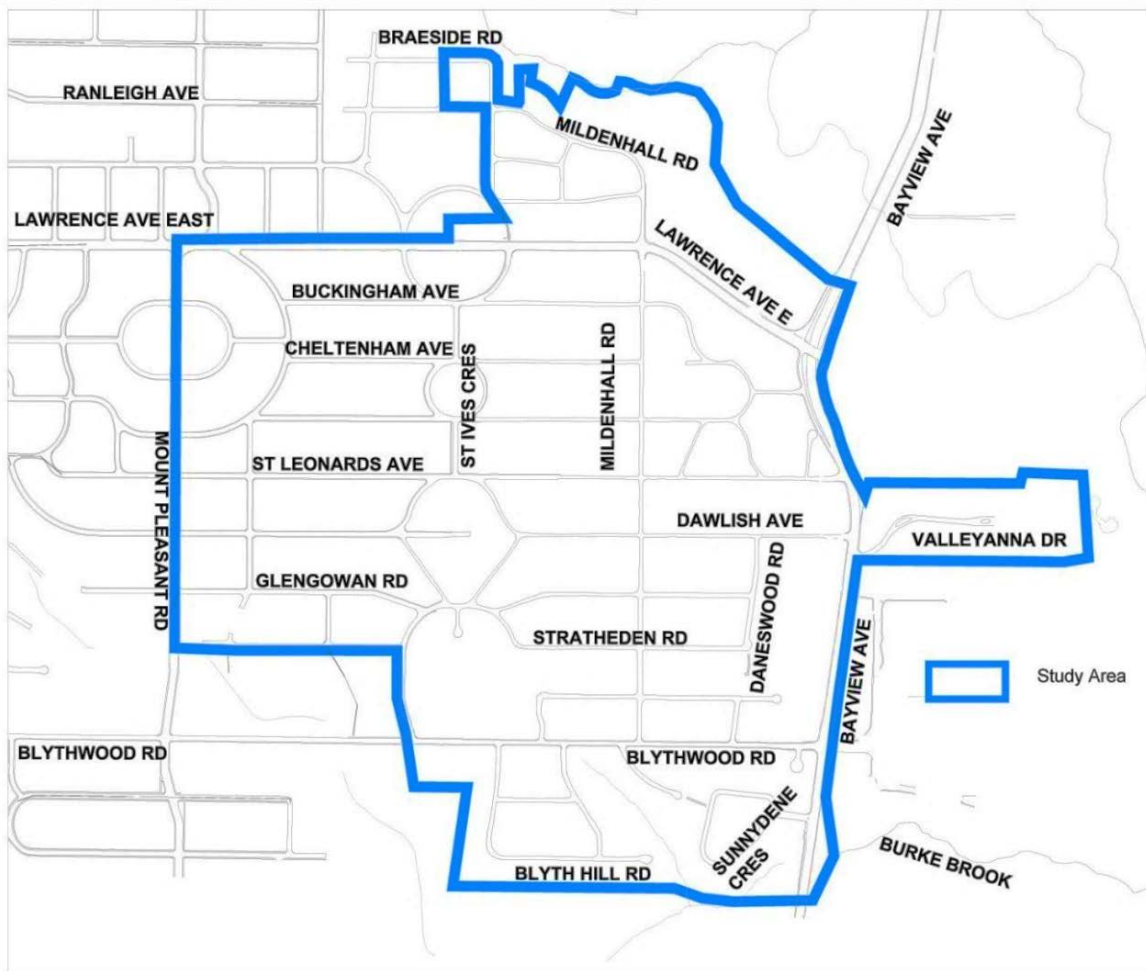
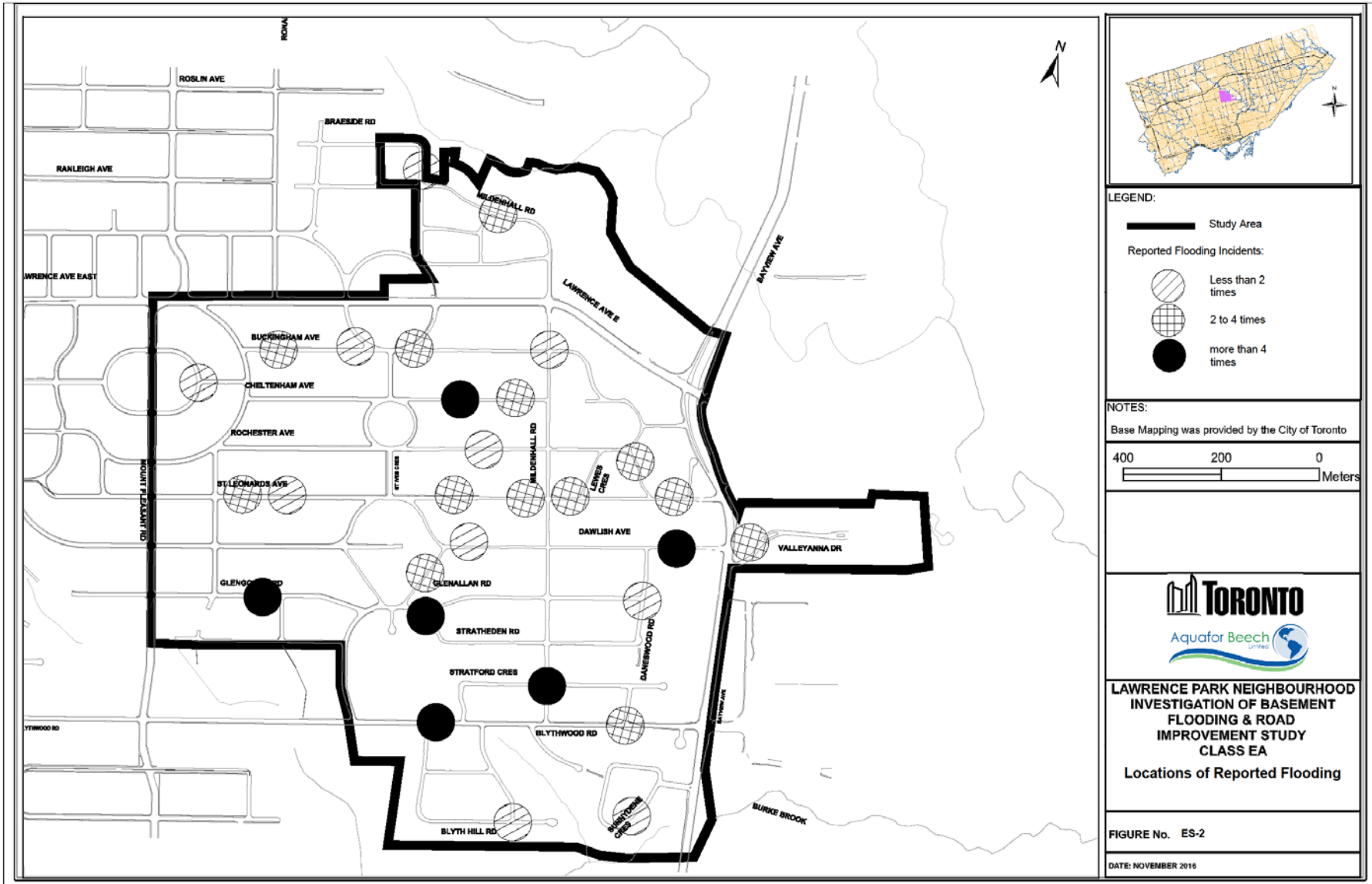


Attachment 1. Lawrence Park Neighbourhood Study Area Map



Attachment 2. Reported Incidents of Basement Flooding



Attachment 3. Summary of Road, Drainage and Sidewalk Alternatives

Road Classification	Alternative No.	Description
Local Road	Alternative 1	"Do Nothing" - Maintain the existing road width and features (i.e., drainage system and sidewalks)
	Alternative 2	Rural drainage/8.5m road width/1 sidewalk
	Alternative 3	Urban drainage/8.5m road width/1 sidewalk
	Alternative 4	Rural drainage/7.2m road width/1 sidewalk
	Alternative 5	Urban drainage/7.2m road width/1 sidewalk
	Alternative 6	Rural drainage/8.5m road width/no sidewalk
	Alternative 7	Urban drainage/8.5m road width/no sidewalk
	Alternative 8	Rural drainage/7.2m road width/no sidewalk
	Alternative 9	Urban drainage/7.2m road width/no sidewalk
Collector Road (Mildenhall Road between Lawrence Avenue and Blythwood Road)	Alternative 1	"Do Nothing" - Maintain the existing road width and features (i.e., drainage system and sidewalks)
	Alternative 2	Urban drainage/9.5m road width/2 sidewalks
	Alternative 3	Urban drainage/9.5m road width/1 sidewalk
	Alternative 4	Urban drainage/8.5m road width/2 sidewalks
	Alternative 5	Urban drainage/8.5m road width/1 sidewalk
	Alternative 6*	Urban drainage/7.2m road width/2 sidewalks
	Alternative 7*	Urban drainage/7.2m road width/1 sidewalk

Note:

*Collector Road Alternatives 6 and 7 were added after the initial evaluation of alternatives presented at PIC#3 based on public input.

