



Prepared for:

City of Toronto

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Attention: Kirill Cheiko, P.Eng

**Basement Flooding Protection Program Capacity
Assessment Study
Bundle C, Study Area 58
Master Plan – Final**

A report submitted by:
Aquafor Beech Limited

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- Appendix A – Public and Stakeholder Consultation
- Appendix B – Archaeological & Cultural Heritage Reports

Volume 2

- Appendix C – QA / QC Disposition Form
- Appendix D – Background TMs
- Appendix E – Schedule B Preferred Solutions

ABBREVIATIONS

Abbreviation	Description
BFA	Basement Flooding Area
BFPF	Basement Flooding Protection Program
CB	Catchbasin
CET	Cost Estimating Tool
DEM	Digital Elevation Model
EA	Environmental Assessment
ESA	Environmental Significant Area
FM	Flow Monitors
GIS	Geographical Information System
HCI	High-Capacity Inlets
HGL	Hydraulic Grade Line
H&H	Hydrologic & Hydraulic
I&I	Infiltration and Inflow
ICD	Inlet Control Devices
ICI	Industrial / Commercial / Institutional
LID	Low Impact Development
MCEA	Municipal Class Environmental Assessment
MEA	Municipal Engineers Association's
MECP	Ministry of Environment, Conservation and Parks
MH	Maintenance Hole
MOECC	Ministry of Environment and Climate Change
O&M	Operation and Maintenance
PIC	Public Information Centre
RG	Rain Gauge
ROW	Right-of-Way
RTK	Real Time Kinematic
SAR	Species at Risk
SMD	Scope Management Document
STS	Sanitary Trunk Sewer
TM	Technical Memorandum
TRCA	Toronto and Region Conservation Authority
WWF	Wet Weather Flow
WWFMP	Wet Weather Flow Master Plan

1 INTRODUCTION

1.1 Background

Over the past two decades the City of Toronto (the City) has experienced a number of severe storm events that has resulted in both surface and basement flooding of many residents' homes as well as damage to the City's infrastructure including roads, bridges, culverts and sewers. The severe storms that the City has experienced include events that are in excess of the 100-year storm. On August 19, 2005 various locations within the City received over 150mm of rainfall in 3 hours and more than 4,200 basement flooding complaints were received by the City consequently.

In April 2006, City Council approved a Basement Flooding Work Plan, now referred to as the Basement Flooding Protection Program (BFPP), to develop comprehensive plans to reduce flooding risks in 31 areas. The program focuses on applying an integrated approach with preventative measures to the most economical degree possible of reducing surface flooding and the amount of storm water entering into all sewer systems. In 2013, the BFPP was expanded to a city-wide scale, which now includes 67 study areas.

The City retained Aquafor Beech Limited (Aquafor) and its sub-consultants Civica Infrastructure Inc. (Civica), Parsons, Thompson Flow Investigation (TQI) and Archaeological Services Inc. to undertake the BFPP Capacity Assessment Studies – Bundle C, Study Areas 55, 58, 65 and 66 (the Capacity Assessment Study).

1.2 Study Purpose and Scope of the Capacity Assessment Study and the A58 Master Plan Study

The purpose of the Capacity Assessment Study was to assess the existing storm drainage system and sanitary sewer system capacities and provide infrastructure upgrade recommendations that meet the City's basement and surface flooding criteria (the study component), and prepare preliminary designs for selected assignments (the preliminary design component). Several key considerations, as outlined in the RFP (No. 9117-18-7752), are summarized below:

- The primary focus is on the identification and development of Municipal Class Environmental Assessment (EA) Schedule A / A+ assignments and alignment of efforts and resources to best accelerate the implementation of assignments. Should any assignments be identified as Schedule B or Schedule C projects, then additional reports will be required to address Phase 2, 3, and / or 4 of the Municipal Class EA Process.
- The objective of combining the study and preliminary design components is to reduce the amount of time required to begin the detailed design and construction of Assignments, by eliminating the consultant transition period between the study and the preliminary design phases.

The scope of the Capacity Study included the following:

- A comprehensive background data analyses to confirm existing conditions, supplemented with additional field investigations to identify roof downspout connectivity, reverse-slope driveways, low-

lying areas, catchbasin (CB) types and locations, perforated sanitary maintenance hole (MH) covers as well as the inspection of storm sewer outfalls.

- Development and refinement of the hydrologic and hydraulic modelling, including both major and minor systems.
- Assessment of the drainage systems to identify the drainage system deficiencies, flood clusters and extents, and the root cause(s) of basement and surface flooding.
- Development and assessment alternative remedial measures to achieve the targeted level of service under both existing and future (2041) growth conditions, including the confirmation of the constructability, functionality and feasibility of the proposed solutions, as well as selection of preferred solutions and preparation of cost estimates.
- Archaeological and cultural heritage assessment.
- Development of BFPP Assignments, including the scope, prioritization and cost per benefitting property analysis.

As a result, of the Capacity Study, a total of 85 Assignments (groups of remedial solutions) were identified for the four study areas (44 Assignments for study area 58), of which a majority of them fall under the Municipal Class EA Schedule A/A+ category as per the project objectives. The total estimated construction cost is \$993 million. The total Maximum Construction Cost for the Assignments to move forward into the PD Phase as part of the project is \$47.25 million. As a result, thirteen Assignments were selected to move into the Preliminary Design phase. Four technical memorandums (TM) and a Final Study Report were prepared for each study area for the Capacity Assessment Study in accordance with Phase 1 of the Municipal Engineers Association's (MEA) Municipal Class EA Process (October 2000, as amended in 2007, 2011, 2015 and 2023). TM#1 to TM#3 can be found in **Appendix** .

As part of the Capacity Assessment Study, five Assignments were identified as Schedule B projects. These Assignments were identified as Schedule B due to easement requirements. Since additional studies are required to satisfy the Schedule B requirements as per the Municipal Class EA process, this study report (the A58 Master Plan) has been prepared for the five Schedule B projects following Master Plan Approach #2. Further details regarding the Municipal Class EA process and Master Plan Approach are presented in **Section 2**.

As a result, the A58 Master Plan Study has been undertaken and this report has been prepared to present an overview of study approach and findings from the Capacity Assessment Study and the A58 Master Plan Study, which has a focus to fulfill the requirements for the Schedule B projects.

1.3 Study Area Characteristics

Study Area 58, the largest study area within Bundle C, traverses across the City from Steeles Avenue at Keele Street to the Don Valley Parkway at Don Mills Road following the Don River West Branch. Area 58 falls within North York District, forming part of Ward 6 (York Centre), 8 (Eglinton-Lawrence), 14 (Toronto-Danforth), 15 (Don Valley West), 16 (Don Valley East), and 18 (Willowdale). The area consists of distributed residential land uses, valley lands with a mix of commercial, institutional and light-industrial land uses.

Due to its long and narrow shape, Area 58 borders a total of twelve Basement Flooding Areas (BFA) including 8 completed EA studies (BFA 2, 19, 20, 24, 25, 26, 28 & 40) and 4 on-going EA studies (BFA 43, 46, 55 & 65). **Figure 1.1** shows the extent of the Bundle C study areas and BFA adjacent to Area 58. **Figure 1.2** illustrates the study area boundary, storm sewershed boundary as well as the sanitary sewershed boundary. The study area is comprised largely of smaller, independent sewersheds surrounding the watercourses and has a completely separated sewer system, with the sanitary sewers outletting into the Don River Sanitary Trunk Sewer (STS) System.

The study area consists of 3,925 properties with approximately 24,000 residents and 20,500 employment population. The predominant land use within the study area is open space (40%) followed by ICI land use (27%), residential areas (24%), and vacant / other unknown land use (9%).

The five Schedule B project areas are shown in **Figure 1.3**. A brief summary of the characteristics for each project is provided below.

