reports to this Committee. The improved process has resulted in both process efficiencies and operational savings.

The general Scope of Work which is included in this SWMF Design and Construction Program will be functional design, detailed design, tender preparation, construction administration, as well as supporting studies such as geotechnical, hydrogeological fluvial geomorphological, archeological assessments, Subject Land Status Reports (SLSR) and Environmental Impact Studies (EIS) as required. Consultants who are awarded design and construction assignments will be subject to annual reviews to obtain a performance rating specific to delivering SWMF projects for consideration in future assignments.

DISCUSSION

There are eight 2015 project assignments which were separated into three categories based on varying complexity, with Category 3 being the highest (Table 1). Four of these projects remain to be awarded in December due to the complexity; however, the four projects being recommended for award in this report involve elements within the descriptions below or possess inherent complexity to elevate the project category.

Table 1 – 2015 SWMF Projects and Associated Category

Category	2015 Project	Category Description
1	<ul style="list-style-type: none"> • Applegate Retrofit 	<ul style="list-style-type: none"> • Small scale SWMFs • Private SWMFs, potentially Industrial lands

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Category	2015 Project	Category Description
		<ul style="list-style-type: none"> • Site Plan SWM design • Retrofits to existing facilities • Hydrologic/Hydraulic - single event modelling
2	<ul style="list-style-type: none"> • Dingman Creek B4 	All of Category 1, plus: <ul style="list-style-type: none"> • Design and construction of Municipal SWMFs and/or Subdivision SWMFs • Hydrologic/Hydraulic/Erosion – dynamic and continuous simulation • Management of multi-disciplinary teams with several subconsultants • Public consultation
3	<ul style="list-style-type: none"> • Four Tributary C SWMFs: A, G, F, and temporary • Mud Creek East Branch SWM Servicing 	All of Category 2, plus: <ul style="list-style-type: none"> • Regional SWMF strategies involving multiple ponds • Stream Remediation/Naturalization • Trenchless technologies with large diameter pipes • Extensive local knowledge • Demonstrated ability to deliver large projects

The Municipal Class Environmental Assessment (EA) or Master Plan requirements have been fulfilled for all of these facilities, with the exception of the Mud Creek EA which is anticipated to be completed this winter. The functional design and Environmental Impact Studies (EIS) have also been completed for some of these facilities in order to proceed directly to construction. In addition to the GMIS projects, the Applegate SWMF is currently subject to frequent algae blooms and odours. An evaluation of the existing design and recommendations to improve performance of the facility is required. The general Scope of Work for each facility is shown in **Table 2**.

Table 2 – General Scope of Work for Assignments

Project	Functional Design	Retrofit Design	SLSR/ EIS	Detailed Design and Tender	Construction Administration	GMIS Construction Year
Tributary C	complete		complete	✓	✓	2016
Mud Creek			complete	✓	✓	2016
Dingman Tributary B4	✓		complete	✓	✓	2016
Applegate		✓	n/a	✓	✓	n/a

All facilities scheduled in the GMIS are subject to the Stormwater Management Facility “Just in Time” Design and Construction Process that was established in the 2014 Development Charges Study Update. In accordance with this process, the construction date of the SWMFs may change depending on the progress of development applications.

Consultant Selection Process:

A two stage Request for Expression of Interest/Request for Qualifications & Request for Proposal process was followed in accordance with Section 15.2(e) of the Procurement of Goods and Services Policy. The City received 14 expressions of interest.

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Twelve consultants were determined to be qualified, and placed into three categories based on their previous experience with design and construction specifically related to stormwater management. Each became eligible for projects within their category and all lower categories. Category 3 consultants were separated by the additional criteria of having demonstrated the ability to deliver large projects to the City. Consultants who qualified in this RFQ process will also be considered for other projects over the next two years.

A Quality Based Selection process was used to award the consultant assignments. The twelve consultants submitted general proposals to complete the projects within their Category. These proposals were assessed on the qualifications of staff, cost competitiveness, previous experience and familiarity with the study area. Based on the RFP evaluation, consultants were matched with a project within their Category or lower.

2015 Project Descriptions and Consultant Awards:

The following is a brief description of the projects and the recommended consultant. An index map is provided in Appendix “B” with individual location maps found in Appendices B1 through B5.

1. Tributary C SWMFs – AECOM Canada Ltd. & Matrix Solutions Inc.

The Tributary C SWMFs are GMIS projects located within the Downstream Thames Subwatershed (Appendix “B1”). The construction of these facilities will allow for approximately 84.5 hectares of residential and commercial development in the Riverbend area. The justification for this project was confirmed by the Schedule C Municipal Class Environmental Assessment (EA) which was completed by AECOM in 2013 which included an Environmental Impact Study (EIS). The EA recommended Alternative 10b Enhanced which consists of several stormwater management components including a wet pond facility, a linear conveyance / infiltration facility and a dry pond facility with an infiltration component. Following conclusion of the EA, a Functional Design was completed by Matrix Solutions Inc. in 2015 which progressed the level of design detail of the SWMFs and allowed for application of regulatory approvals. These facilities are scheduled for construction in 2016 in accordance with the GMIS with a budget of \$14.9M.

AECOM Canada Ltd. is recommended to complete the detailed design, monitoring and construction of the Tributary C facilities based on their extensive background knowledge. Matrix Solutions Inc. is recommended to continue with project support. This is a complex project that requires technical expertise in groundwater interactions, thermal mitigation, environmental protection and construction. The project will include three permanent SWM facilities, one interim facility, a comprehensive monitoring plan for groundwater, local water wells and the environment through pre-construction, construction and post construction stages.

2. Mud Creek East Branch SWM Servicing – CH2M

The Mud Creek East Branch is a GMIS project located within the Mud Creek subwatershed (Appendix “B5”). This area is subject to frequent flooding of Oxford Street West as well as public and private property due to an undersized culvert at the Canadian National Railway (CNR) crossing. CH2M is currently undertaking the Schedule B Municipal Class EA to confirm the preferred alternative which includes upsizing and lowering the CNR culvert and in-stream remediation works. Prior to finalizing this EA, it is necessary to update the Regulatory Floodplain mapping in coordination with the Upper Thames River Conservation Authority (UTRCA). Traditionally, this has not been completed during the EA process, however, going forward, it is recommended that Regulatory Floodplain mapping be coordinated with the

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UTRCA to prevent duplication and reduce costs for work that is mutually beneficial. In this case, it is particularly warranted given that the development of 54 hectares hinge on establishing the post-construction Regulatory Floodplain.