**Rural drainage consists of culverts and ditches.

***Urban drainage consists of curb and gutter road drainage and underground storm sewers.

Attachment 4. Summary of Basement Flooding Alternatives

Sewer System	Alternative No.	Description
Partially Separated Sanitary Sewers	Alternative 1	“Do Nothing” – maintain existing sewer system
	Alternative 2	Increase Conveyance (pipe sizes)
	Alternative 3	Provide Offline Storage (outside roadway tanks)
Sanitary Sewers	Alternative 1	“Do Nothing” – maintain existing sewer system
	Alternative 2	Increase Conveyance (pipe sizes)
	Alternative 3	Provide In-line Storage (within roadway oversized pipes)
	Alternative 4	Increase Conveyance and Provide In-line Storage

Attachment 5. Evaluation Criteria for Road, Drainage and Sidewalk Alternatives

Category	Criteria	Description of Criteria	Measures for Assigning Scores	*Weighting Factor
Socio-Cultural	Pedestrian Safety for Local Roads	Ability of alternative to provide safe conditions for pedestrians on local roads	Scores are assigned as follows: <ul style="list-style-type: none"> • 4 – one sidewalk with boulevard separation between sidewalk/road • 3 – sidewalk on one side without boulevard • 0 – no sidewalk 	2
	Pedestrian Safety for Collector Roads (Mildenhall)	Ability of alternative to provide safe conditions for pedestrians on collector roads	Scores are assigned as follows: <ul style="list-style-type: none"> • 4 – sidewalks on both sides without boulevard • 3 – sidewalk on one side without boulevard • 0 – no sidewalk 	2
	Impact on Urban Greenspace/ Recreational Uses (Street Trees, Parks, Open Spaces)	Potential of alternative to impact vegetation, street trees, public parks and open spaces and associated wildlife	Scores are assigned as follows: <ul style="list-style-type: none"> • 4 – do nothing, results in no tree removals • 3 – lowest estimated tree removals of alternatives 2 - 9 • 2 – alternatives within 10% of the alternative with the lowest estimated tree removals • 1 – alternatives within 20% of the alternative with the lowest estimated tree removals • 0 – alternatives with greater than 20% more estimated tree removals as compared to alternative with the lowest estimated tree removals 	4

Category	Criteria	Description of Criteria	Measures for Assigning Scores	Weighting Factor
Technical Effectiveness	Surface Flooding	Ability of alternative to reduce surface flooding associated with public property issues	Scores are assigned as follows: <ul style="list-style-type: none"> • 4 - significant reduction in surface flooding risks • 0 – no change in surface flooding risk 	2
	Stormwater Quality	Potential impact of the alternative on stormwater quality	Scores are assigned as follows: <ul style="list-style-type: none"> • 4 - improvement in stormwater quality discharges at outfalls • 0 – no change 	1
	Pavement Structural Conditions	Ability of alternative to improve existing roadway structure	Scores are assigned as follows: <ul style="list-style-type: none"> • 4 – structure of roadway meets the provincial and city pavement condition standards • 0 – structure of roadway does not meet the provincial and city pavement condition standards 	1
	Pedestrian Connectivity	Ability of alternative to provide link to existing destinations	Scores are assigned as follows, and are only applicable to the following street sections identified as Priority Connections: <ul style="list-style-type: none"> • 4 – creates a priority pedestrian linkage or maintains an existing sidewalk • 0 – does not create a high priority pedestrian linkage 	1

Category	Criteria	Description of Criteria	Measures for Assigning Scores	*Weighting Factor
Technical Effectiveness	Accessibility for Maintenance & Emergency Vehicle for Local Roads	Ability of the alternative to provide safe conditions for emergency and operation vehicles	Scores are assigned as follows: <ul style="list-style-type: none"> • 4 – 8.5m pavement width • 2 – 7.2m pavement width • 0 < 7.0 m pavement width 	1
	Accessibility for Maintenance & Emergency Vehicle for Collector Roads (Mildenhall)	Ability of the alternative to provide safe conditions for emergency and operation vehicles	Scores are assigned as follows: <ul style="list-style-type: none"> • 4 – 9.5m pavement width • 3 – 8.5m pavement width • 2 – 7.2m pavement width • 0 < 7.0 m pavement width 	1
Economic	Capital Costs	The relative estimated capital cost as compared to the other alternatives	Scores are assigned as follows: <ul style="list-style-type: none"> • 4 – no capital cost • 3 – lowest capital cost of alternatives 2 through 9 • 2 – within 10% of the lowest of alternatives 2 through 9 • 1 – within 20% of the lowest of alternatives 2 through 9 • 0 – greater than 20% of the lowest of alternatives 2 through 9 	1

Notes: Weighting Factor for Pedestrian Safety, Impact on Urban Greenspace and Surface/Basement Flooding is assigned a factor of at least 2 because these specific criteria were identified as "Most Important" from the community. Other Criteria which fall under the categories of Socio-Cultural, Technical Effectiveness, Natural Environment and Economic were also considered but were not included in the evaluation as they are not relevant or scored equally for each alternative. In situations where the top two alternatives scored within one point of each other a qualitative assessment was made in order to select the preferred alternative.

Attachment 6. Evaluation Criteria for Basement Flooding Alternatives

Category	Criteria	Description of Criteria	Measures for Assigning Scores
<p>Socio-Cultural</p>	<p>Impact on Urban Greenspace/Recreational Uses (Street Trees, Parks, Open Spaces)</p>	<p>Potential of alternative to impact vegetation, street trees, public parks and open spaces and associated wildlife</p>	<p>Scores are assigned as follows:</p> <ul style="list-style-type: none"> • 4 – less than 20% of moderate - high caliber trees are impacted • 3 – 20-40% of moderate - high caliber trees are impacted • 2 – 41-60% of moderate - high caliber trees are impacted • 1 – 61-80% of moderate - high caliber trees are impacted • 0 – greater than 80% of moderate - high caliber trees are impacted
	<p>Community Impact - Disruption to Community During Construction</p>	<p>Potential to impact the community in terms of access to the site, visibility, road access, construction of mitigation measure in valley lands / parks, possible noise / odour / light, short-term construction impact, etc.</p>	<p>Scores are assigned as follows:</p> <ul style="list-style-type: none"> • 4 – no impact on community • 3 – minor impact on community • 2 – moderate impact on community • 1 – significant impact on community

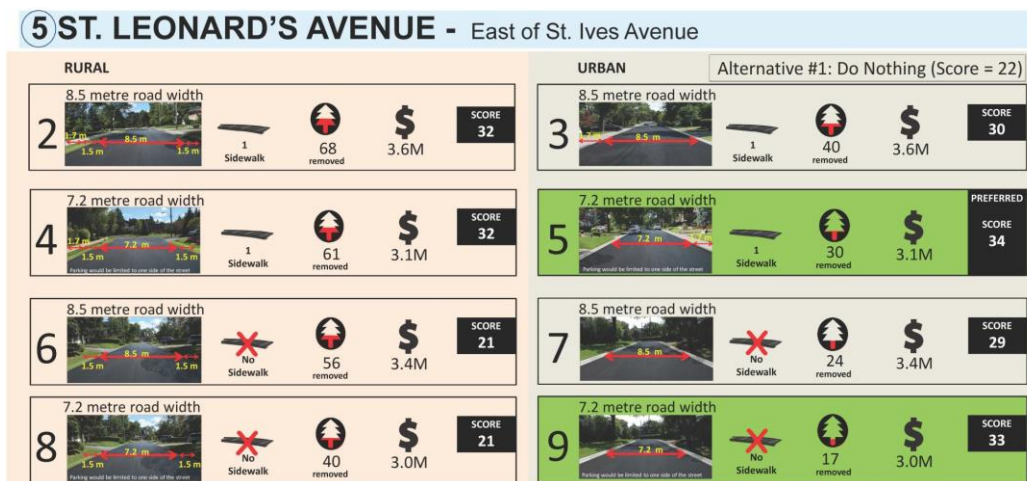
Category	Criteria	Description of Criteria	Measures for Assigning Scores
Technical Effectiveness	Effectiveness of Control Measure	Effectiveness of the alternative in the reduction of basement flooding and/or surface flooding in the study area based on the design criteria considered.	Scores are assigned as follows: <ul style="list-style-type: none"> • 4 –achieves stated requirements or better • 3 –achieves stated requirements • 2 – limited effectiveness in achieving stated requirements • 0 – no effectiveness in achieving stated requirements
	Feasibility of Control Measure	The extent to which the alternative is feasible in terms of availability of space, accessibility, ease of construction, construction requirements.	Scores are assigned as follows: <ul style="list-style-type: none"> • 4 – feasible in terms of stated considerations • 3 – partially feasible in terms of stated considerations • 2 – limited feasibility in terms of stated considerations. • 0 – not feasible in terms of stated considerations
	Downstream Impacts on Downstream Trunk Sewers / Treatment Facilities / Receiving Water	The impacts of the alternative in increasing the peak flow rate and total flow in the downstream receiving water system	Scores are assigned as follows: <ul style="list-style-type: none"> • 4 – reduces the peak flow and total flow downstream • 3 – maintains the peak flow and total flow downstream • 2 – moderate impact in increasing the peak flow and total flow downstream • 1 – significant impact in increasing the peak flow and total flow downstream

Category	Criteria	Description of Criteria	Measures for Assigning Scores
Natural Environment	Potential Impact on Terrestrial Systems (Vegetation, Trees in Valleys and Parks, Wildlife)	Potential to alternative to impact terrestrial habitats or systems, including terrestrial features / functions (ANSIs, ESAs), unique vegetation species or wildlife	Scores are assigned as follows: <ul style="list-style-type: none"> • 4 – no impact on usage or vegetation • 3 – limited impact on usage or vegetation • 2 – moderate impact on usage or vegetation • 1 – significant impact on usage or vegetation
	Potential Impact on Aquatic Systems, Aquatic Life and Aquatic Vegetation	Potential to impact aquatic habitats or systems, including possible impacts on aquatic life, features / functions	Scores are assigned as follows: <ul style="list-style-type: none"> • 4 – improves aquatic habitats or systems • 3 – no impact on aquatic habitats or systems • 2 – moderate impact on aquatic habitats or systems • 1 – significant impact on aquatic habitats or systems
Economic	Capital Costs	The relative estimated capital cost as compared to the other alternatives	Scores are assigned as follows: <ul style="list-style-type: none"> • 4 – no capital cost • 3 – lowest capital cost of alternatives • 2 – within 10% of the lowest of alternatives • 1 – within 20% of the lowest of alternatives • 0 – greater than 20% of the lowest of alternatives
	Operating/ Maintenance Costs	The relative operation/maintenance cost as compared to the other alternatives	Scores are assigned as follows: <ul style="list-style-type: none"> • 4 – lowest overall cost • 3 – lowest of alternatives • 2 – within 10% of alternatives • 1 – within 20% of alternatives • 0 – greater than 20% of alternatives