A58-07: Robert Hicks Finch/Bathurst Area

The site is bounded by Finch Avenue to the south, Dufferin Street to the west, Bathurst Street to the east and Finch Corridor Recreational Trail to the north and is located within Ward 6 (York Centre). The area consists of mostly low-density residential properties, followed by high-density residential properties, open space, hydro corridor and community centre.

A58-28: Old Yonge Street

The site is immediately south-east of the Yonge Street and Highway 401 intersection, as part of Ward 15 (Don Valley West), and is comprised of low-density residential properties.

A58-29: York Mills Road Area

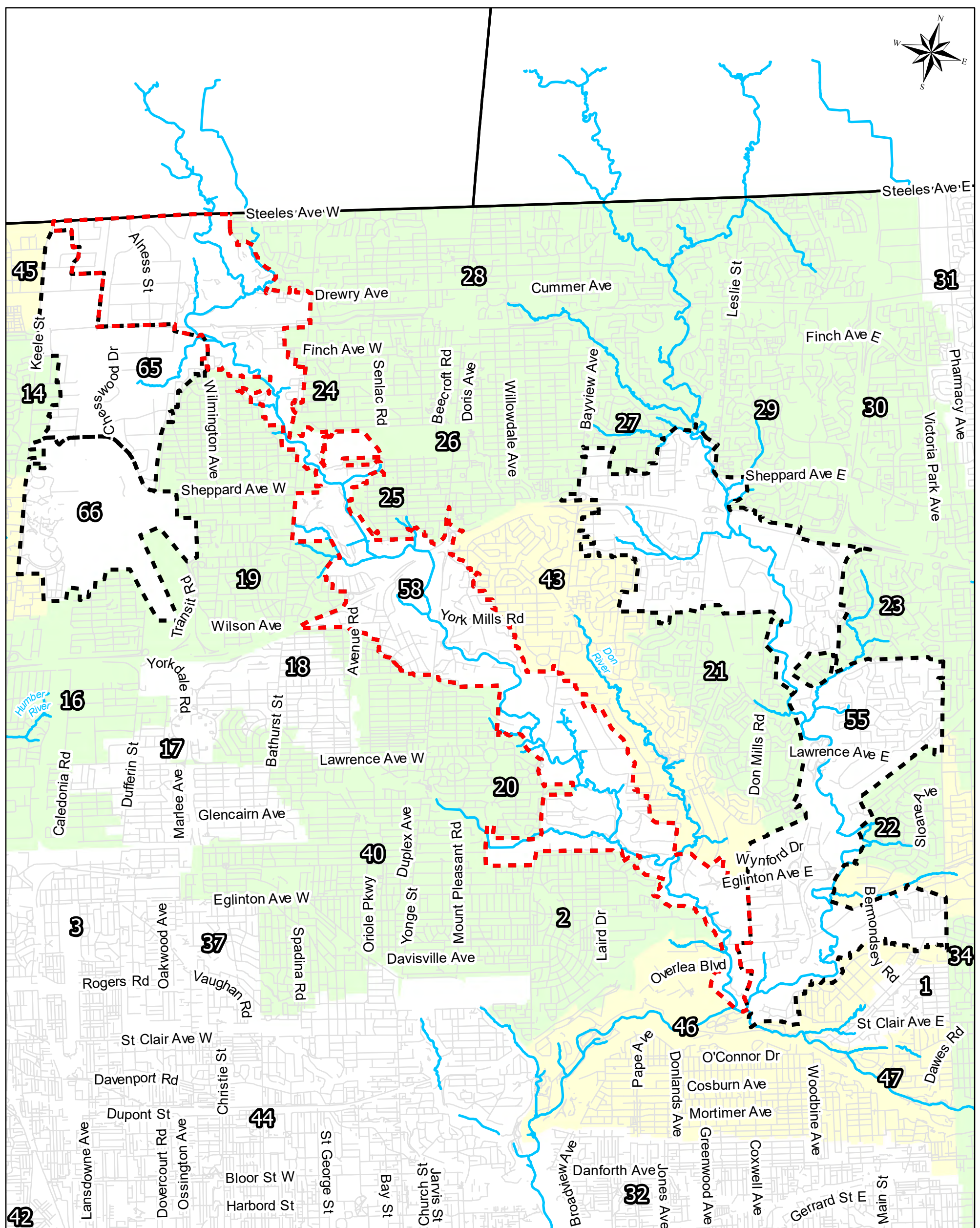
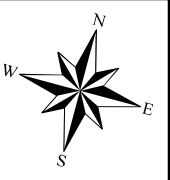
This site is the largest site of the five sites and is also south-east of the Yonge Street and Highway 401 intersection. The existing infrastructure within the area services mostly low-density residential properties, a few high-density residential properties and commercial lands.

A58-39: Belgrave / Highway 401 Area

The Belgrave Site sits within Ward 8 (Eglinton-Lawrence), which is south-east of the Highway 401 and Avenue Road intersection. The site is fully developed and consists of low-density residential properties.