In accordance with section 15.2(g) of the Procurement of Goods and Services Policy, it is recommended that design fees to coordinate the detailed floodplain mapping with the UTRCA and establish a draft Regulatory Floodplain for the Mud Creek East Branch be awarded to CH2M. The continued use of this firm is of financial advantage to the City due to the fact that it has specific knowledge of the project and have undertaken work for which duplication would be required if another firm were to be appointed. Design fees are \$96,540 in addition to the original EA amount of \$221,771 awarded to CH2M in August 2014 for a total cost of \$318,311. The EA is anticipated to be completed this winter. Following the completion of the EA, the City intends to proceed to detailed design and construction of the preferred recommended alternative. Following construction of the works, the new floodplain can be established by the UTRCA.

In a future report, CH2M will be recommended to proceed with the detailed design and construction of the Mud Creek East Branch based on their extensive background knowledge. This is a complex project that will require technical expertise with trenchless technologies and stream remediation. A Committee report will be submitted in 2016 to formally award this project as they are the most qualified to conduct this work, subject to all technical and financial requirements being met.

3. Dingman Creek Tributary B4 – Ecosystem Recovery Inc.

The Dingman Creek Tributary B4 SWMF is a GMIS project located within the Dingman Creek Subwatershed (Appendix “B2”). The construction of this wet pond will facilitate approximately 150 hectares of residential development in southwest London. The need and justification for this project was identified through the Southwest Area Secondary Plan. In 2014, the City engaged Parsons Consulting to complete a Schedule B Municipal Class Environmental Assessment, Storm/Drainage and Stormwater Management Servicing Works for the Dingman Creek No. B-4 Stormwater Management Facility and Tributary Channel Improvement / Modification, which was finalized in April 2015 (B4 SWMF EA). We note that the recommendations of the 2015 EA process are considered independent of the upcoming Dingman Creek Subwatershed EA, awarded by Council in October 2015. Therefore, this facility may proceed in advance of completing the Dingman Creek EA. The B4 SWMF EA recommended a wet pond facility and stream enhancements to be completed by the developer. The proposed solution works to reduce the risk of surface flooding in the study area; provide adequate conveyance capacity and controls for minor and major system flows under current and future conditions; address requirements of the 2005 Dingman Creek Subwatershed Study Update; and address future growth requirements over the long term from a stormwater quality and/or quantity perspective as well as erosion control. This facility is scheduled for construction in 2016 in accordance with the GMIS with a budget of \$3.64M.

Ecosystem Recovery is recommended to proceed with the detailed design and construction of the Dingman Creek B4 facility based on their qualifications.

4. Applegate Retrofit – IBI Group

The existing Applegate SWMF is located within the Dingman Creek Subwatershed (Appendix “B3”). The facility was designed in March 1999 to provide stormwater quality/quantity and erosion control for 11.9 ha of the Applegate Estates Subdivision. Primarily due to the use of old design standards; this pond has a history of algae blooms and odours. The consultant will be evaluating retrofits to this facility to increase

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the treatment capacity and to reduce the growth of algae, thereby improving water quality discharging to the receiving Dingman Creek. The budget for this project is approximately \$600,000.

IBI Group is recommended to proceed with the investigative design of the Applegate Retrofit facility based on their experience with servicing in this area and its qualifications. The detailed design and construction will be administratively awarded in spring 2016 as the total consulting fees are anticipated to be under \$100,000 in accordance with Section 15.2 (c) of the Procurement of Goods and Services Policy.

Wickerson S-B Construction Administration: – AECOM Canada Ltd.:

The Wickerson S-B facility is a GMIS project located in the Dingman Creek subwatershed (Appendix “B4”). Construction of this facility is scheduled for this winter and will facilitate the development of 33 hectares of residential development. The total budget for this project is \$3.2M.

AECOM Canada Ltd. has satisfactorily completed two prior phases of the design of the Wickerson No. S-B SWMF (functional and detailed design appointments). AECOM Canada Ltd. has an experienced project team that has a clear understanding of the project scope and has proven experience with the detailed design of Wickerson S-B SWMF and similar projects of this nature. In accordance with section 15.2(g) of the Procurement of Goods and Services Policy, it is recommended that the construction administration of Wickerson SB SWMF be awarded to AECOM Canada Ltd. The continued use of this firm is of financial advantage to the City due to the fact that it has specific knowledge of the project and have undertaken work for which duplication would be required if another firm were to be appointed. Construction Administration fees are \$156,046 including contingency, excluding HST. It is noted that the previously awarded consulting fees for functional and detailed design amounted to \$305,807, bringing the total engineering fees to \$461,853, including contingency, excluding HST.

Provisional Items and Allowances:

In the development of the work plans for each project assignment, a risk based scenario analysis was completed with the goal of minimizing the probability of consulting fee cost overruns. To ensure the best value for money, several commonly incurred provisional items were included in the consultant appointments. These items include detailed archaeological investigations that could be triggered if artifacts are found onsite, extensive engagement with First Nations, additional survey work, and hours of construction supervision, if required. Any unutilized budget related to the project contingency, provisional items and allowances will be released at the conclusion of the project. The inclusion of these amounts from the onset of the project aligns with PricewaterhouseCooper’s 2014 audit recommendations.

Public Consultation:

Prior to construction of SWMFs in urbanized areas, a site visit meeting will be held with neighbouring residents to describe the scope and impacts of the proposed projects. This applies to three projects, namely the Tributary C SWMFs, Mud Creek East Branch Improvements, and Applegate retrofit. The Dingman Creek SWMF B4 is located in a greenfield area to service new development. It has already been subject to public EIS and EA processes.

CONCLUSIONS

Recommendation (a) appoints four qualified engineering consultants to conduct the design and supervise construction of stormwater management infrastructure. These facilities are identified in the 2014 Development Charges Study Update and 2016 Growth Management Implementation Strategy to be constructed in 2016 or 2017. A two

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stage process was followed to make recommendations under section 15.2(e) of the Procurement of Goods and Services Policy.

Recommendations (b) and (c) appoint consultants under section 15.2(g) of the Procurement of Goods and Services Policy: AECOM to complete the construction administration of the Wickerson S-B facility; and CH2M to coordinate floodplain modelling with the UTRCA prior to finalizing the Mud Creek EA.

The consulting work outlined above will allow for the construction of an estimated \$21.6M of capital stormwater infrastructure and will facilitate approximately 268 hectares of mixed residential and commercial development.