Attachment 7. Road, Drainage and Sidewalk Alternatives Evaluation – St. Leonards Avenue

	Alt #2	Alt #3	Alt #4	Alt #5	Alt #6	Alt #7	Alt #8	Alt #9
Socio-Cultural								
Pedestrian Safety	8	6	8	6	0	0	0	0
Impact on Urban Greenspace / Recreational Use (Street Trees, Parks, Open Spaces)	0	0	0	4	0	8	0	12
Technical Effectiveness								
Surface Flooding	8	8	8	8	8	8	8	8
Stormwater Quality Improvement	4	4	4	4	4	4	4	4
Pavement Structural Conditions	4	4	4	4	4	4	4	4
Pedestrian Connectivity	4	4	4	4	0	0	0	0
Accessibility for Maintenance & Emergency Vehicle	4	4	2	2	4	4	2	2
Economic								
Capital Costs	0	0	2	2	1	1	3	3
Total	32	30	32	34	21	29	21	33

*Alternative 1 represents the "Do Nothing" Alternative



Attachment 8. Partially-Separated & Separated Sanitary Sewer System Alternatives Evaluation

Partially-Separated Sewer System

		Alt #2	Alt #3
Socio-Cultural	Impact on Urban Greenspace/Recreational Use (Trees, Parks, Open Spaces)	4	4
	Disruption to Community During Construction	2	2
Technical Effectiveness	Effectiveness of Control Measure	4	3
	Feasibility of Control Measure	4	2
	Downstream Impacts on Downstream Trunk Sewers/Treatment Facilities/Receiving Water	2	3
Natural Environment	Potential Impact on Terrestrial Systems (Vegetation, Trees, Wildlife)	4	3
	Potential Impact on Aquatic Systems, Aquatic Life and Aquatic Vegetation	3	3
Economic	Capital Costs	4	3
	O & M Cost	4	2
Total		31	25

*Alternative 1 represents the "Do Nothing" Alternative

Separated Sewer System

		Alt #2	Alt #3	Alt #4
Socio-Cultural	Impact on Urban Greenspace/Recreational Use (Trees, Parks, Open Spaces)	3	4	4
	Disruption to Community During Construction	2	1	2
Technical Effectiveness	Effectiveness of Control Measure	4	4	4
	Feasibility of Control Measure	2	0	3
	Downstream Impacts on Downstream Trunk Sewers/Treatment Facilities/Receiving Water	1	3	3
Natural Environment	Potential Impact on Terrestrial Systems (Vegetation, Trees, Wildlife)	1	2	2
	Potential Impact on Aquatic Systems, Aquatic Life and Aquatic Vegetation	2	3	3
Economic	Capital Costs	3	2	4
	O & M Cost	4	1	3
Total		22	20	28

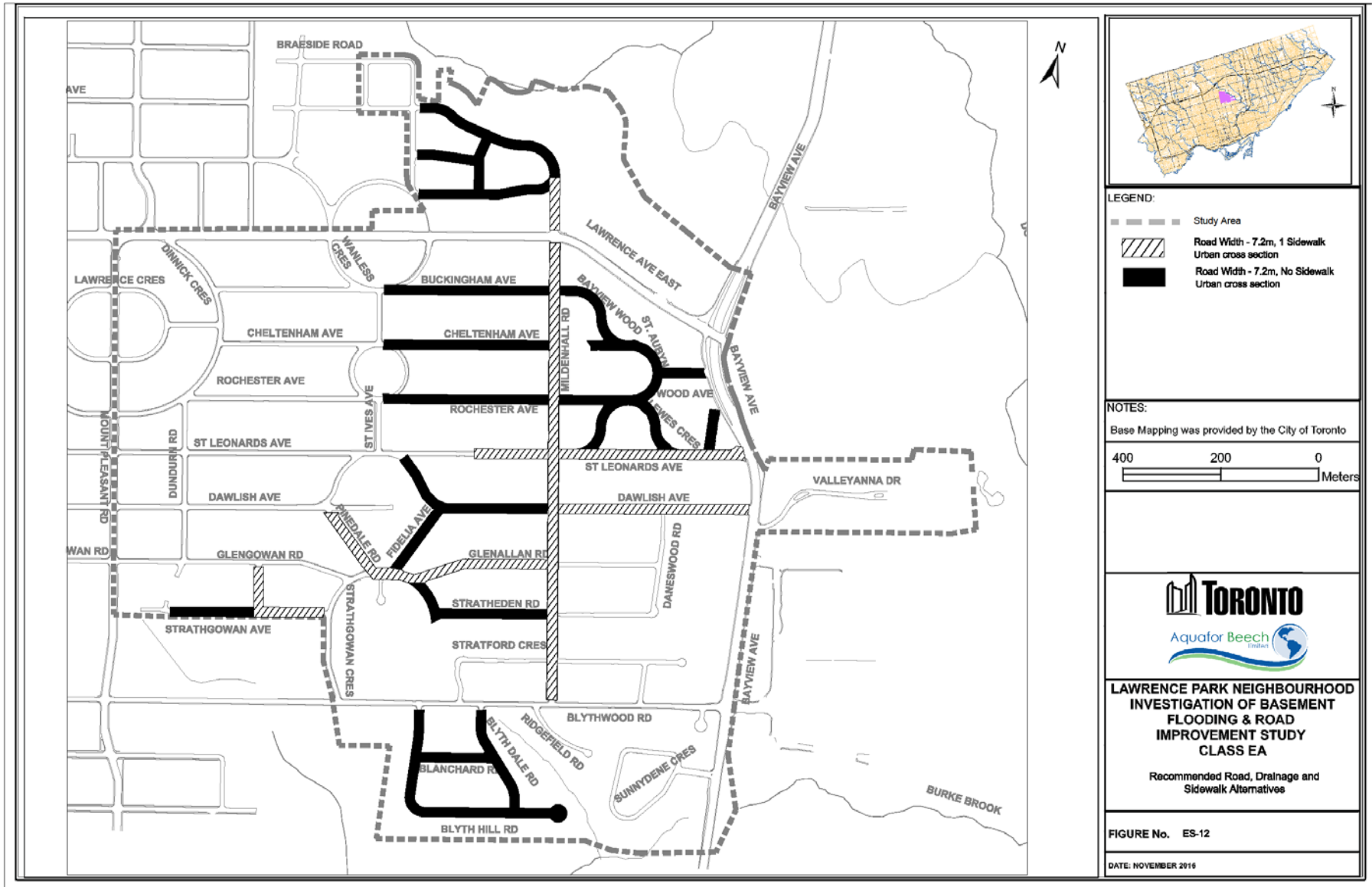
*Alternative 1 represents the "Do Nothing" Alternative

Attachment 9. Summary of Public Consultation Activities

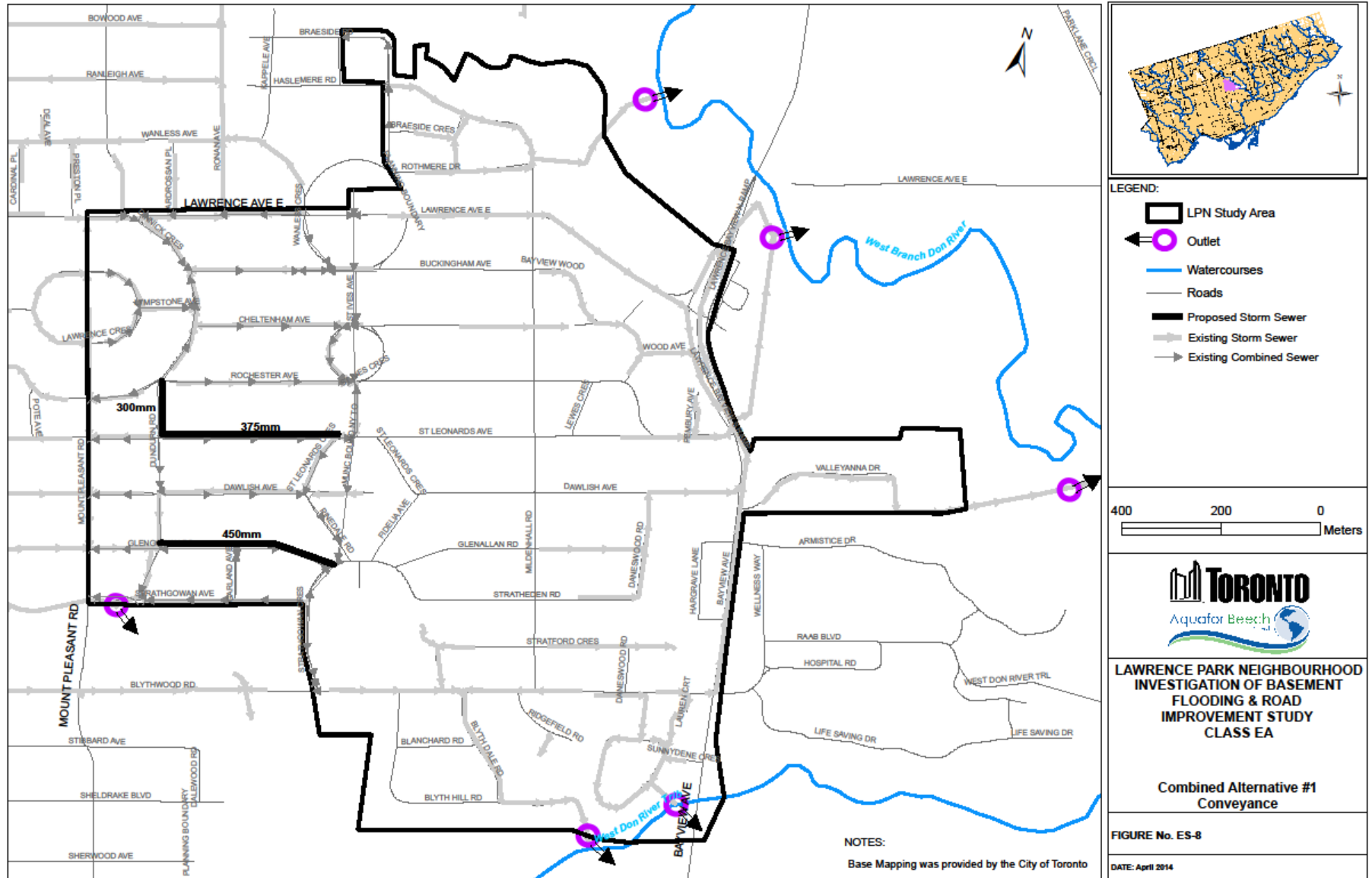
Milestone	Date	Description
Notice of Commencement	January 17, 2013	Published in the local newspaper and distributed to approximately 2000 properties in the study area via Canada Post.
Questionnaire	January, February 2013	Distributed all properties in the study area. Received 387 responses.
Public Information Centre #1 (approximately 100 people attended)	April 22, 2013	Presented questionnaire responses and study area problems/opportunities. Received feedback Invited applicants to Community Advisory Group.
Community Advisory Group #1	November 5, 2013	Presented content for PIC#2. Presentation material was revised based on feedback.
Public Information Centre #2 (approximately 100 people attended)	November 19, 2013	Presented summary of findings and long list of alternatives for road cross sections and evaluation criteria. Small group discussions and feedback received.
Community Advisory Group #2	June 16, 2014	Presented refinement of road cross section alternatives and addition of alternatives with no sidewalks on local roads. Presented Basement Flooding preliminary recommended solutions.
Community Advisory Group #3	April 23, 2015	Presented sample content to be presented at upcoming PICs and notification of events.