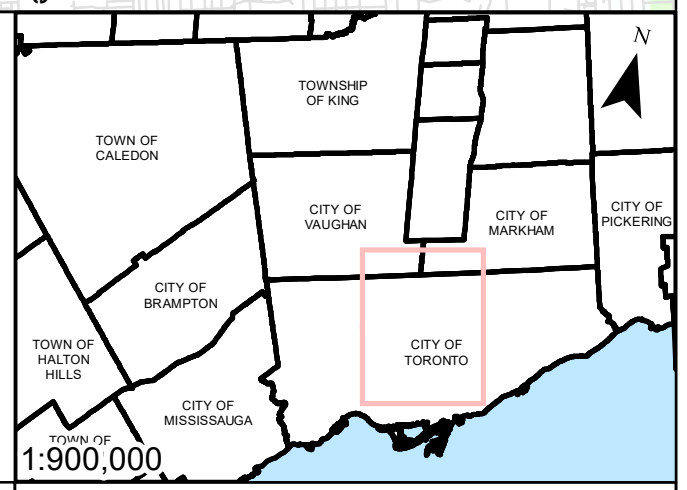
A58-41: Eglinton Avenue East Area

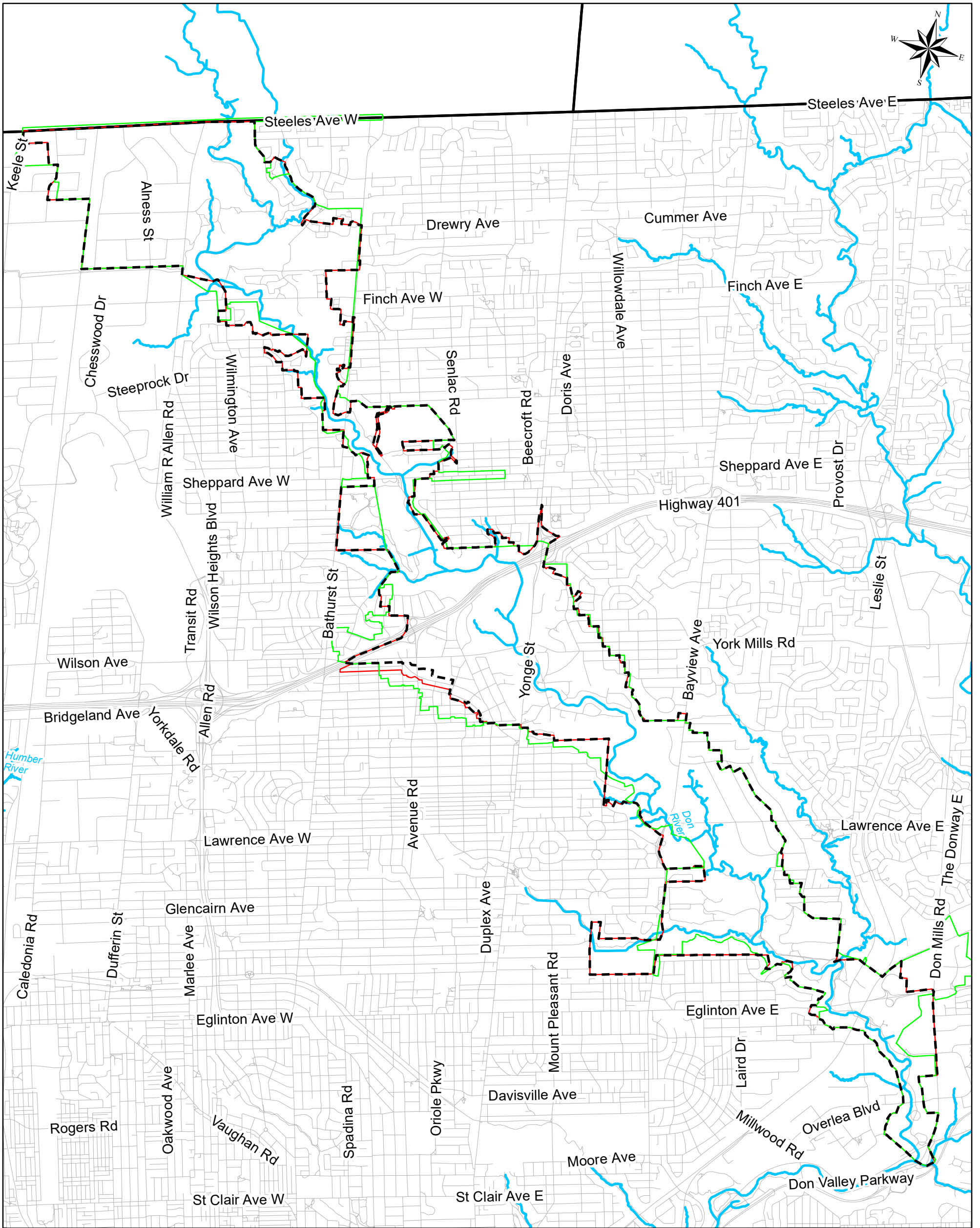
The Eglinton Area is the second largest site, which consists of industrial, commercial and institutional properties and open space. The site is located within Ward 16 (Don Valley East).



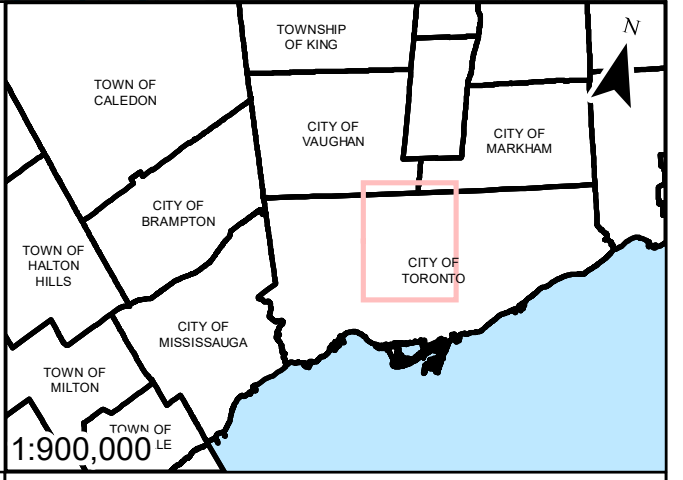
- Legend**
- - - A58 Study Area Boundary
 - BFPP Study Area Boundaries
 - Municipal Boundary
 - Watercourse (TRCA, 2012)