Acknowledgements

This document has been prepared within the Stormwater Engineering Division by Shawna Chambers, P.Eng. in collaboration with David Gough, P.Eng, Chris McIntosh, P.Eng., and Paul Titus, C.E.T.

SUBMITTED BY:	REVIEWED AND CONCURRED BY:
SCOTT MATHERS, MPA, P.ENG. DIVISION MANAGER, STORMWATER	JOHN LUCAS, P.ENG. DIRECTOR, WATER AND WASTEWATER
RECOMMENDED BY:	
JOHN BRAAM, P.ENG. MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER	

October 26, 2015

Cc: John Freeman, Manager, Purchasing and Supply
 Pat Shack, Budget Analyst
 Peter Christiaans, Director, Development Finance
 All Consultants

Attach: Appendix "A" – Sources of Financing
 Appendix "B" – Map Index
 Appendix "B1" – Tributary "C" Location Map
 Appendix "B2" – Dingman Tributary B4 Location Map
 Appendix "B3" – Applegate Location Map
 Appendix "B4" – Wickerson SB Location Map
 Appendix "B5" – Mud Creek East Branch Location Map

Chair and Members
Civic Works Committee

October 23, 2015
(Appoint Consulting Engineers)

RE: Design and Construction of Stormwater Management Facilities

Capital Project ES3020-RVBTC - SWM Facility - River Bend Trib 'C' (Subledger SWMRVBTC)
Capital Project ESSWM-DCB4 - SWM Facility - Dingman Creek No. B-4 (Subledger SWM14002)
Capital Project ES6089 - Applegate SWMF Remediation Works (Subledger SWM13005)
Capital Project ES2681 - Mud Creek East Br. Stormwater (Subledger SWM15004)
Capital Project ESSWM-SB - SWM Facility - Wickerson S-B (Subledger SWM13007)
AECOM Canada Ltd. - \$1,136,057 (excluding H.S.T.) - SWM Facilities - Tributary C
Matrix Solutions Inc. - \$91,402 (excluding H.S.T.) - SWM Facilities - Tributary C
Ecosystem Recovery Inc. - \$327,303 (excluding H.S.T.) - SWM Facility - Dingman Creek No. B4
IBI Group - \$37,446 (excluding H.S.T.) - Applegate SWMF Remediation & Erosion in Open Watercourses
CH2M Hill Company - \$96,540 (excluding H.S.T.) - Mud Creek East Br. Servicing
AECOM Canada Ltd. - \$156,046 (excluding H.S.T.) - SWM Facility - Wickerson S-B

FINANCE & CORPORATE SERVICES REPORT ON THE SOURCES OF FINANCING:

Finance & Corporate Services confirms that the cost of this project can be accommodated within the financing available for it in the Capital Works Budget and that, subject to the adoption of the recommendations of the Managing Director, Environmental & Engineering Services & City Engineer, the detailed source of financing for this project is:

	Approved Budget	Committed to Date	This Submission	Balance for Future Work
SUMMARY OF ESTIMATED EXPENDITURES				
ES3020-RVBTC-SWMF-RiverBend Trib 'C'				
Engineering	\$2,272,308	\$1,023,245	\$1,249,063	\$0
Land Purchase	1,616,098			1,616,098
Construction	1,211,986			1,211,986
City Related Expenses	6,308	6,308		0
	5,106,700	1,029,553	1,249,063	2,828,084
ESSWM-DCB4-SWMF-Dingman Creek No.B-4				
Engineering	682,965	227,132	333,063	122,770
Land Purchase	1,297,296			1,297,296
Construction	1,655,381			1,655,381
City Related Expenses	2,700	1,549		1,151
	3,638,342	228,681	333,063	3,076,598
ES6089-Applegate SWMF Remediation Works				
Engineering	70,000	12,639	38,105	19,256
Construction	200,000			200,000
City Related Expenses	10,000			10,000
	280,000	12,639	38,105	229,256
ES2681-Mud Creek E Branch Stormwater				
Engineering	668,953	570,714	98,239	0
Land Purchase	1,500,000			1,500,000
Construction	2,930,047			2,930,047
City Related Expenses	15,000	908		14,092
	5,114,000	571,622	98,239	4,444,139
ESSWM-SB - SWMF Wickerson S-B				
Engineering	902,259	330,928	158,792	412,539
Land Purchase	511,241	511,241		0
Construction	1,809,100			1,809,100
Relocate Utilities	4,100	4,100		0
	3,226,700	846,269	158,792	2,221,639
NET ESTIMATED EXPENDITURES	\$17,365,742	\$2,688,764	\$1,877,262 1)	\$12,799,716
SUMMARY OF FINANCING:				
ES3020-RVBTC-SWMF-RiverBend Trib 'C'				
Drawdown from Sewage Works Reserve Fund	\$89,900	\$18,125	\$21,989	\$49,786
Drawdown from City Services - Mjr. SWM Reserve Fund (Development Charges)	3) 2,096,800	1,011,428	1,085,372	0
Debenture Quota (Serviced through City Services-Mjr. SWM Reserve Fund (Development Charges))	3&4a) 2,920,000		141,702	2,778,298
	5,106,700	1,029,553	1,249,063	2,828,084
ESSWM-DCB4-SWMF-Dingman Creek No.B-4				
Drawdown from City Services - Mjr. SWM Reserve Fund (Development Charges)	3) 219,206	219,206		0
Debenture By-law No. W.-5585-184 (Serviced through City Services - Mjr. SWM Reserve Fund (Development Charges))	3) 3,419,136	9,475	333,063	3,076,598
	3,638,342	228,681	333,063	3,076,598
ES6089-Applegate SWMF Remediation Works				
Debenture Quota	4b) 74,000			74,000
Drawdown from Sewage Works Reserve Fund	206,000	12,639	38,105	155,256
	280,000	12,639	38,105	229,256
ES2681-Mud Creek E Branch Stormwater				
Debenture By-law No. W.-5558-198	185,900			185,900
Debenture By-law No. W.-5558-198 (Serviced through City Services-Mjr. SWM R.F. (Development Charges))	3&4c) 4,090,700			4,090,700
Drawdown from Sewage Works Reserve Fund	118,200	33,991	5,842	78,367
Drawdown from City Services-Mjr. SWM Reserve Fund (Development Charges)	3) 719,200	537,631	92,397	89,172
	5,114,000	571,622	98,239	4,444,139
ESSWM-SB - SWMF Wickerson S-B				
Drawdown from Sewage Works Reserve Fund	143,400	37,609	7,057	98,734
Debenture By-Law No. W.-5567-361 (Serviced through City Services-Mjr. SWM Reserve Fund - Development Charges)	3) 3,083,300	808,660	151,735	2,122,905
	3,226,700	846,269	158,792	2,221,639
TOTAL FINANCING	\$17,365,742	\$2,688,764	\$1,877,262	\$12,799,716