Milestone	Date	Description
Public Information Centre #3 (approximately 130 people attended)	May 13, 14, 19 & 21, 2015	Held four sessions of same content, specific to four geographic groupings within the study area Presented preliminary preferred alternative solutions addressing basement flooding and road structure and safety issues.
Community Advisory Group #4	April 5, 2016	Presented sample content to be presented at upcoming PIC.
Public Information Centre #4 (approximately 150 people attended)	May 26, 2016	Held an Open House with displays boards showing recommended road reconstruction works and potential tree impacts for each street. Presented review of study purpose and process; an update on the work completed since PIC #3; revised plan and recommendations; and next steps.

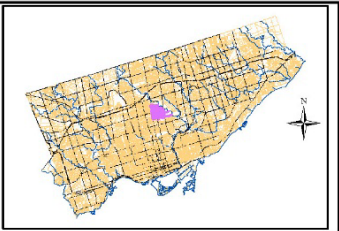
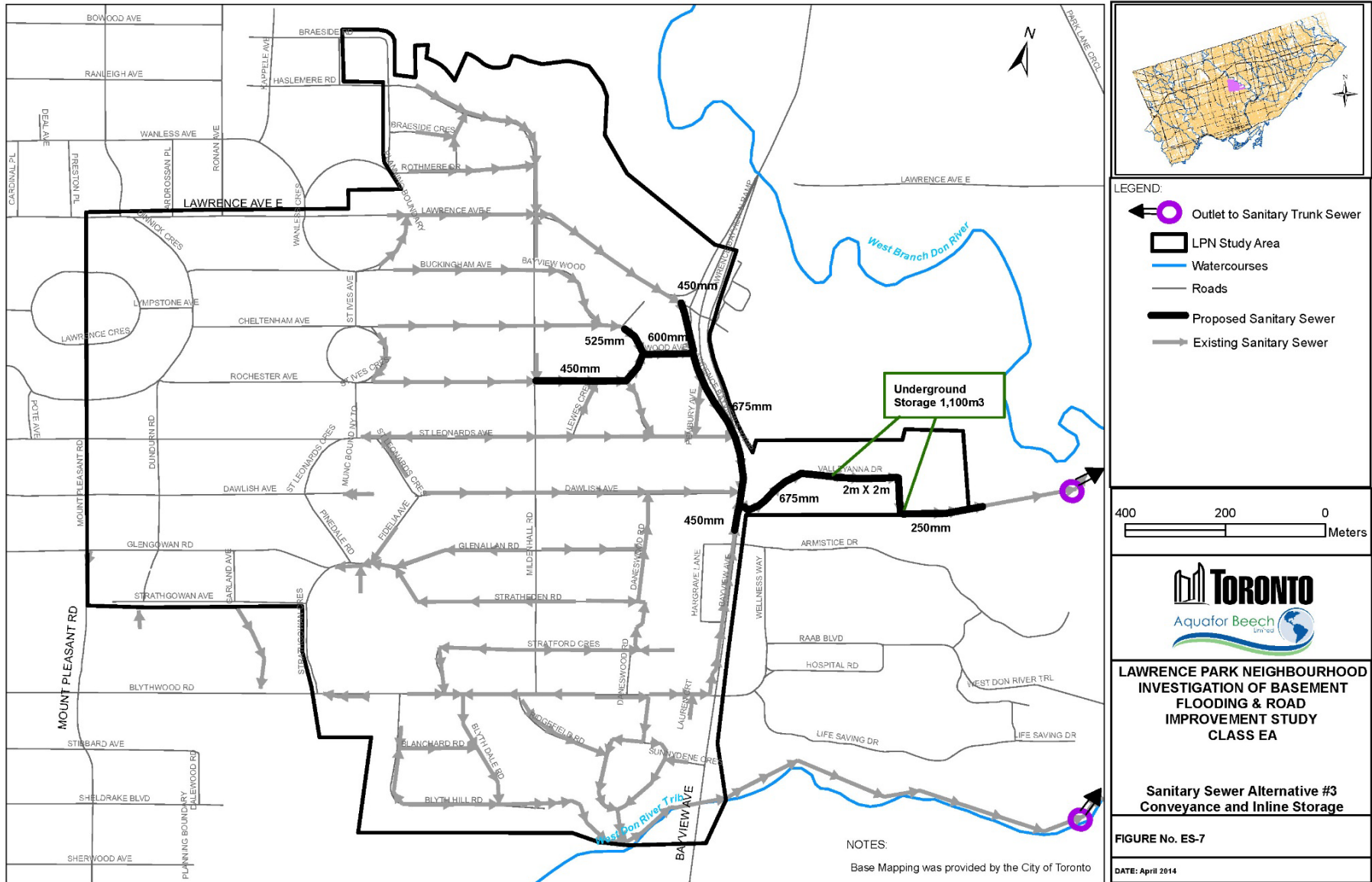
Attachment 10. Recommended Solution for Roads, Drainage and Sidewalks



Attachment 11. Recommended Basement Flooding Solution for Partially-Separated Sanitary System

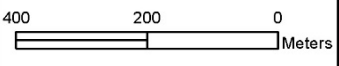


Attachment 12. Recommended Basement Flooding Solution for Sanitary System



LEGEND:

- Outlet to Sanitary Trunk Sewer
- LPN Study Area
- Watercourses
- Roads
- Proposed Sanitary Sewer
- Existing Sanitary Sewer



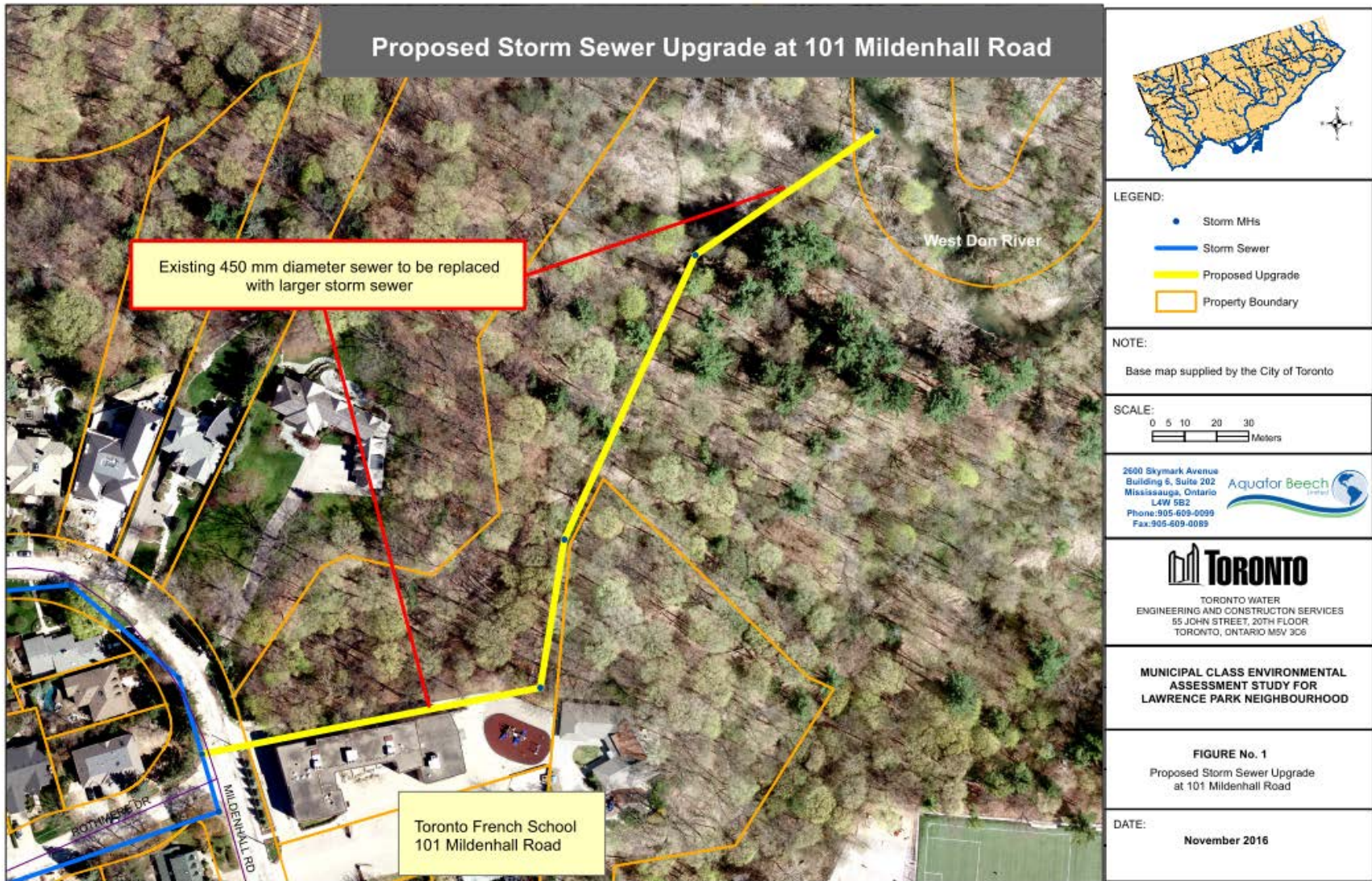
**LAWRENCE PARK NEIGHBOURHOOD
INVESTIGATION OF BASEMENT
FLOODING & ROAD
IMPROVEMENT STUDY
CLASS EA**