- Bordering BR Area Status:**
- EA Completed
 - EA In Progress



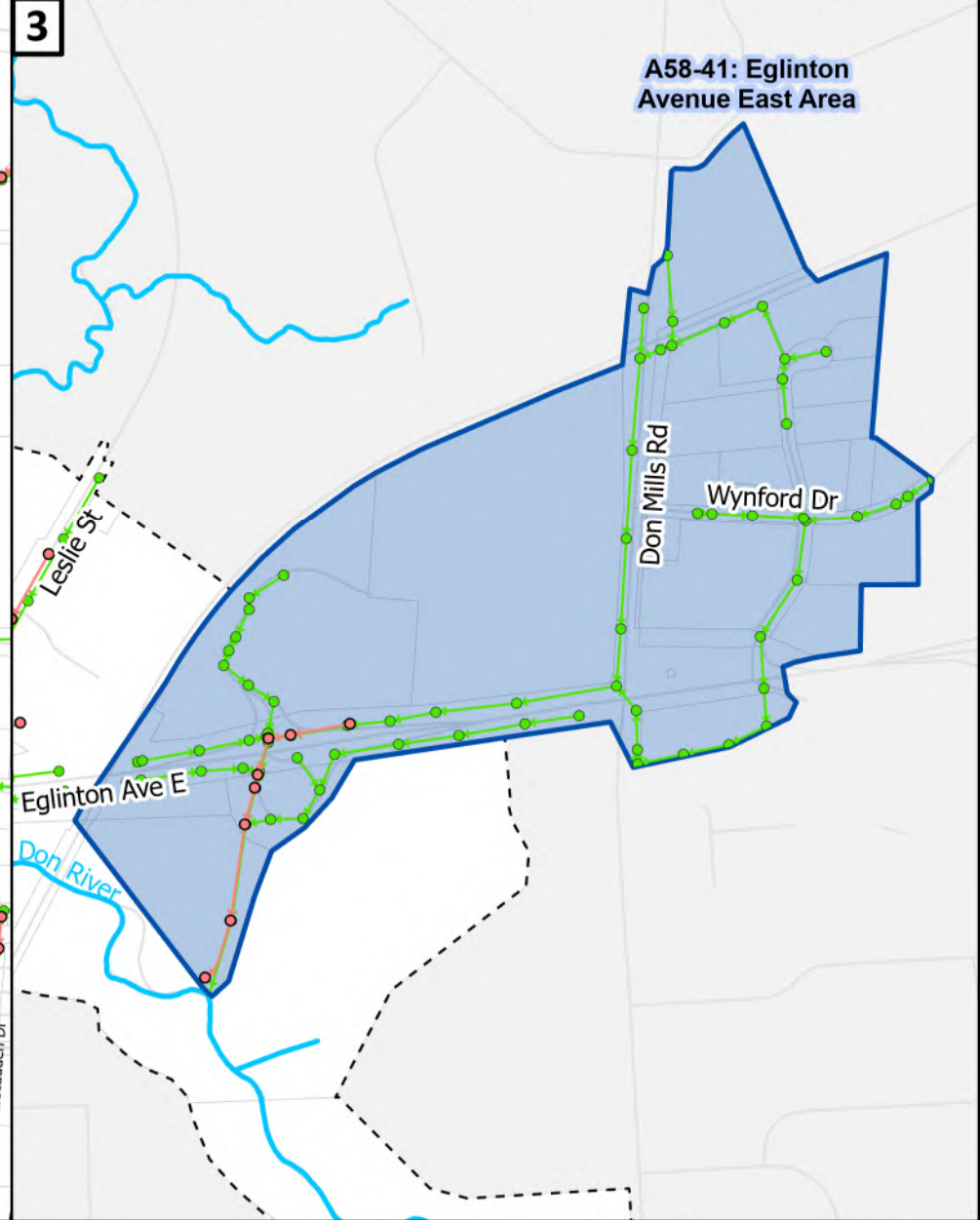
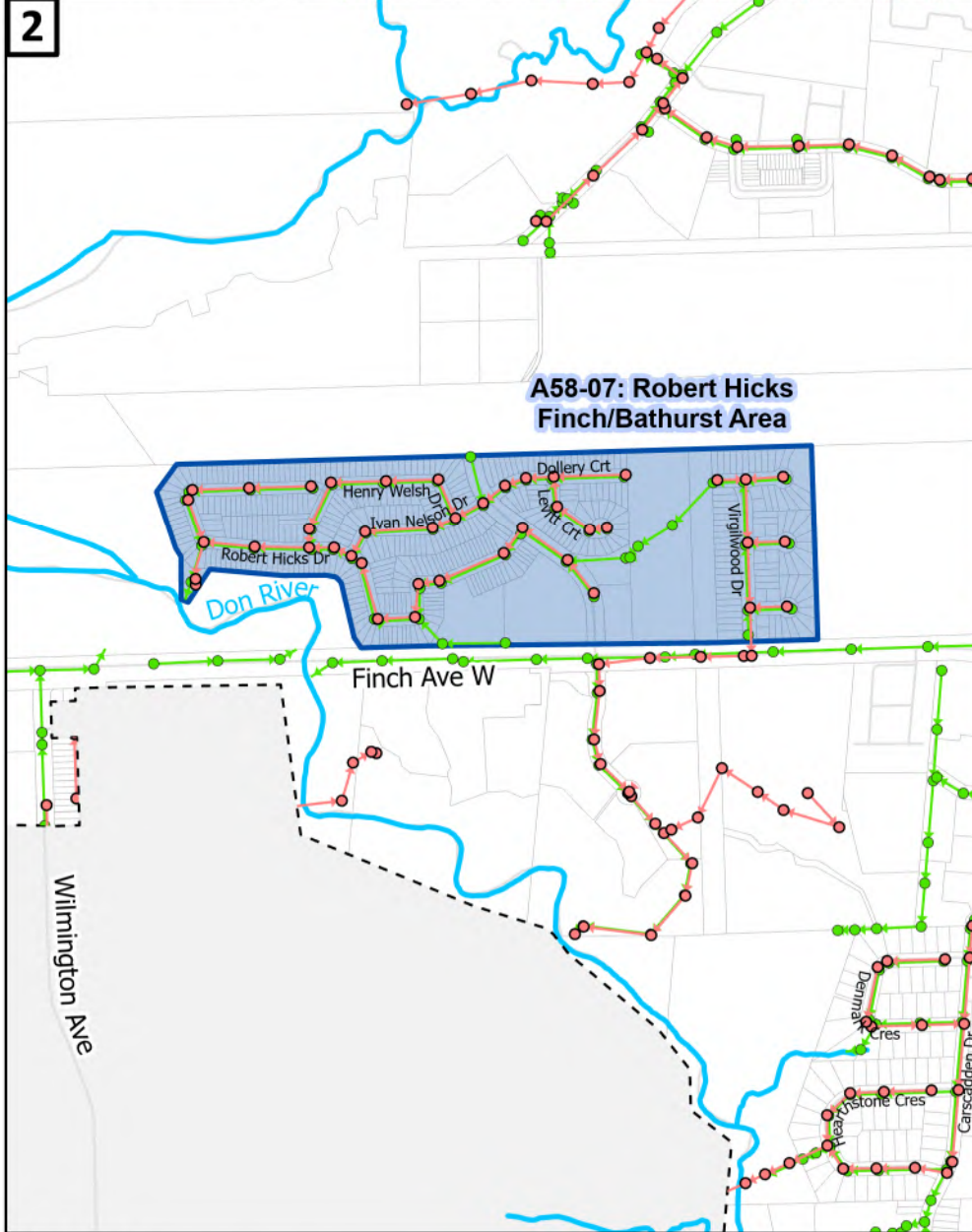
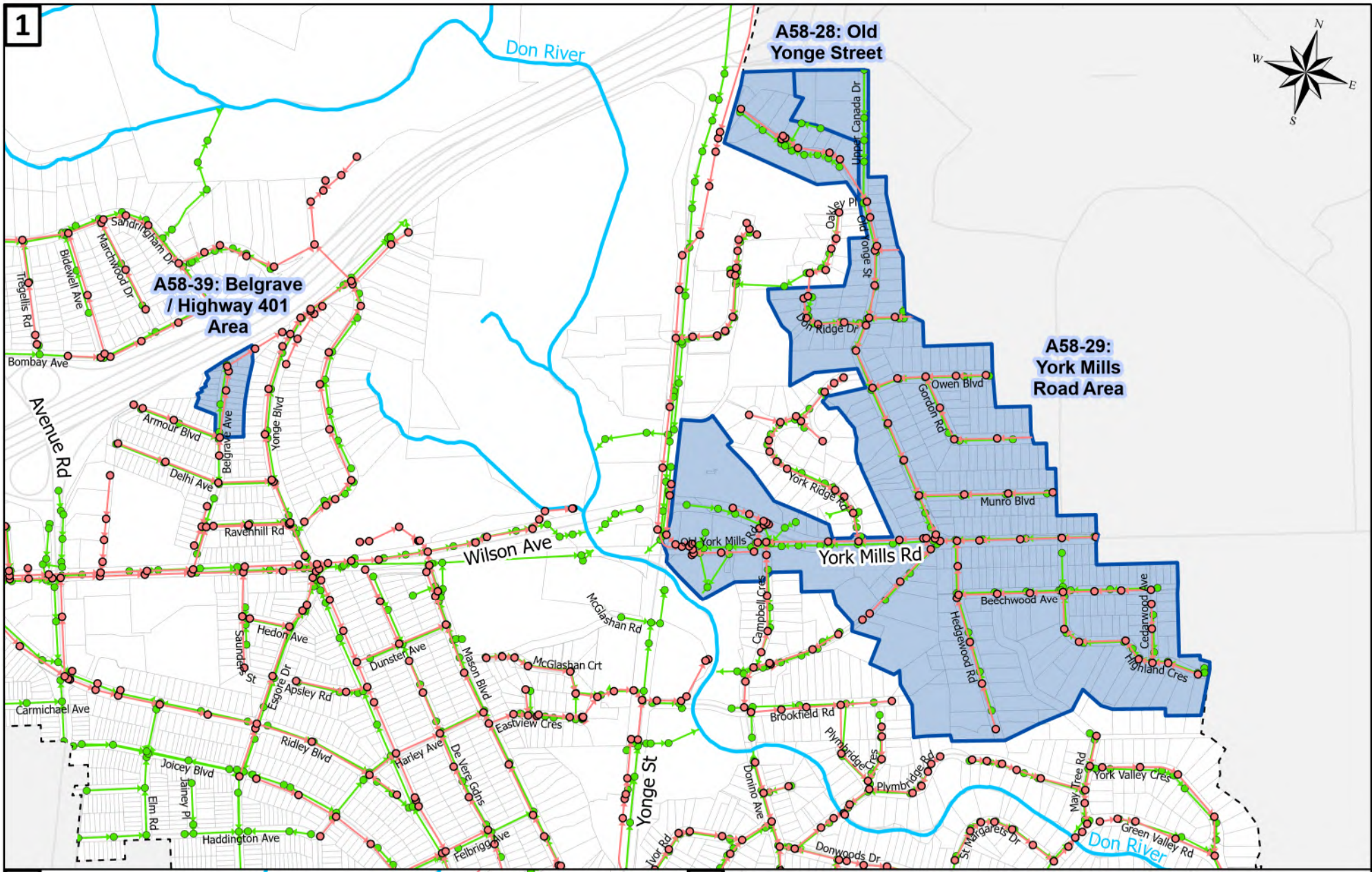


- Legend**
- Municipal Boundary
 - Storm Boundary
 - Study Area Boundary
 - Sanitary Boundary (Revised)
 - Watercourse (TRCA, 2012)
 - Road Centreline



Project: Toronto Basement Flooding Study Area 58
 Title: Figure 1.2
 Area 58 Sanitary and Storm Boundaries

Projection: NAD_1983_CSRS_MTM_10
 Data Source: City of Toronto, TRCA, LIO
 Date: May, 2020
 1:900,000
 0 0.5 1 2
 Kilometers
 1:42,000