Chair and Members
Civic Works Committee

October 23, 2015
(Appoint Consulting Engineers)

RE: Design and Construction of Stormwater Management Facilities
Capital Project ES3020-RVBTC - SWM Facility - River Bend Trib 'C' (Subledger SWMRVBTC)
Capital Project ESSWM-DCB4 - SWM Facility - Dingman Creek No. B-4 (Subledger SWM14002)
Capital Project ES6089 - Applegate SWMF Remediation Works (Subledger SWM13005)
Capital Project ES2681 - Mud Creek East Br. Stormwater (Subledger SWM15004)
Capital Project ESSWM-SB - SWM Facility - Wickerson S-B (Subledger SWM13007)
AECOM Canada Ltd. - \$1,136,057 (excluding H.S.T.) - SWM Facilities - Tributary C
Matrix Solutions Inc. - \$91,402 (excluding H.S.T.) - SWM Facilities - Tributary C
Ecosystem Recovery Inc. - \$327,303 (excluding H.S.T.) - SWM Facility - Dingman Creek No. B4
IBI Group - \$37,446 (excluding H.S.T.) - Applegate SWMF Remediation & Erosion in Open Watercourses
CH2M Hill Company - \$96,540 (excluding H.S.T.) - Mud Creek East Br. Servicing
AECOM Canada Ltd. - \$156,046 (excluding H.S.T.) - SWM Facility - Wickerson S-B

1) FINANCIAL NOTE: (EXCLUDING H.S.T.)	ES3020-RVBTC	ESSWM-DCB4	ES6089	ES2681	ESSWM-SB
AECOM Canada Ltd.-SWMF-Tributary C	\$1,136,057				
Matrix Solutions Ltd.-SWMF-Tributary C	91,402				
Ecosystem Recovery Inc.-SWMF-Dingman Creek No. B4		327,303			
IBI Group-Applegate SWMF Remediation & Erosion in Open Watercourses			37,446		
CH2M Hill Company-Mud Creek East Branch Serv. Floodplain Assessment				96,540	
AECOM Canada Ltd.- Wickerson S-B					156,046
TOTAL PER CAPITAL PROJECT (EXCLUDING H.S.T.)	\$1,227,459	\$327,303	\$37,446	\$96,540	\$156,046

FINANCIAL NOTE (continued)

	TOTAL PER CONTRACT	
	Excluding HST	Incl. HST
AECOM Canada Ltd.-SWMF-Tributary C	\$1,136,057	\$1,156,052
Matrix Solutions Ltd.-SWMF-Tributary C	91,402	93,011
Ecosystem Recovery Inc.-SWMF-Dingman Creek No. B4	327,303	333,063
IBI Group-Applegate SWMF Remediation & Erosion in Open Watercourses	37,446	38,105
CH2M Hill Company-Mud Creek E Branch Servicing Floodplain Assessment	96,540	98,239
AECOM Canada Ltd.- Wickerson S-B	156,046	158,792
TOTAL PER CAPITAL PROJECT (EXCLUDING H.S.T.)	\$1,844,794	\$1,877,262

2) Financial Note: (Charges per Capital Project)	ES3020-RVBTC	ESSWM-DCB4	ES6089	ES2681	ESSWM-SB
Contract Price	\$1,227,459	\$327,303	\$37,446	\$96,540	\$156,046
Add: HST @13%	159,570	42,549	4,868	12,550	20,286
Total Contract Price Including Taxes	1,387,029	369,852	42,314	109,090	176,332
Less: HST Rebate	137,966	36,789	4,209	10,851	17,540
Net Contract Price	<u>\$1,249,063</u>	<u>\$333,063</u>	<u>\$38,105</u>	<u>\$98,239</u>	<u>\$158,792</u>

Financial Note (continued)

	TOTAL
Contract Price	\$1,844,794
Add: HST @13%	239,823
Total Contract Price Including Taxes	2,084,617
Less: HST Rebate	207,355
Net Contract Price	<u>\$1,877,262</u>

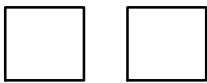
3) Development charges have been utilized in accordance with the underlying legislation and the Development Charges Background Studies completed in 2014.

NOTE TO CITY CLERK:

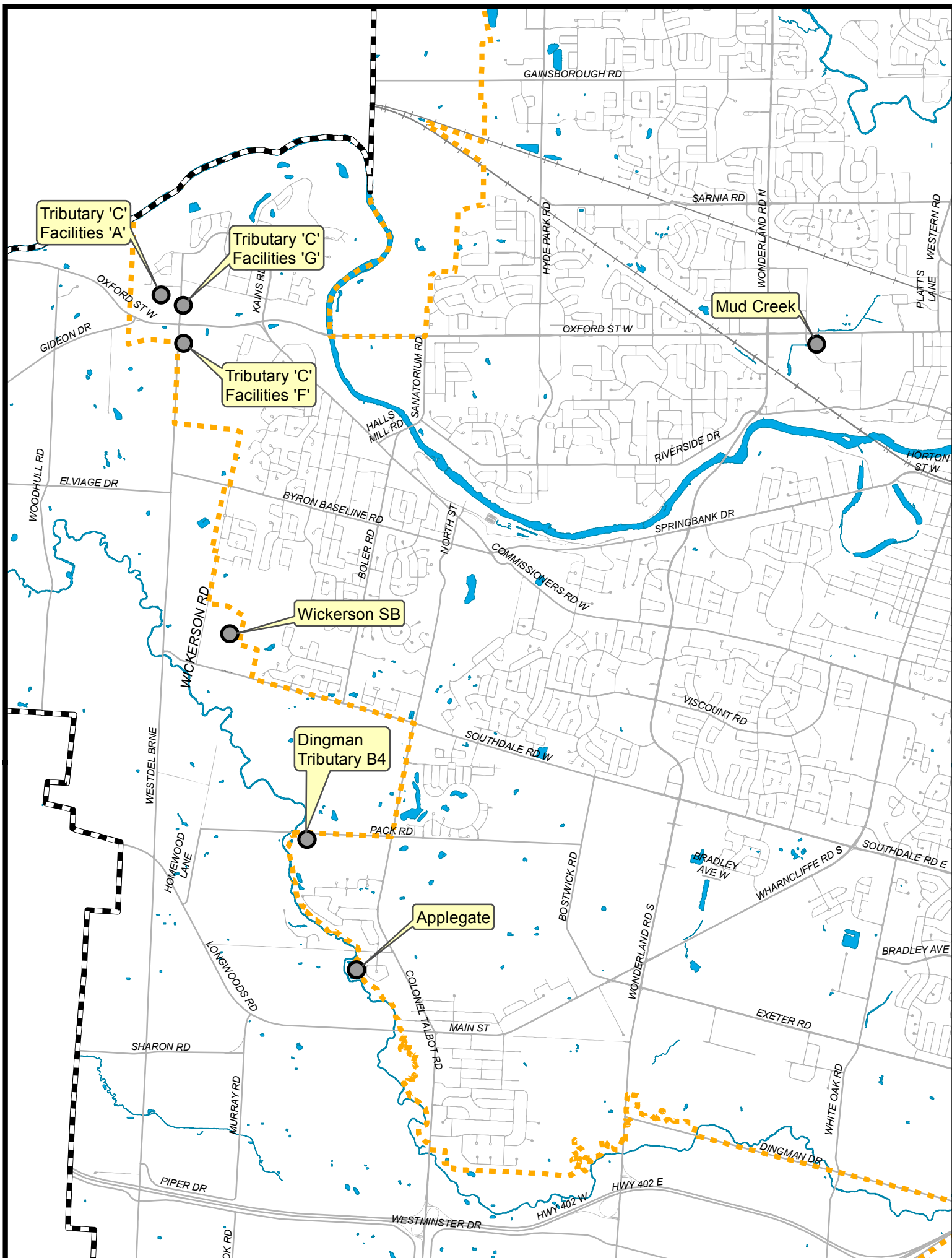
- 4) Administration hereby certifies that the estimated amounts payable in respect of this project does not exceed the annual financial debt and obligation limit for the Municipality of Municipal Affairs in accordance with the provisions of Ontario Regulation 403/02 made under the Municipal Act, and accordingly the City Clerk is hereby requested to prepare and introduce the necessary authorizing by-laws.
- a) An authorizing by-law should be drafted to secure debenture financing for project ES3020-RVBTC - SWM Facility - River Bend Trib. 'C' for the net amount to be debentured of \$2,920,000.
- b) An authorizing by-law should be drafted to secure debenture financing for project ES6089 - Applegate SWMF Remediation Works for the net amount to be debentured of \$74,000.
- c) The City Clerk be authorized to increase Debenture By-law No. W.-5558-198 by \$2,414,000 from \$1,862,600 to \$4,276,600.

JG

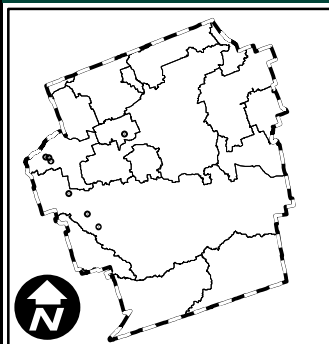
 Alan Dunbar
 Manager of Financial Planning & Policy








APPENDIX 'B'



SWM FACILITY INDEX MAP



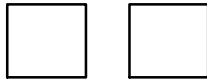
Legend:

-  Water Body
-  Urban Growth Boundary
-  Road
-  Railroad
-  City Limits

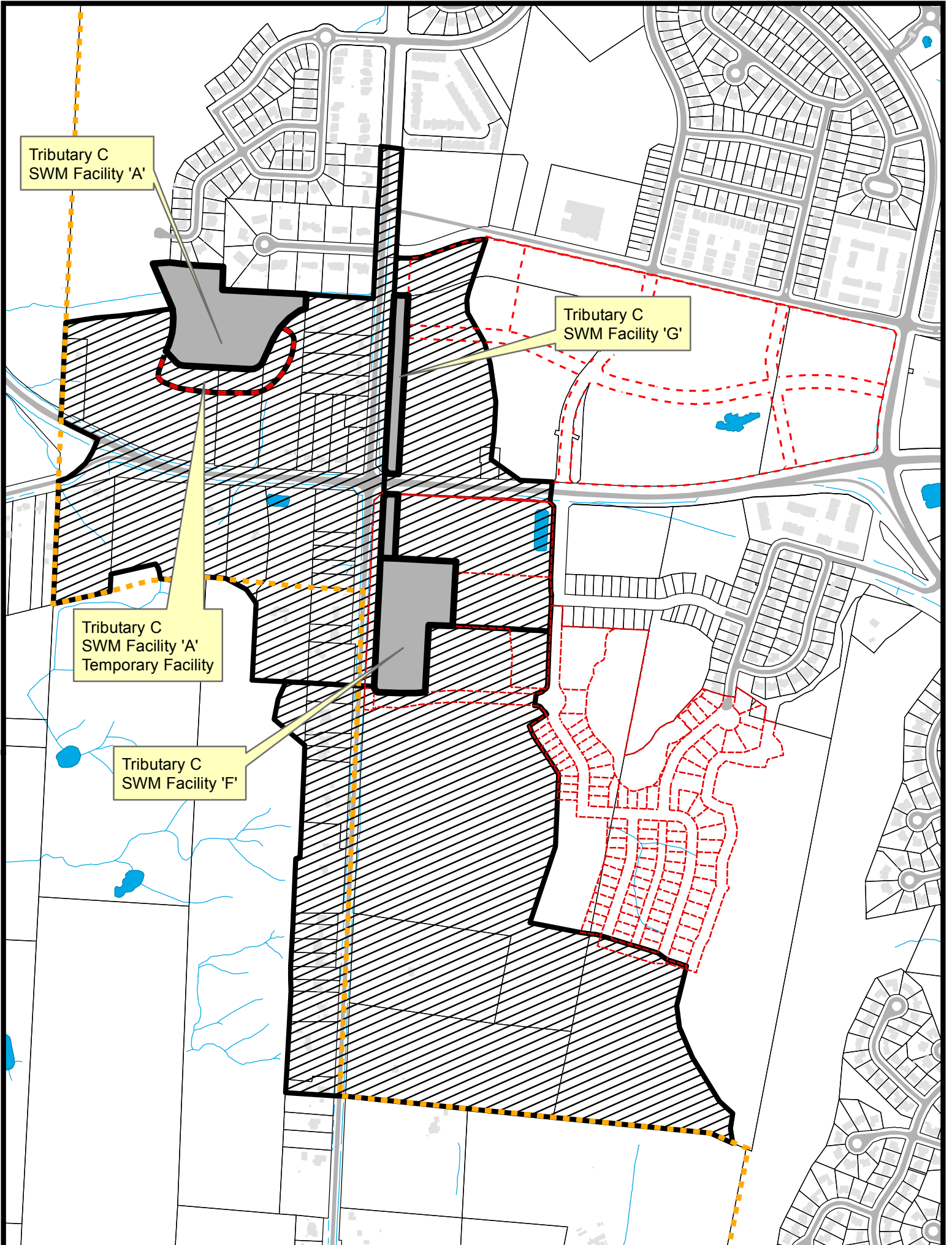
Map Produced by the Stormwater Engineering Division October 8, 2015 PT