**Sanitary Sewer Alternative #3
Conveyance and Inline Storage**

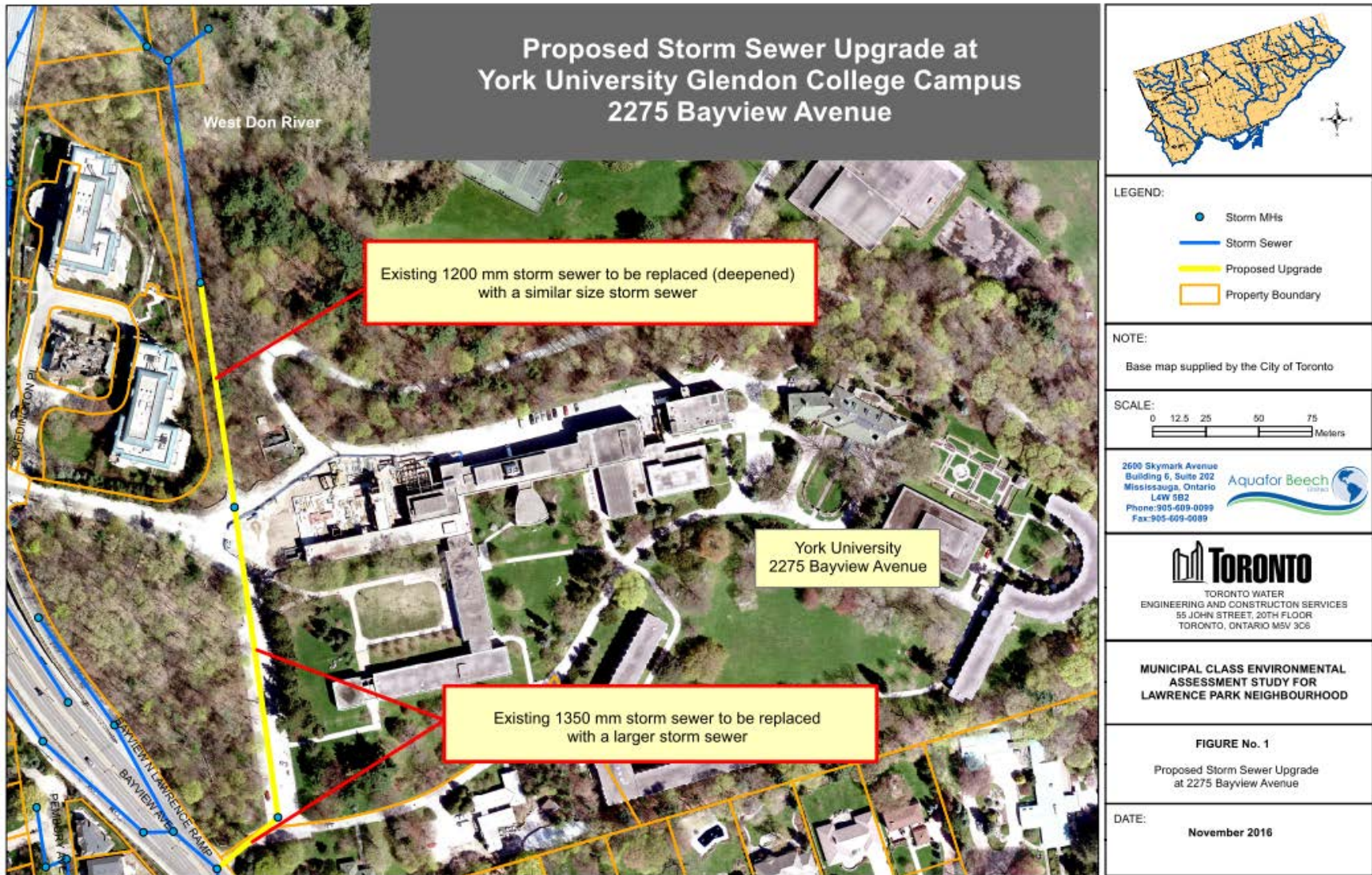
FIGURE No. ES-7

DATE: April 2014

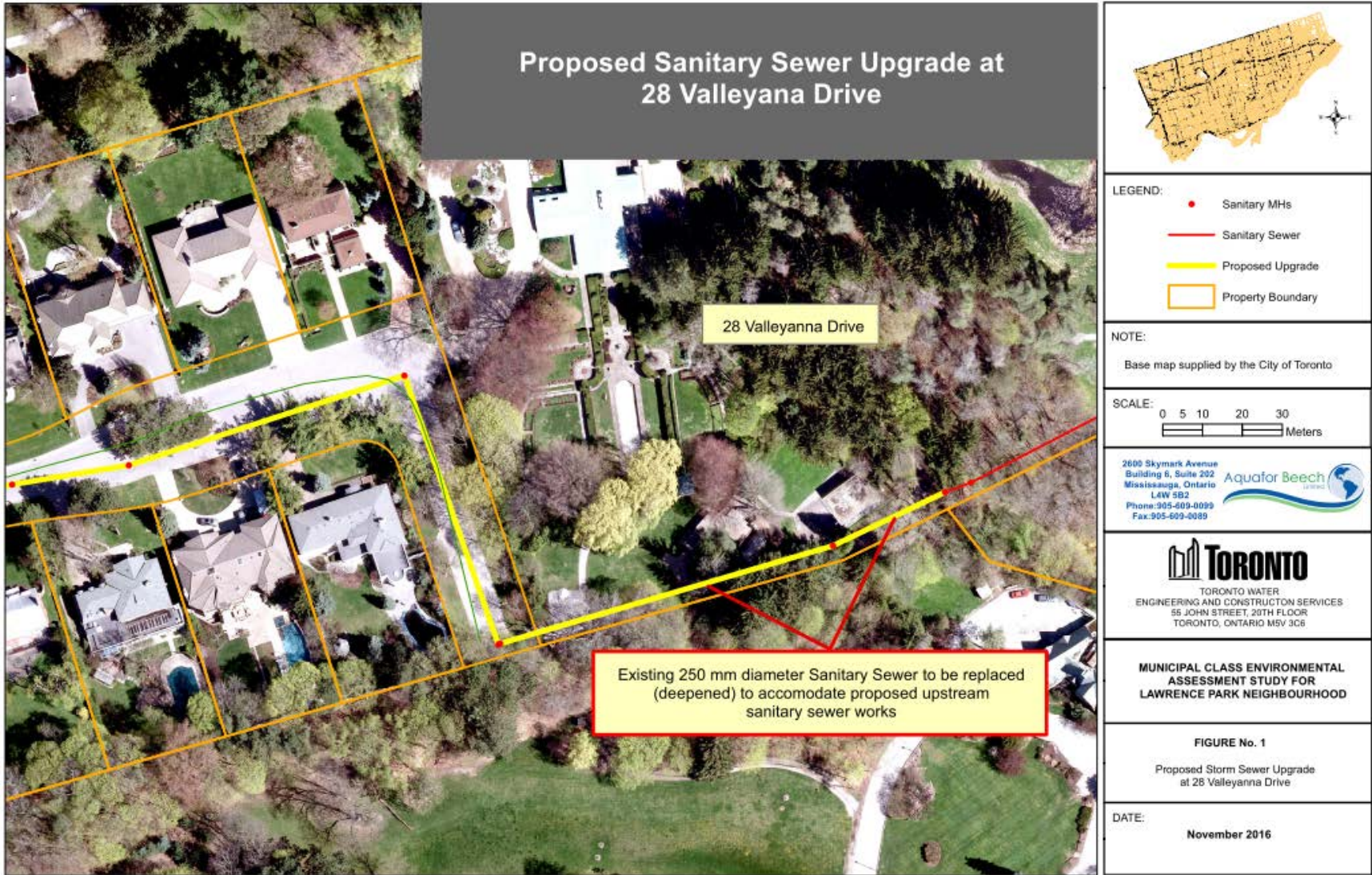
Attachment 13. Property Impacts at 101 Mildenhall Road (Toronto French School)



Attachment 14. Property Impacts at 2275 Bayview Avenue (York University)



Attachment 15. Property Impacts at 28 Valleyanna Drive and 2075 Bayview Avenue (University of Toronto)