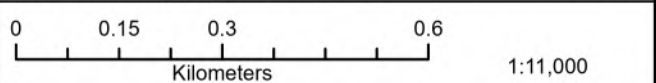
- Legend**
- Municipal Boundaries
 - Storm Boundary
 - Property Parcel
 - Road Centreline
 - Watercourse (TRCA, 2012)
 - Schedule B Project Areas
 - Existing Storm Node
 - Existing Storm Sewer
 - Existing Sanitary Node
 - Existing Sanitary Sewer



1:250,000
 Projection: NAD_1983_CSRS_MTM_10
 Data Source: City of Toronto, TRCA, LIO
 Date: March, 2023



Project: Toronto Basement Flooding Study Area 58
 Figure 1.3 Schedule B Project Areas



2 THE ENVIRONMENTAL ASSESMENT PROCESS

The Capacity Assessment Study was initiated as a flood remediation study with a provisional item to fulfill the Municipal Class Environmental Assessment (EA) requirements for Schedule B / C projects as required. Since five Assignments were identified as Schedule B projects due to the lack of easements for the proposed improvement works and / or unclear easement conditions at the time of alternative development, the provisional item to undertake additional studies to fulfill Schedule B project requirements was warranted by the City. The Capacity Assessment Study fulfilled Schedule A/A+ project requirements. This study, the A58 Master Plan, will address MCEA Schedule B project requirements for the five Assignments that were identified as the lack of easements for the proposed works. The Municipal Class EA process provides members of the public and interest groups an opportunity to provide input at key stages of the study.

2.1 The Municipal Class Environmental Assessment (MCEA)

The MEA's Municipal Class EA document (October 2000, as amended in 2007, 2011 and 2015), describes the process that municipalities must follow in order to meet Ontario's Environmental Assessment requirements for water, wastewater and road projects, including Master Plans. Depending on the individual project or Master Plan to be completed, there are different processes that municipalities must follow to meet Ontario's Environmental Assessment requirements.

Class EAs are prepared for approval by the Minister of the Environment. A Class EA is an approved planning document that defines groups of projects and activities and the EA process which the proponent commits to for each project undertaking. Provided the process is followed, projects and activities included under the Class EA do not require formal review and approval under the Environmental Assessment Act (EAA). In this fashion, the Class EA process expedites the environmental assessment of smaller, recurring projects.

This Class EA document reflects the following five key principles of successful planning under the EAA.

- Consultation with affected parties early on, such that the planning process is a cooperative venture.
- Consideration of a reasonable range of alternatives.
- Identification and consideration of the effects of each alternative on all aspects of the environment.
- Systematic evaluation of alternatives in terms of their advantages and disadvantages, to determine their net environmental effects.
- Provision of clear and complete documentation of the planning process followed, to allow "traceability" of decision-making with respect to the project.

The accompanying flow chart (**Figure 2.1**) illustrates the process followed in the planning and design of projects covered by this Class Environmental Assessment. The five phases, as defined in the flow chart, are summarized in the document as follows:

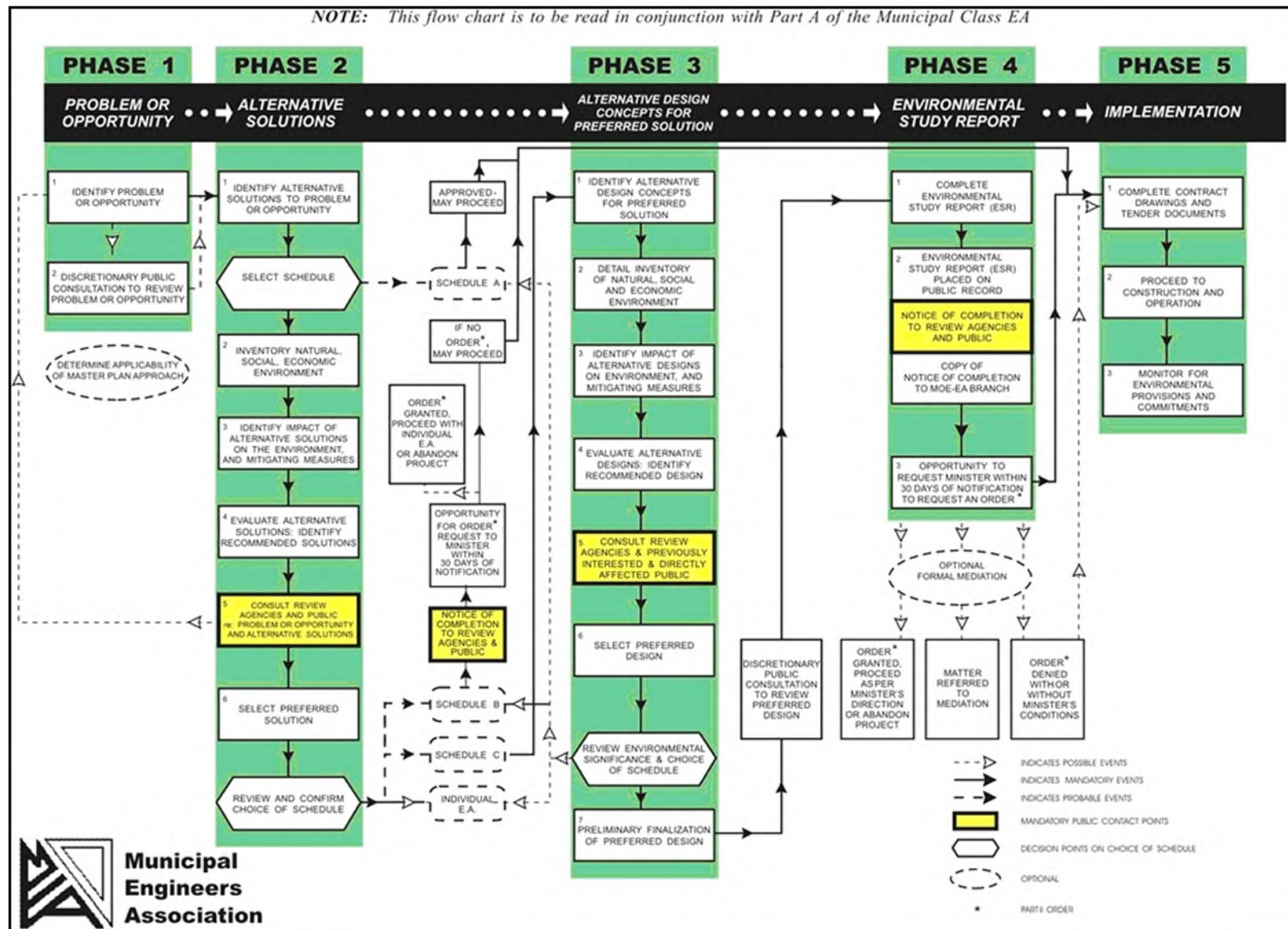


Figure 2.1: Municipal Class EA Planning and Design Process

- **Phase 1:** Identify the problem or deficiency.
- **Phase 2:** Identify alternative solutions to the problem, by taking into consideration the existing environment, and establish the preferred solution taking into account public and agency review and input. At this point, identify approval requirements (e.g., Ontario Water Resources Act, Lakes and Rivers Improvement Act, and Environmental Protection Act) and determine the appropriate schedule for the project and proceed through the appropriate phases.
- **Phase 3:** Examine alternative methods of implementing the preferred solution, based upon the existing environment, public and government agency input, anticipated environmental effects, and methods of minimizing negative effects and maximizing positive effects.
- **Phase 4:** Document, in an Environmental Study Report, a summary of the rationale and the planning, design, and consultation process of the project as established throughout the above phases, and make such documentation available for scrutiny by review agencies and the public.
- **Phase 5:** Complete contract drawings and documents, and proceed to construction and operation; monitor construction for adherence to environmental provisions and commitments. Where special conditions dictate, also monitor the operation of the completed facilities.

Public and agency consultation is also an important and necessary component of the five phases.

The MEA's Class EA document classifies projects as Schedule A, B or C depending on their level of environmental impact and public concern.