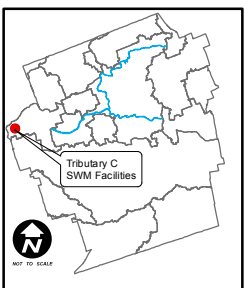
London CANADA 300 Dufferin Avenue, PO Box 5035 London, Ontario N6A 4L9 www.London.ca



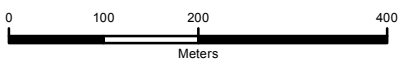
APPENDIX 'B1'







TRIBUTARY 'C' SWM FACILITIES








1:8,000



Legend:

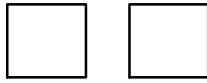
-  Proposed Tributary C SWM Facilities
-  Tributary C SWM Facility Drainage Catchment Areas
-  Land Parcel
-  Proposed Subdivision Lotting

-  Water Body
-  Urban Growth Boundary
-  Road
-  Railroad
-  City Limits

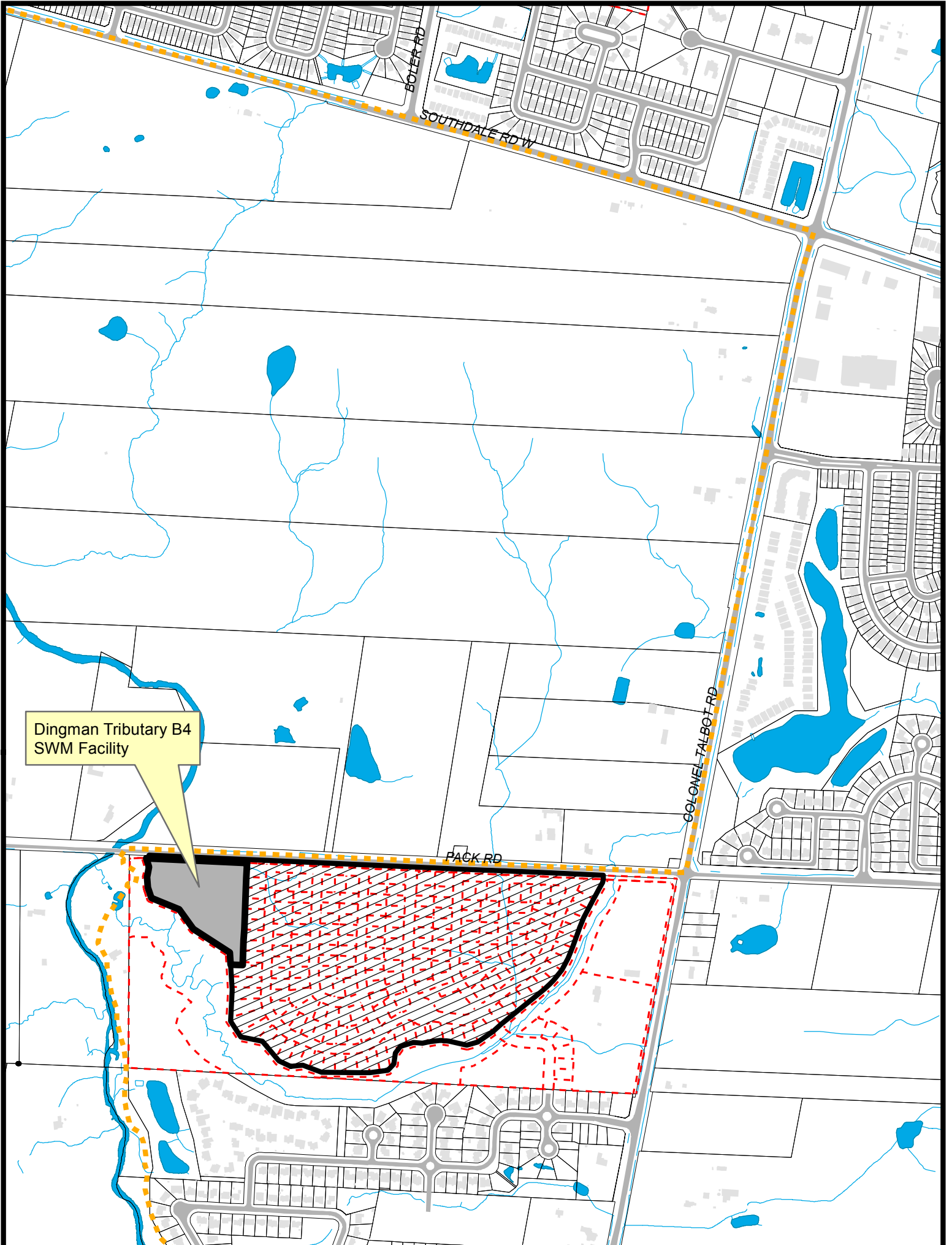
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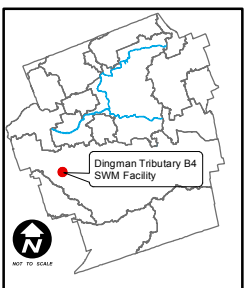
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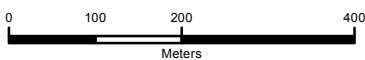
APPENDIX 'B2'












DINGMAN TRIBUTARY B4 SWM FACILITY



1:8,750



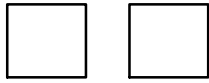
Legend:

-  Proposed Dingman Tributary B4 SWM Facility
-  Dingman Tributary B4 SWM Facility Drainage Catchment Area
-  Land Parcel
-  Proposed Subdivision Lotting
-  Water Body
-  Urban Growth Boundary
-  Road
-  Railroad
-  City Limits