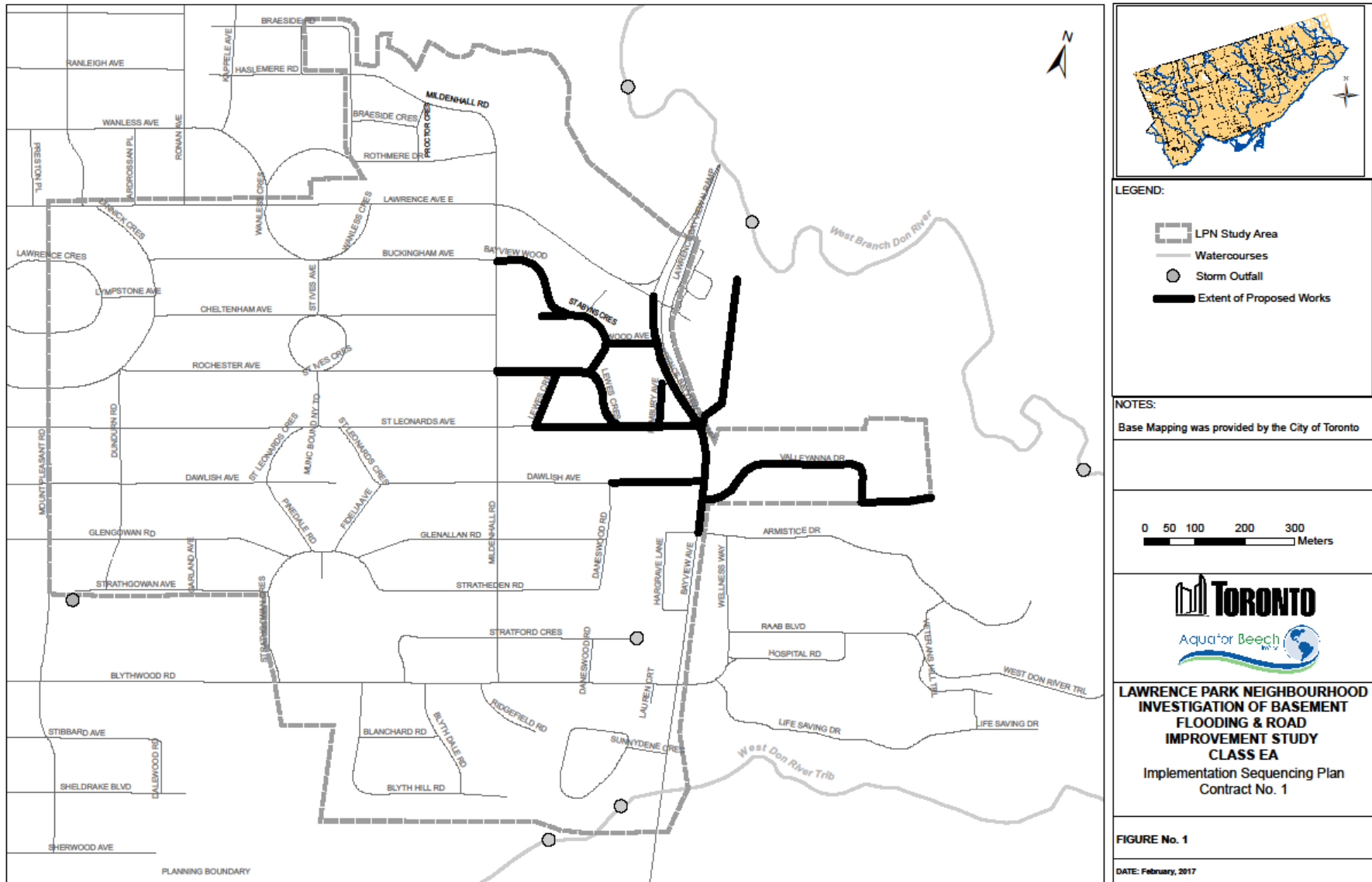


Attachment 16. Street Tree Impacts for the Recommended Road, Drainage and Sidewalk Solutions

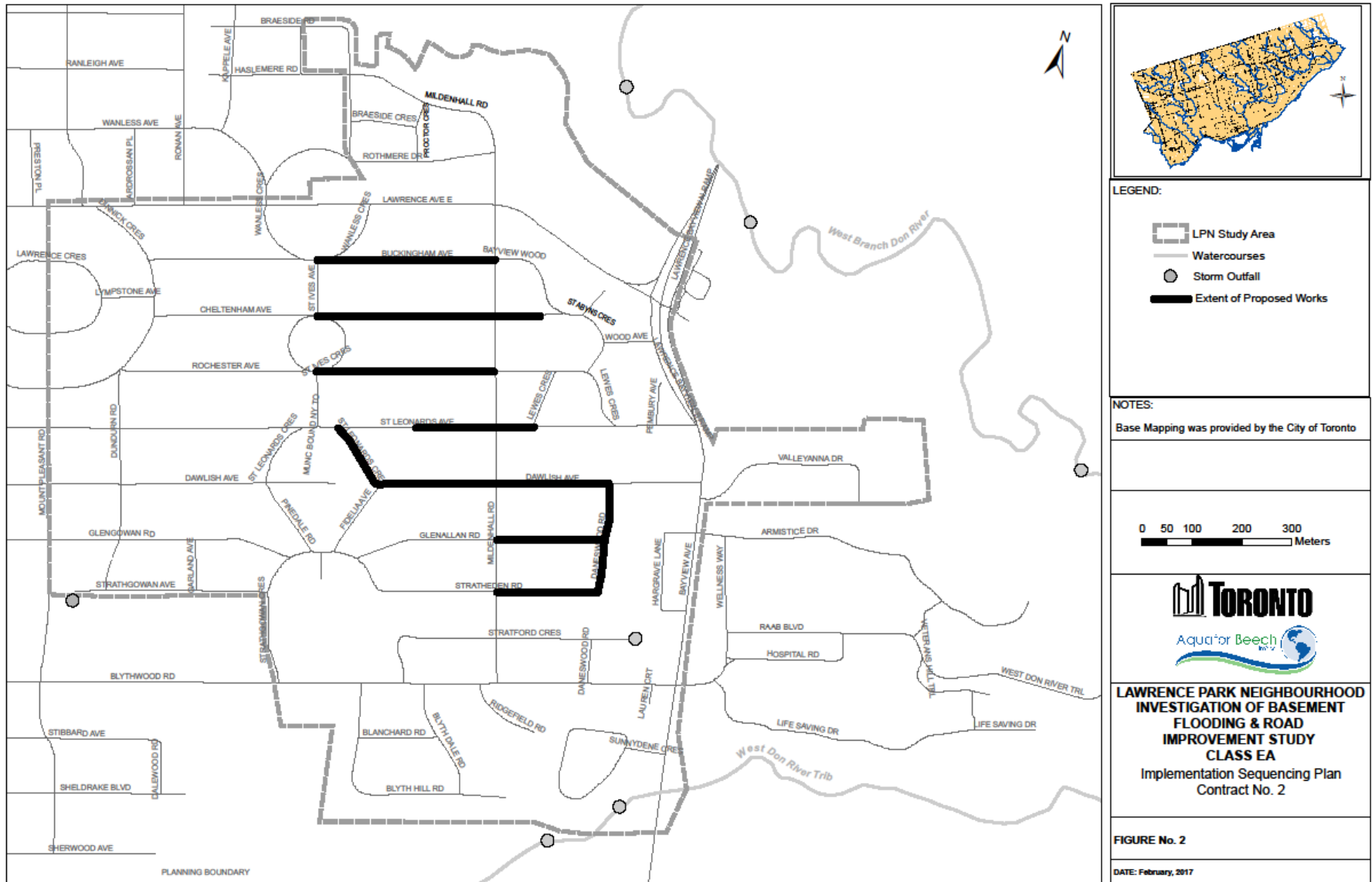
Street Name	Total Trees (Approximate)	Trees to be Removed and Replaced	Trees to be Preserved	Trees Not Impacted
Mildenhall Rd	137	22	43	72
Buckingham Ave	59	7	9	43
Cheltenham Ave	44	3	9	32
Rochester Ave	77	6	13	58
St. Leonards Ave	79	11	20	48
Lewes Cres, Pembury Ave	39	4	8	27
Dawlish Ave	54	14	14	26
Glenallan Rd, Pinedale Rd, Strathgowan Cres	80	1	12	67
Stratheden Rd, Strathgowan Cres	58	2	8	48
Garland Ave, Strathgowan Ave	42	5	12	25
Strathgowan Ave	35	1	8	26
Blyth Hill Rd	86	3	6	77
Blyth Dale Rd, Blanchard Rd	79	2	9	68

Street Name	Total Trees (Approximate)	Trees to be Removed and Replaced	Trees to be Preserved	Trees Not Impacted
Braeside Cres, Proctor Cres	28	0	8	20
Rothmere Dr	48	2	8	38
Mildenhall Rd North	90	2	12	76
Bayview Wood, St. Aubyns Cres, Wood Ave	96	8	22	66
Fidelia Ave, St. Leonards Cres, Dawlish Ave	70	6	26	38
Total Number of Trees	1201	99	247	855

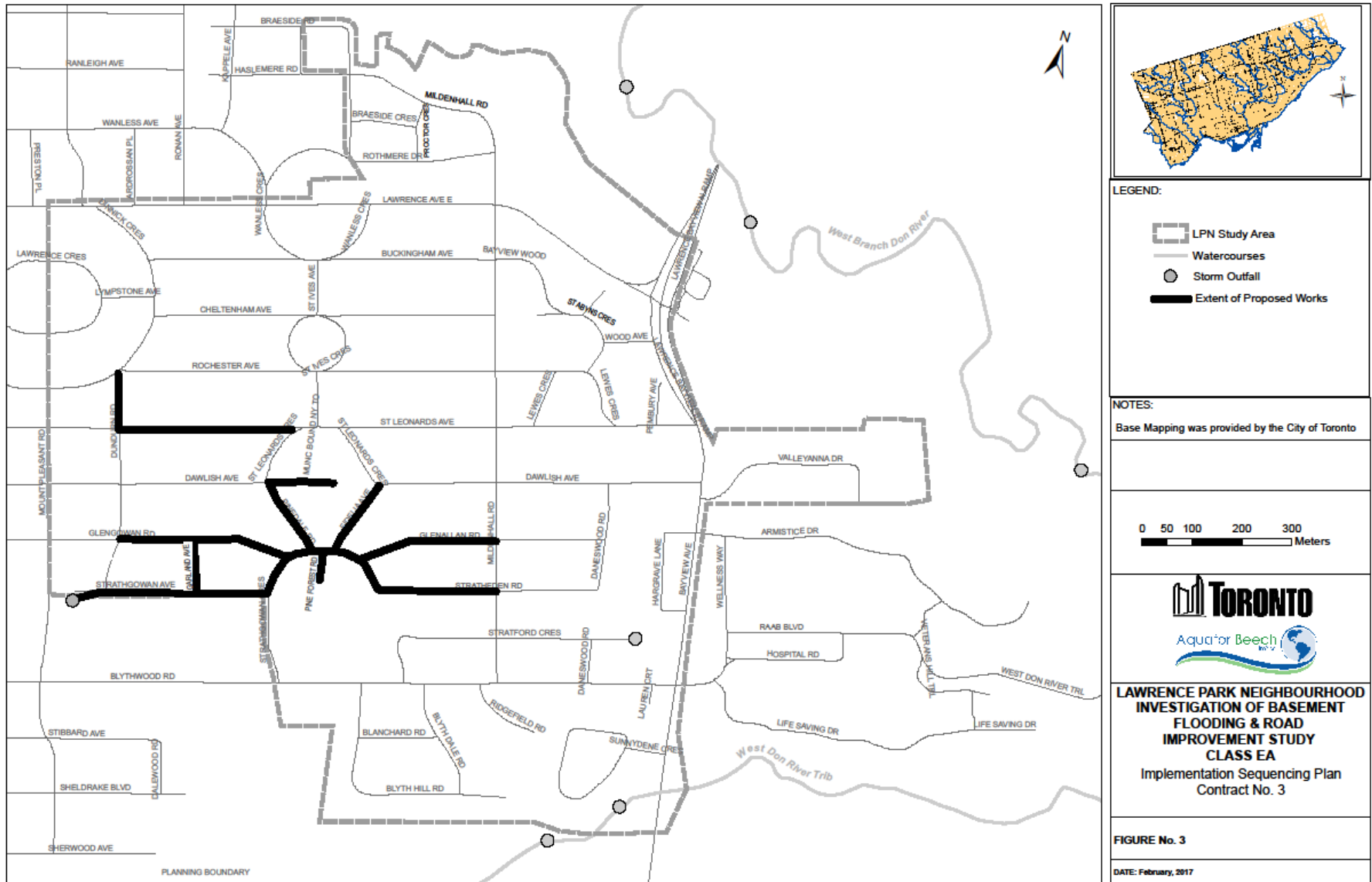
Attachment 17. Implementation Sequencing Plan - Contract 1