- **Schedule 'A'** projects are generally routine maintenance and upgrade projects; they do not have big environmental impacts or need public input. Schedule 'A' projects are all so routine that they are generally pre-approved without any further public consultation.
- **Schedule 'B'** projects have more environmental impact and do have public implications. Examples would be stormwater ponds, river crossings, expansion of water or sewage plants beyond up to their rated capacity, new or expanded outfalls and intakes, and the like. Schedule 'B' projects require completion of Phases 1 and 2 of the Class EA process.
- **Schedule 'C'** projects have the most major public and environmental impacts. Examples would be storage tanks and tunnels with disinfection, anything involving chemical treatment, or expansion beyond a water or sewage plant's rated capacity. Schedule 'C' projects require completion of Phases 1 through 4 of the Class EA process, before proceeding to Phase 5 implementation.

MEA's Municipal Class EA recognized benefits of comprehensive, long-range planning exercises that examine problems and solutions for an overall system for municipal services. Master plans are defined as "long range plans which integrate infrastructure requirements for existing and future land use with environmental assessment planning principles". The Class EA Master Plan process examines infrastructure system(s) or groups of related projects in order to outline a framework for implementation of subsequent projects and/or developments. Therefore, the specific projects recommended in a master plan may occur over an extended time frame.

There are four different approaches to completing Master Plans and each approach represents a different level of assessment. All Master Plans must address at least the first two phases of the Class EA process.

- **Approach #1:** Prepare a Master Plan document at the end of Phases 1 and 2 of the Municipal Class EA process. The Master Plan document will be the basis for, and be used in support of, future investigations for the specific projects identified within it.
- **Approach #2:** Prepare a Master Plan document at the end of Phases 1 and 2 of the Municipal Class EA process where the level of investigation, consultation and documentation are sufficient to fulfil the requirements for Schedule B projects.
- **Approach #3:** Prepare a Master Plan document at the end of Phase 4 of the Municipal Class EA process.
- **Approach #4:** Integrate approvals under the EA and Planning Acts. For example, the preparation of new or amended Official Plans could be undertaken simultaneously with Master Plans for water, wastewater and transportation, and approval for both sought through the same process.

2.2 Study Approach Overview and Primary Tasks

This study has been undertaken following the Master Plan approach (Approach #2), under the Municipal Class Environmental Assessment process to satisfy the Environmental Assessment requirements for Schedule B projects. The primary tasks which were undertaken as part of this study and the associated chapters are summarized below:

- Chapter 1 – Introduction
 - Provide study background and define the study purpose;
- Chapter 2 – The Environmental Assessment Process
 - Specify Municipal Class Environmental Assessment Process and Phases;
 - Provide Study Approach Overview
- Chapter 3 – Identification of Problems and Opportunities
 - Define the problems and opportunities associated with the study;
- Chapter 4 – Existing Conditions
 - Summarize the existing conditions within the study area from physiological, natural environment, social-economical, regulatory and other perspectives;
- Chapter 5 – Data Collection and Field Investigations
 - Collect associated background information and undertake data gap analysis;
 - Undertake various field investigations to collect additional information;
- Chapter 6 – Assessment of Existing Conditions
 - Storm and sanitary system modelling;
 - Assess the existing storm and sanitary drainage system and identify system deficiencies under various storm events;

- Chapter 7 – Development and Assessment of Alternative Solutions
 - Present and evaluate the alternative solutions;
 - Selection of the preferred alternative;
- Chapter 8 – Preferred Alternatives Measures
 - Provide a description of the preferred solution for the drainage systems, costing and implementation considerations including impact mitigation measures, details relating to functional design and detailed design, environmental approvals and permitting, and contract documents and construction;
- Chapter 9 – Conclusions and Recommendations
 - Provide conclusions and recommendations.

2.3 Public Consultation

Consultation was undertaken together with the City’s Public Consultation Unit. A stakeholder list was developed to keep track of all relevant stakeholders including indigenous groups, review agencies, general public and private property owners. Consultation for this project included:

- Notification to the local community
- Online Questionnaire about basement flooding
- Letters to Affected Property Owners
- Information posted to a Project Webpage (Toronto.ca/BF65)

A high-level summary for each component is presented in the sub-sections below and copies of materials are attached in **Appendix A**.

2.3.1 Public Notification

A Notice of Study Commencement and Public Consultation was published on October 31st, 2022 on the City’s website. The notice introduced the study, illustrated the study area boundary, explained the Municipal Class EA process and identified means of providing public input. The notice was also delivered to approximately 5,000 properties and stakeholders associations within the study area.

Questionnaires were also mailed to local residences in February 2021 to collect additional information with respect to local flooding problems and issues.

Notices were also posted to the City’s webpage at Toronto.ca/BF58.

2.3.2 Direct Mail

As mentioned in **Section 2.3.1**, various notices regarding the study, including Study Commencement, Public Consultation and online questionnaire notice, were mailed out directly to the relevant stakeholders. The notices also include a link to City’s project website.

2.3.3 Public Consultation

The City posted information online starting on October 31st, 2022 to its webpage introducing the project, providing an opportunity for people to learn about the nature and types of flooding, presenting an overview of the study including key tasks completed and information on existing conditions, presenting findings of investigations, proposed remediation solutions, study progress and timelines, as well as opportunities for community input.

The City's Public Consultation Unit's contact information was provided online in order to collect public input. A dozen comments were received. A copy of the posted materials and public comments can be found in **Appendix A**.

2.3.4 Online Questionnaire

To support the data collected during the field survey, residents within the area were provided a website link in a newsletter to complete an online basement flooding questionnaire requesting information regarding the dates and the number of times they experienced basement flooding. Information with respect to the disconnection of downspouts, existence of a backflow device, and whether their properties had reverse-sloped driveways was also requested.

A total of 240 questionnaire responses were received for this study area and 138 responses (57%) indicated that their properties have not experienced flooding previously or they were not aware of historical flooding incidents. A total of 102 responders (43%) reported flooding incidents on their properties, with a frequency of historical flooding ranging from once to five times. Seven records indicate flooding incidents occurred prior to 2000. The information collected from the questionnaires was used to correlate the basement flooding that properties identified by the residents in the questionnaires with the data collected by the City previously.

2.3.5 Website

A project website was created to share all background information related to the study, meeting materials, project updates and staff contact information. The website was promoted in notices mailed out to the public and stakeholders. The website can be accessed at Toronto.ca/bf58.

2.4 Indigenous Consultation

The Notice of Study Commencement and Public Consultation were distributed on October 31st, 2022 to various indigenous groups to inform them of the study, study recommendations and to request feedback. Relevant indigenous contacts include the following:

- Mississaugas of the Credit First Nation (MCFN)
- Chippewas of Georgina Island First Nation
- Chippewas of Rama First Nation (Mnjikaning)
- Beausoleil First Nation
- Curve Lake First Nation
- Mississaugas of Scugog Island First Nation

- Hiawatha First Nation
- Alderville First Nation

A response was received from the Mississaugas of the Credit First Nation to indicate that they had reviewed the Stage 1 Archaeology Assessment report and did not have any questions or comments.

2.5 Agency Consultation

The City notified all relevant review agencies by email on October 31st, 2022. A list of review agencies that were notified as well as the responses received can be found in **Appendix A**.

The Toronto and Region Conservation Authority (TRCA) was consulted during both the Capacity Assessment Study and this study. A preliminary consultation meeting was held with TRCA and the City on September 28, 2021 to introduce the Capacity Assessment Study, present the proposed works that are within the TRCA regulated areas and / or on TRCA properties. A series of comments were received from TRCA on January 25, 2022 , responses to which are included in **Appendix A**.

TRCA was also consulted during this study and a series of comments were received on February 6, 2023 in response to the PIC. The TRCA's response letter and the comment responses can also be found in **Appendix A**.