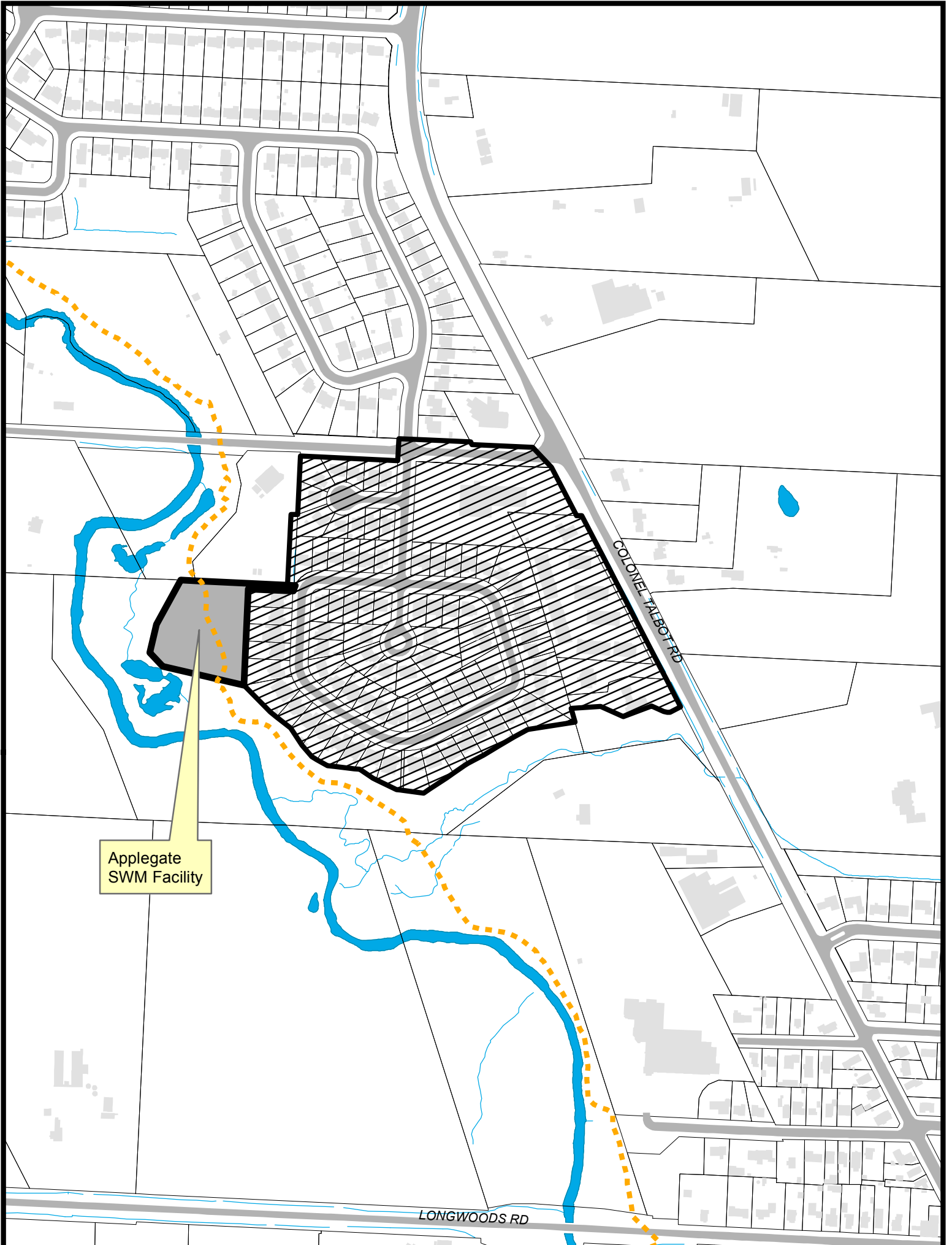
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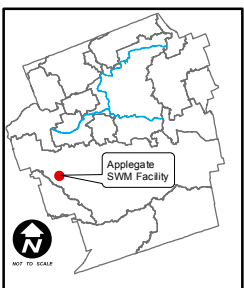


APPENDIX 'B3'

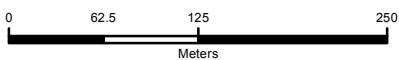


Applegate SWM Facility

APPLEGATE SWM FACILITY



1:5,000



Legend:

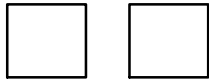
- Existing Applegate SWM Facility
- Applegate SWM Facility Drainage Catchment Area
- Land Parcel

- Water Body
- Urban Growth Boundary
- Road
- Railroad
- City Limits

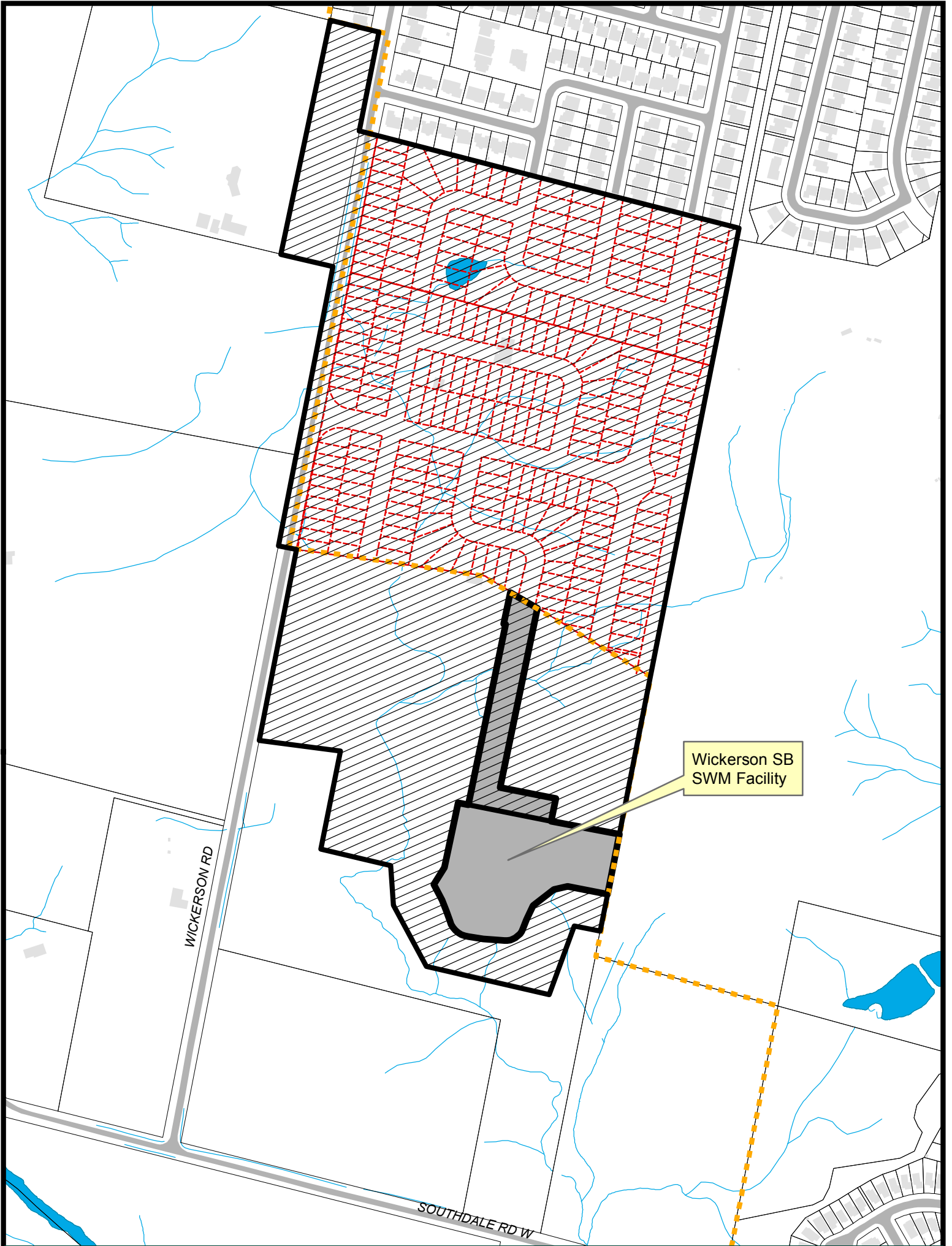
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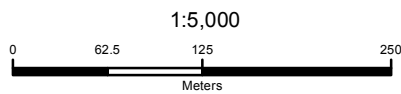