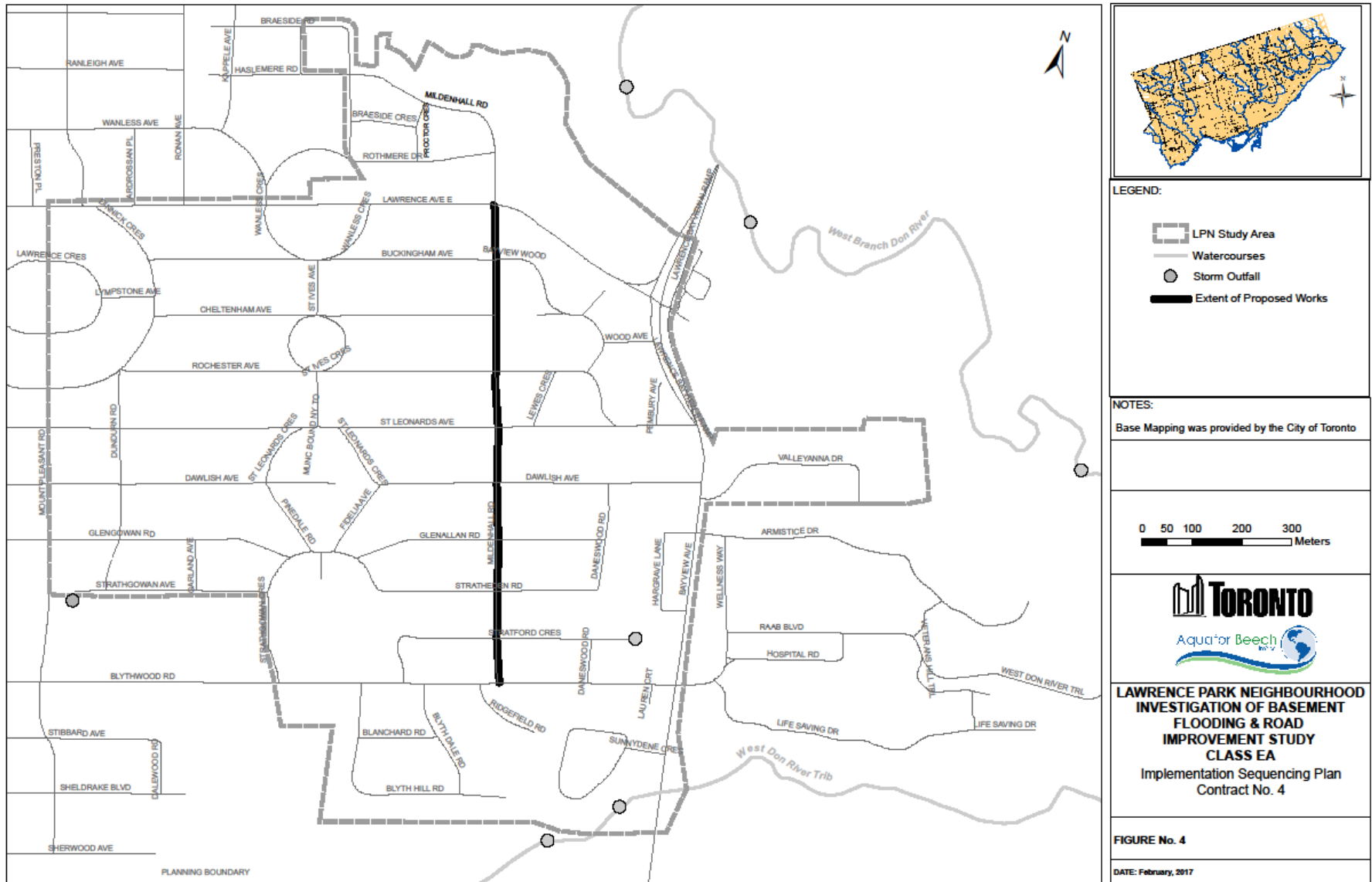
Attachment 18. Implementation Sequencing Plan - Contract 2



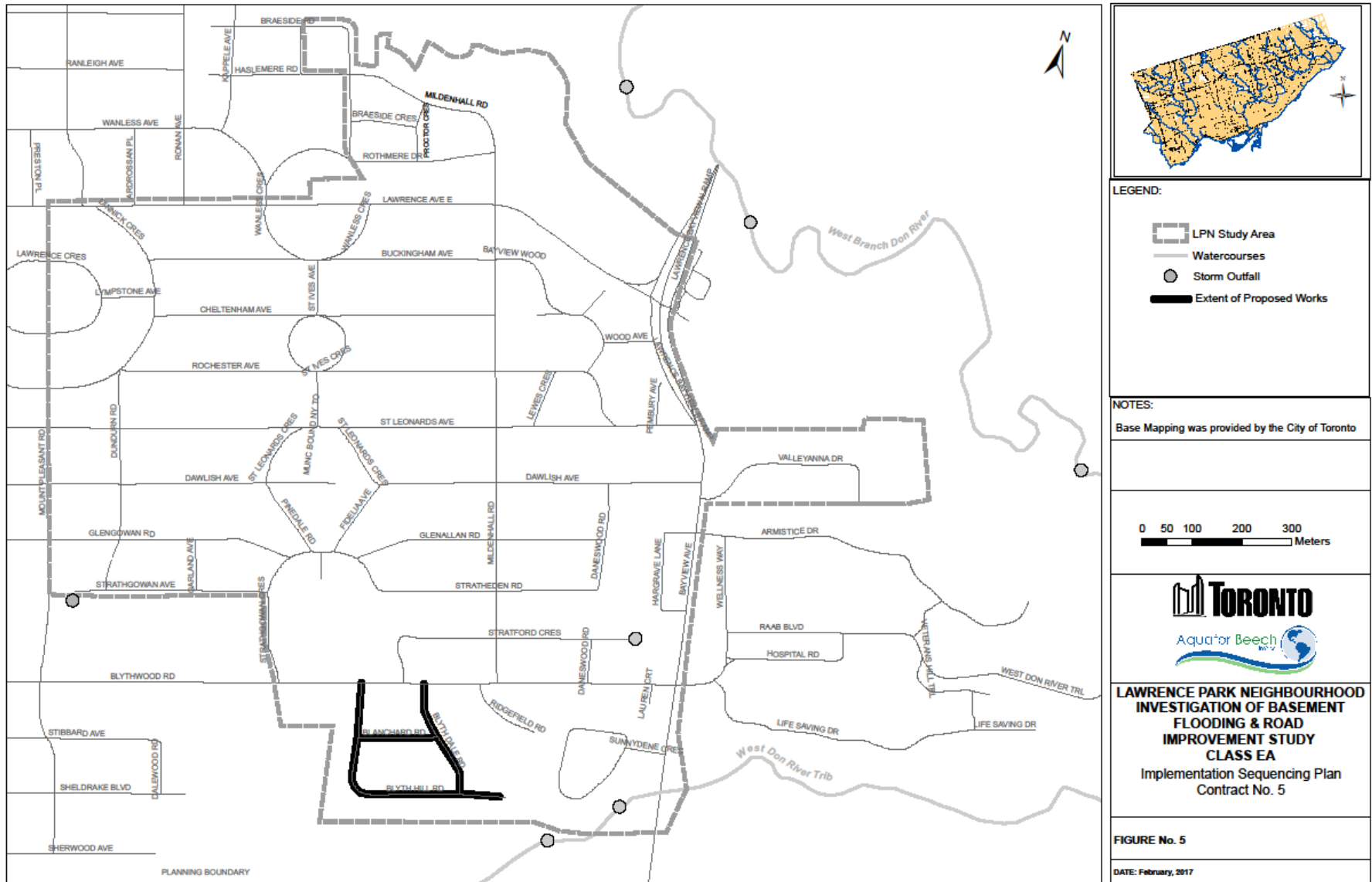
Attachment 19. Implementation Sequencing Plan - Contract 3