The City acknowledged TRCA's request for further evaluation of the sensitivity of the receiving watercourses to peak flow impacts from the proposed basement flooding solutions. The City would like to emphasize that the full set of solutions developed through the Study Phase is subject to cost per benefiting property prioritization to determine which projects will be included in the City's capital plan. Therefore, the City plans to undertake further consultation for projects located within TRCA regulation limits during the future design phases.

2.6 Individual Property Consultation / Easements

As the Schedule B projects involve works on private properties, letters were sent out to the private property owners associated with each Schedule B project. The group of private property owners include TRCA, MTO, Hydro One, residents and condominium management corporations. Comments and responses were received from some of the private property owners. Communication correspondence is attached in **Appendix A**.

Stakeholder meetings were also held with three of the property owners, including 1150 Eglinton Avenue East and 895 Don Mills Road for the A58-41 project as well 382 Old Yonge Street for the A58-28 project. Meeting minutes are provided in **Appendix A**.

It should be noted that during the stakeholder consultation with the property owner of 1150 Eglinton Avenue East (within the A58-41 project area), which is currently being re-developed as a residential neighbourhood, the City had just become aware of the existing sewers replacement works completed within the property in support of the land development project. As a result, the works proposed as part of this study along the 1150 Eglinton Avenue East are no longer required.

2.7 Notice of Completion

The filing of this Master Plan and the issuance of the Notice of Completion fulfill the requirements for Schedule 'B' projects under the Municipal Class EA process. Subject to comments received, the receipt of the necessary approvals and funding, the City of Toronto may consider the continuation of detailed design and construction of the recommended projects in Study Area 58.

3 PROBLEM AND OPPORTUNITY IDENTIFICATION

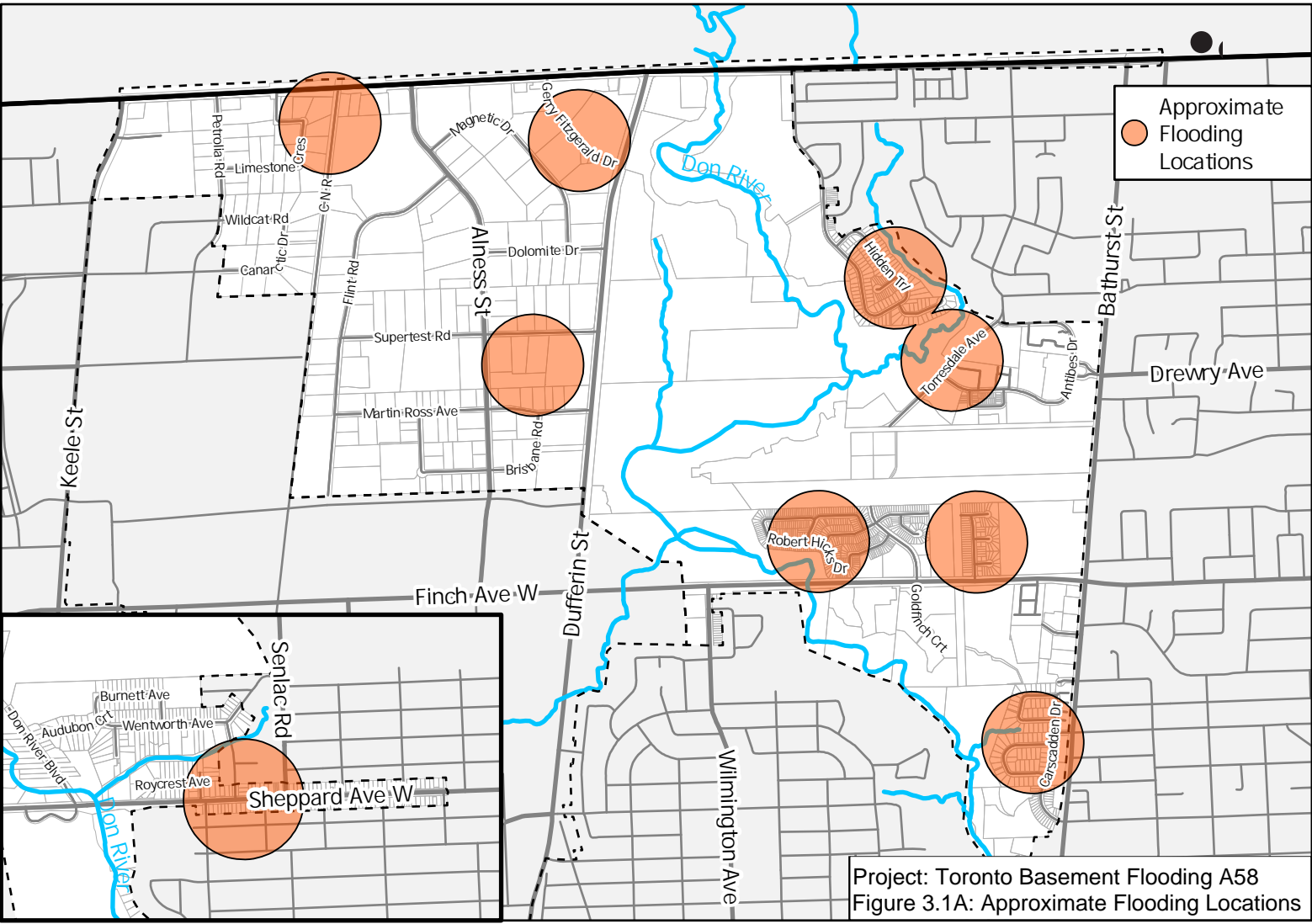
The City of Toronto undertook a series of five studies that were completed in 2003. The study, which is now referred to as the Wet Weather Flow Master Plan (WWFMP) addressed a number of issues related to drainage, protection of streams and rivers from stormwater discharge and the integrated design of road and storm systems. The WWFMP includes a Vision Statement that “recognizes rainwater as a potential resource to be utilized to improve the health of Toronto’s watercourses”. The WWFMP philosophy and principles provided direction for treating stormwater at the source (i.e. on private and public properties) as well as looking at integrated road and storm drainage systems and end-of-pipe control and/or treatment measures. The study area together with the West Don River, which receives stormwater from the study area, experiences several of the issues as identified in the Don River WWFMP. Opportunities for water quality improvement were identified in the study, however, the focus of the Capacity Assessment Study and the A58 Master Plan was on reducing surface and basement flooding.

Flooding incidents were reported following the storm events that occurred on May 12, 2000, August 19, 2005 and July 8, 2013. **Figure 3.1** shows the general locations of reported basement and surface flooding incidences based on the City’s Hansen Records. Engineering assessments using the hydraulic modelling undertaken during the study identified various locations at risk of basement flooding during extreme events which overload the existing storm and sanitary sewer systems. The frequency and specific causes of basement flooding vary between the different sewer systems which service the study area. Both surface flooding and basement flooding, supported by historical flooding records and hydraulic model simulation results, were observed throughout the study area 58 and within the Schedule B project locations. The five Schedule B projects are listed below and the approximate locations of the sites are illustrated in **Figure 1.3**:

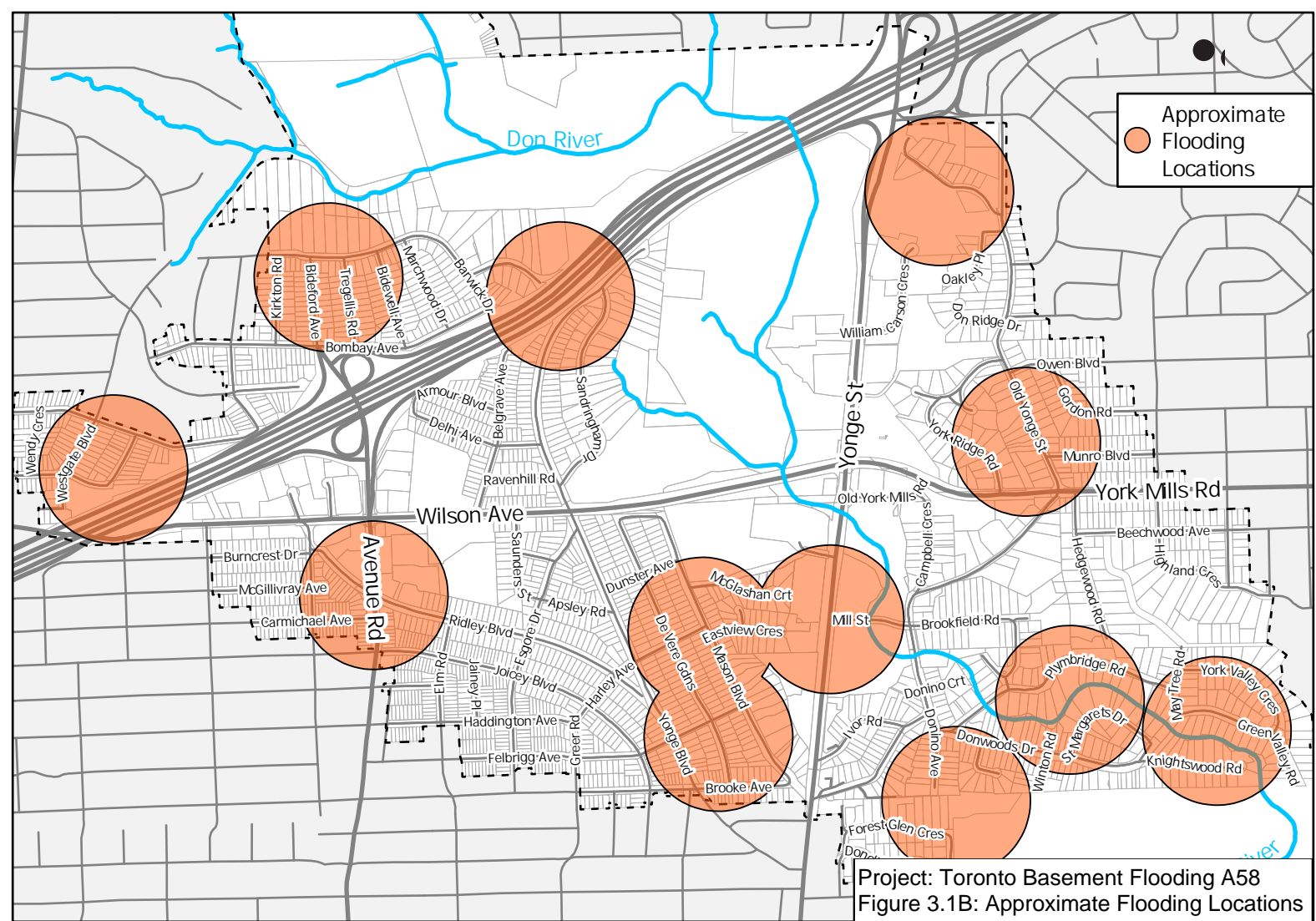
1. A58-07: Robert Hicks Finch/Bathurst Area (storm system deficiencies)
2. A58-28: Old Yonge Street (storm system deficiencies)
3. A58-29: York Mills Road Area (sanitary system deficiencies)
4. A58-39: Belgrave / Highway 401 Area (storm system deficiencies)
5. A58-41: Eglinton Avenue East Area (storm system deficiencies)

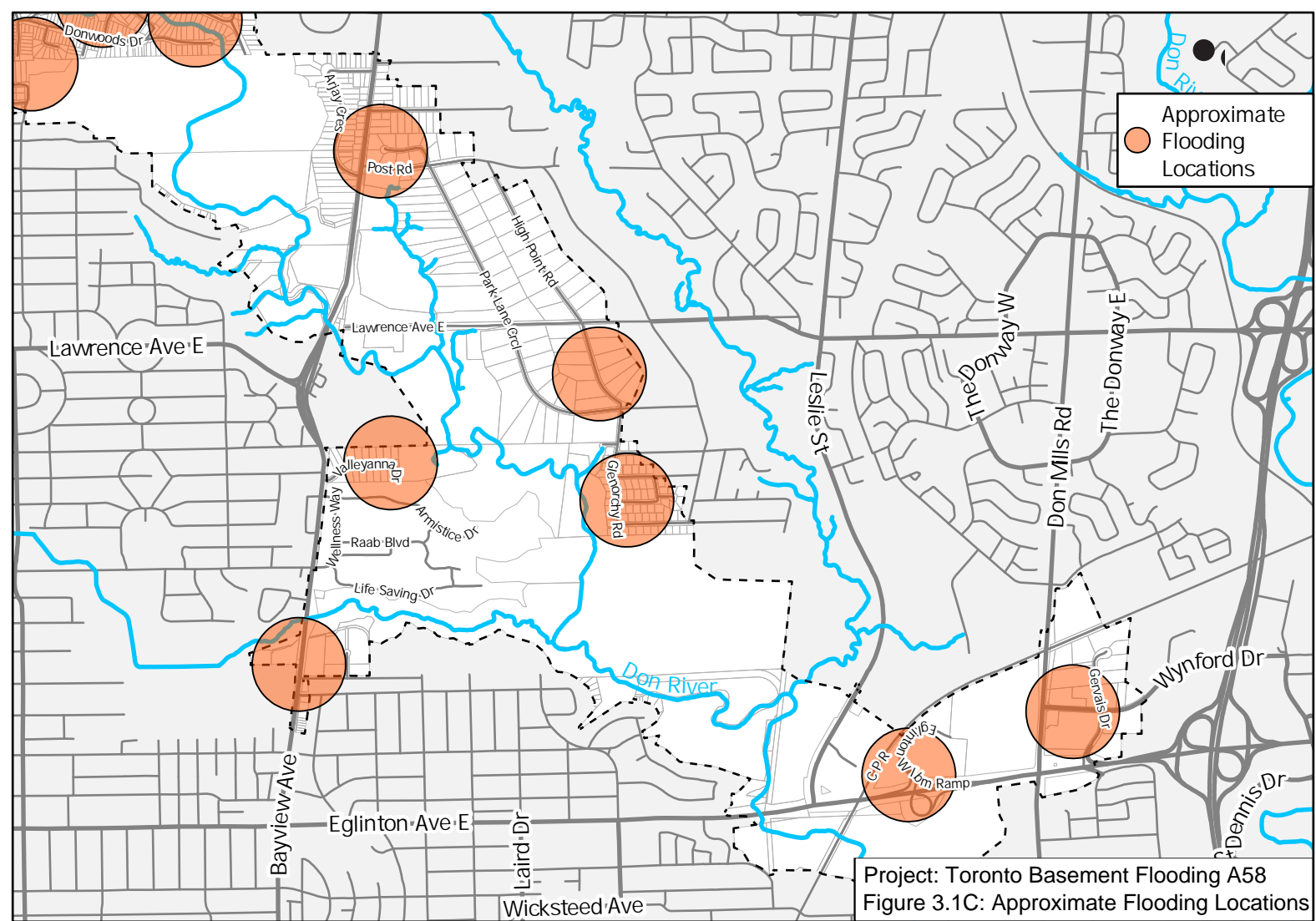
It should be noted that although deficiencies were observed in both storm and sanitary system for A58-29, the proposed storm system improvement works will be carried out as a Schedule A/A+ project as part of the Capacity Assessment Study, the A58-29 project in the A58 Master Plan study only deals with the sanitary sewer system due to the lack of easements.

With increasingly severe weather events and continued population growth, the risk of basement and surface flooding needs to be reduced to protect against damage to private property within the study area. The opportunities in both the Capacity Assessment Study and the A58 Master Plan Study include the development of a comprehensive storm drainage system and sanitary sewer system improvement plan that meets the current level of service.



Project: Toronto Basement Flooding A58
 Figure 3.1A: Approximate Flooding Locations





Project: Toronto Basement Flooding A58
 Figure 3.1C: Approximate Flooding Locations