APPENDIX 'B4'



Wickerson SB SWM Facility

WICKERSON SB SWM FACILITY



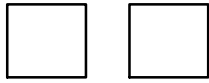
Legend:

- Proposed Wickerson SB SWM Facility
- Wickerson SB SWM Facility Drainage Catchment Area
- Land Parcel
- Proposed Subdivision Lotting
- Water Body
- Urban Growth Boundary
- Road
- Railroad
- City Limits

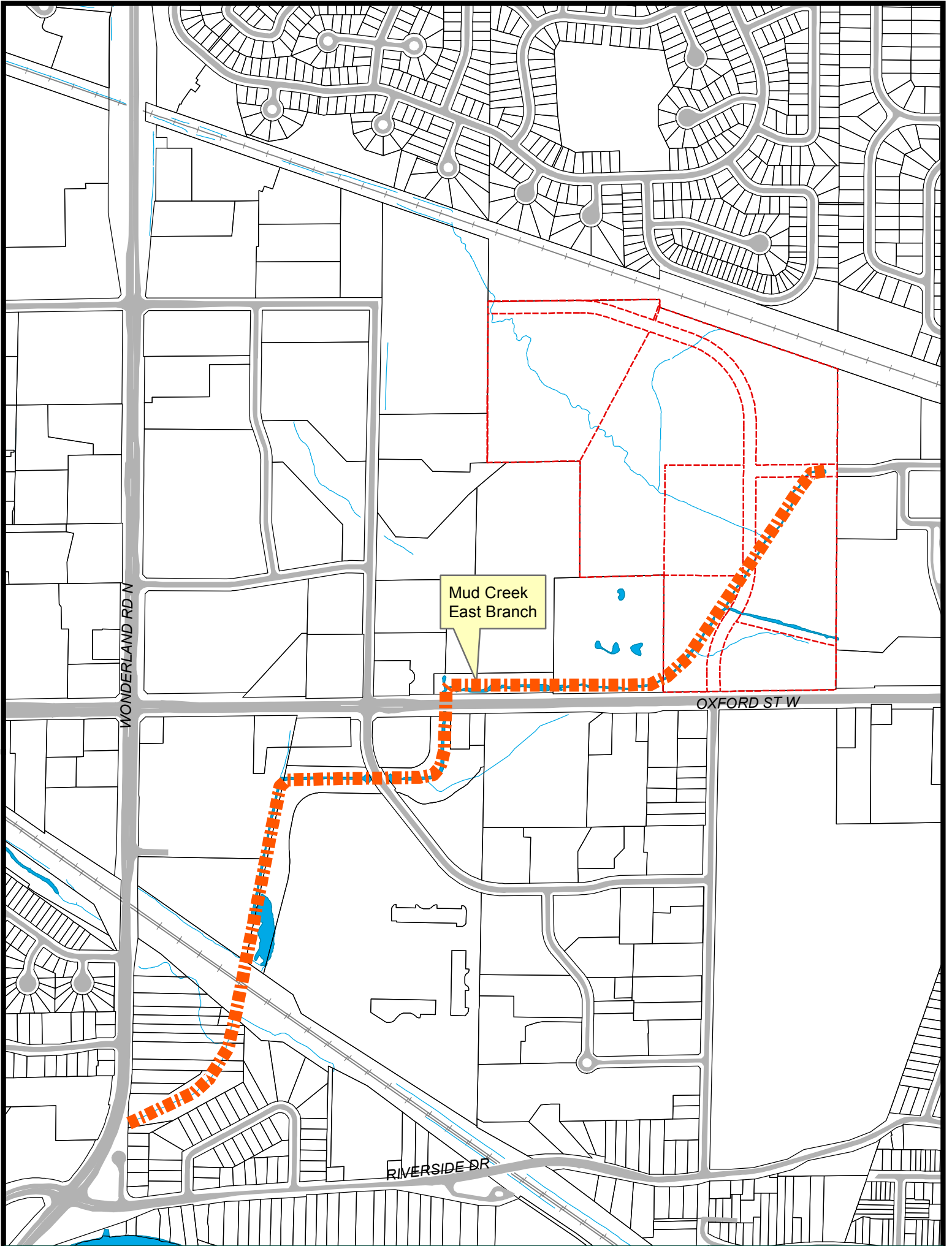
Map Produced by the Stormwater Engineering Division October 8, 2015 PT



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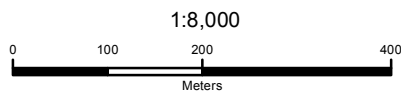


APPENDIX 'B5'



Mud Creek East Branch

MUD CREEK EAST BRANCH



Legend:

- Land Parcel
- Proposed Subdivision Lotting
- Mud Creek East Branch
- Water Body
- Road
- Railroad
- City Limits

Map Produced by the Stormwater Engineering Division
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