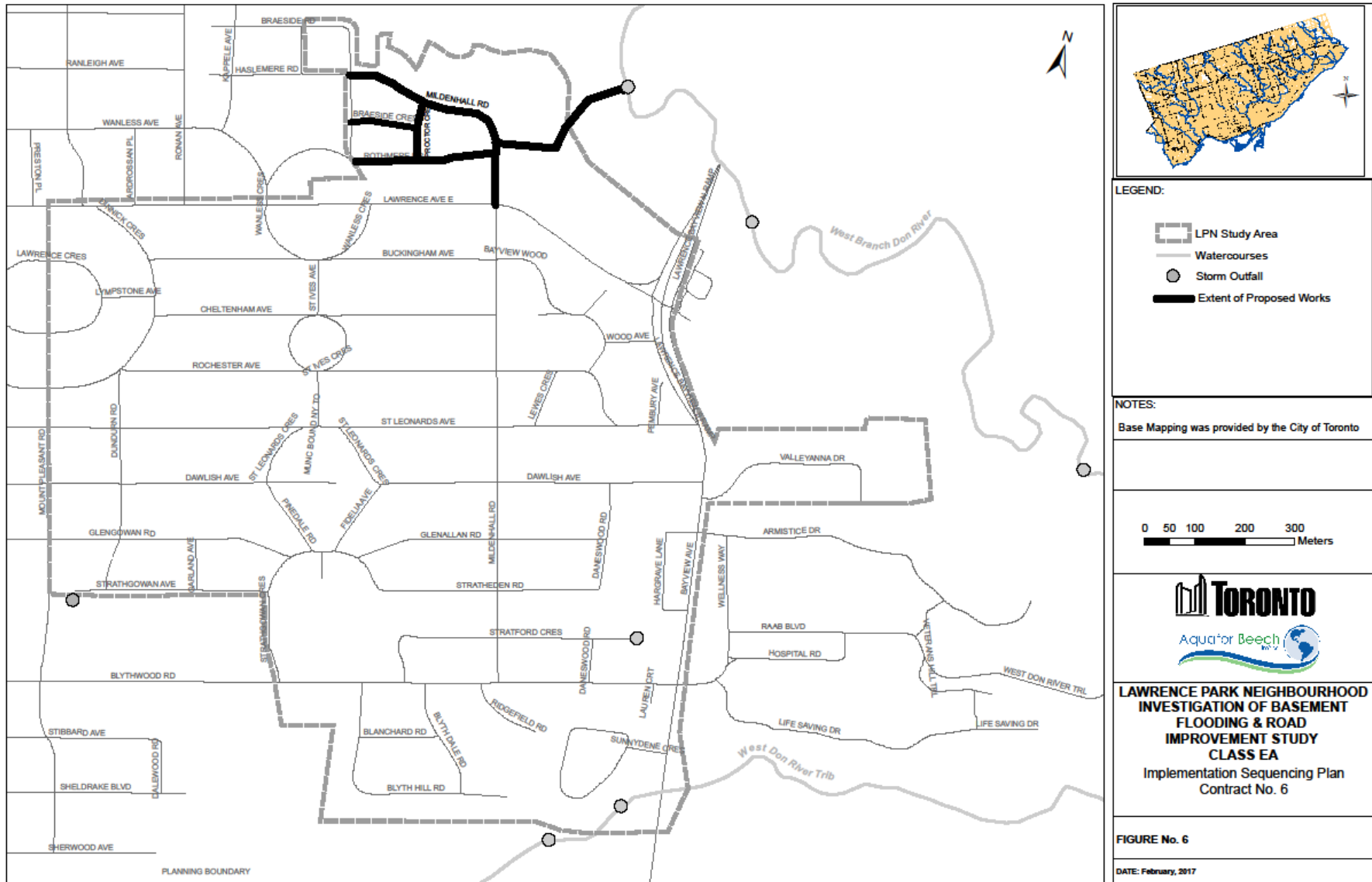
Attachment 20. Implementation Sequencing Plan - Contract 4



Attachment 21. Implementation Sequencing Plan - Contract 5



Attachment 22. Implementation Sequencing Plan - Contract 6



Attachment 23. Recommended Projects for the Lawrence Park Neighbourhood Investigation of Basement Flooding (Area 20) and Road Improvement Class Environmental Assessment Study

Summarized below are the recommended works, grouped according to their individual sewer system drainage area and defined by a Project ID. The recommended works within each Project ID are interdependent and are to be implemented as a whole. The construction sequencing of the recommended works is shown in Attachments 17-22 and considers that where recommended works are within the same location, the works will be integrated into the same construction contract.

Roads, Drainage and Sidewalks (see Attachment 10)

The projects listed below include:

- roads to be reconstructed with a 7.2 m pavement width;
- curb and gutter drainage system with new or replacement storm sewers and, where technically and operationally feasible and supported by underground conditions, the installation of a perforated pipe system; and
- a 1.5 m sidewalk on one side of five streets to be reconstructed.

<i>Project ID</i>	<i>Street Name/Location</i>	<i>Recommended works</i>
RDS-01	Braeside Crescent	Road reconstruction and replacement of storm sewer
	Mildenhall Road (north of Rothmere Drive)	Road reconstruction and replacement of storm sewer
	Proctor Crescent	Road reconstruction and replacement of storm sewer
	Rothmere Drive	Road reconstruction and replacement of storm sewer
	Toronto French School 101 Mildenhall Road	Replacement of storm sewer and reconstruction of outfall located at West Don River (see Attachment 13)
RDS-02	Bayview Avenue (St. Leonards Avenue to Dawlish Avenue)	Replacement of storm sewer
	Bayview Wood	Road reconstruction and replacement of storm sewer

<i>Project ID</i>	<i>Street Name/Location</i>	<i>Recommended works</i>
RDS-02	Buckingham Avenue (St. Ives Avenue to Mildenhall Road)	Road reconstruction and replacement of storm sewer
	Cheltenham Avenue (east of St. Ives Avenue)	Road reconstruction, addition and replacement of storm sewer
	Daneswood Road	Replacement of storm sewer
	Dawlish Avenue (St. Leonards Crescent to Bayview Avenue)	Road reconstruction with sidewalk (Mildenhall Road to Bayview Ave.) and addition and replacement of storm sewer
	Glenallan Road (east of Mildenhall Road)	Replacement of storm sewer
	Lewes Crescent	Road reconstruction and addition of storm sewer
	Mildenhall Road (Rothmere Drive to Blythwood Road)	Road reconstruction with sidewalk and addition of storm sewer
	Plembury Avenue	Road reconstruction and replacement of storm sewer
	Rochester Avenue (from St. Ives Avenue to Lewes Crescent)	Road reconstruction and addition of storm sewer
	St. Aubyns Crescent	Road reconstruction and replacement of storm sewer
	St. Ives Crescent (from Cheltenham Avenue to Rochester Avenue)	Addition of storm sewer
	St. Leonards Avenue (east of St. Ives Avenue)	Road reconstruction with sidewalk, and the addition and replacement of storm sewer
	St. Leonards Crescent	Road reconstruction and addition of storm sewer
	Stratheden Road (east of Mildenhall Road)	Replacement of storm sewer

<i>Project ID</i>	<i>Street Name/Location</i>	<i>Recommended works</i>
RDS-02	Wood Avenue	Road reconstruction
	York University Glendon Campus 2275 Bayview Avenue	Replacement of storm sewer (see Attachment 14)
RDS-03	Blanchard Road	Road reconstruction and addition of storm sewer
	Blyth Dale Road	Road reconstruction
	Blyth Hill Road	Road reconstruction, addition and replacement of storm sewer
RDS-04	Blythwood/Sherwood Ravine	Replacement of storm sewer and reconstruction of outfall located at West Don River tributary
	Dawlish Avenue (from St. Leondards Crescent to the east end of the cul-de-sac)	Replacement of storm sewer
	Fidelia Avenue	Road reconstruction and addition of storm sewer
	Garland Avenue	Road reconstruction and addition of storm sewer
	Glenallan Road (west of Mildenhall Road)	Road reconstruction with a sidewalk and addition of storm sewer
	Glengowan Road (from Dundurn Road to Strathgowan Crescent)	Addition of storm sewer
	Pinedale Road	Road reconstruction with sidewalk and addition of storm sewer
	Pine Forest Road	Addition of storm sewer
	Stratheden Road (west of Mildenhall Road)	Road reconstruction and addition of storm sewer
	Strathgowan Avenue	Road reconstruction and replacement of storm sewer
	Strathgowan Crescent (from Stragthgowan Avenue to Stratheden Road)	Road reconstruction with sidewalk (Glenallan Road to Pinedale Road) and addition of storm sewer

Basement Flooding**Partially-Separated Sewer Area (see Attachment 11)**

The projects listed below include installation of an estimated 830 metres of storm sewers.

<i>Project ID</i>	<i>Street Name</i>	<i>Recommended works</i>
BF-01	Dundurn Road (from Rochester Avenue to St. Leonards Avenue)	Addition of storm sewer
BF-02	Glengowan Road (from Dundurn Road to Strathgowan Crescent)	Addition of storm sewer
BF-03	St. Leonards Avenue (from Dundurn Road to St. Ives Avenue)	Addition of storm sewer

Sanitary Sewer Area (see Attachment 12)

The projects listed below include the replacement of an estimated 1,020 metres of existing sanitary sewers with new larger diameter pipes.

<i>Project ID</i>	<i>Street Name</i>	<i>Recommended works</i>
BF-04	Bayview Avenue (from Lawrence Avenue to Armistice Drive)	Replacement of sanitary sewer To be integrated with RDS-02
	Rochester Avenue (from Mildenhall Road to St. Aubyns Crescent)	Replacement of sanitary sewer To be integrated with RDS-02
	St. Aubyns Crescent (from Rochester Avenue to Bayview Wood)	Replacement of sanitary sewer To be integrated with RDS-02
	Valleyanna Drive	Replacement and addition of sanitary sewer and installation of a 1,100 cubic metre underground in-line sanitary storage facility
	28 Valleyanna Drive/2075 Bayview Avenue	Replacement of sanitary sewer (see Attachment 15)
	Wood Avenue (St. Aubyns Crescent to Bayview Avenue)	Replacement of sanitary sewer To be integrated with RDS-02