APPENDIX M

PUBLIC CONSULTATION

Agency	Sal	First Name	Last Name	Title	Company	Address 1	Address 2	City	Prov	Postal Code	Phone	Fax	Email
Other	Ms.	Sharon	Lingertat	Senior Planner, Environmental Assessment Planning	Toronto and Region Conservation Authority	5 Shoreham Drive		Downsview	ON	M3N 1S4			sharon.lingertat@trca.ca
Other	Mr.	Aaron	Christie	Project Manager	Region of Durham		605 Rossland Road East, Box 911	Whitby	ON	L1N 0B8	905-668-7711 x 3608		aaron.christie@durham.ca
Emergency Services	Mr.	Steve	McNenly	Deputy Chief/Assistant Director	Durham Region Emergency Medical Services		4040 Anderson Street	Whitby	ON	L1R3P6	905-665-6313 x 2248	905-444-2042	
Emergency Services	Mr.	Rob	Kobayashi	Staff Sergeant	Ontario Provincial Police, Whitby Detachment	P.O. Box 57		Whitby	ON	L1N 5R7	905-668-3388	905-668-3651	
Emergency Services	Mr.	Troy	Cheseboro	Director	Region of Durham Paramedic Service	4040 Anderson Street		Whitby	ON	L1R 3P6			troy.cheseboro@durham.ca
Municipal / Regional	Mr.	Chris	Leitch	Senior Planner	Durham Region Planning and Economic Development Department	605 Rossland Rd. E.		Whitby	ON	L1N 6A4	905-668-4113 Ext. 2567		chris.leitch@durham.ca
Municipal / Regional	Mr.	William	Holmes	General Manager	Durham Region Transit	605 Rossland Rd. E		Whitby	ON	L1N 6A3			william.holmes@durham.ca
Municipal / Regional	Mr.	Doug	Robertson	Project Manager, Transportation Infrastructure;	Durham Region Works Department	605 Rossland Rd. E.	P.O. Box 623	Whitby	ON	L1N 6A3			doug.robertson@durham.ca
Municipal / Regional	Mr.	Glen	Severn	Engineering Planning and Studies	Durham Region Works Department	605 Rossland Rd. E.	P.O. Box 623	Whitby	ON	L1N 6A3			Glen.Severn@Durham.ca
Municipal / Regional	Ms.	Lynda	Motschenbacher	Project Coordinator	Region of Durham - Transportation Infrastructure Works Department	605 Rossland Rd. E. Level 5	P.O. Box 623	Whitby	ON	L1N 6A3			Lynda.Motschenbacher@durham.ca
Municipal / Regional	Mr.	Steve	Mayhew		Durham Region	606 Rossland Rd. E.	P.O. Box 624	Whitby	ON	L1N 6A4			Steve.Mayhew@Durham.ca
Education	Ms.	Katie	Johnson	CAO	Durham Student Transportation Services	400 Taunton Road East		Whitby	ON	L1R 2K6	905-666-6450		
Education	Ms.	Chritine	Nancekivelle	Senior Planner	Durham District School Board	400 Taunton Road East		Whitby	ON	L1R 2K6	905-666-5500		christine.nancekivell@ddsb.ca
Provincial	Ms.	Maria	Jawaid	District Planner	Ministry of Natural Resources and Forestry	Aurora District	51 Bloomington Road West	Aurora	ON	L4G0L9	905-713-7368		natosha.fortini@ontario.ca
Provincial	Ms.	Emilee	O'Leary	Environmental Planner/Envirnmnetal Assessment Coordinator	Ministry of the Environment and Climate Change	5775 Yonge Street	8th Floor	Toronto	ON	M2M 4J1	416.326.3469		emilee.oleary@ontario.ca
Provincial	Mr.	Dan	Minkin	Heritage Planner	Ministry of Tourism, Culture and Sport	Heritage Program Unit	Suite 1700, 401 Bay Street	Toronto	ON	M7A 0A7	416-314-7132		dan.minkin@ontario.ca

Notice of Study Commencement

Claremont Drainage Plan
Class Environmental Assessment (EA)

Engineering Services Department

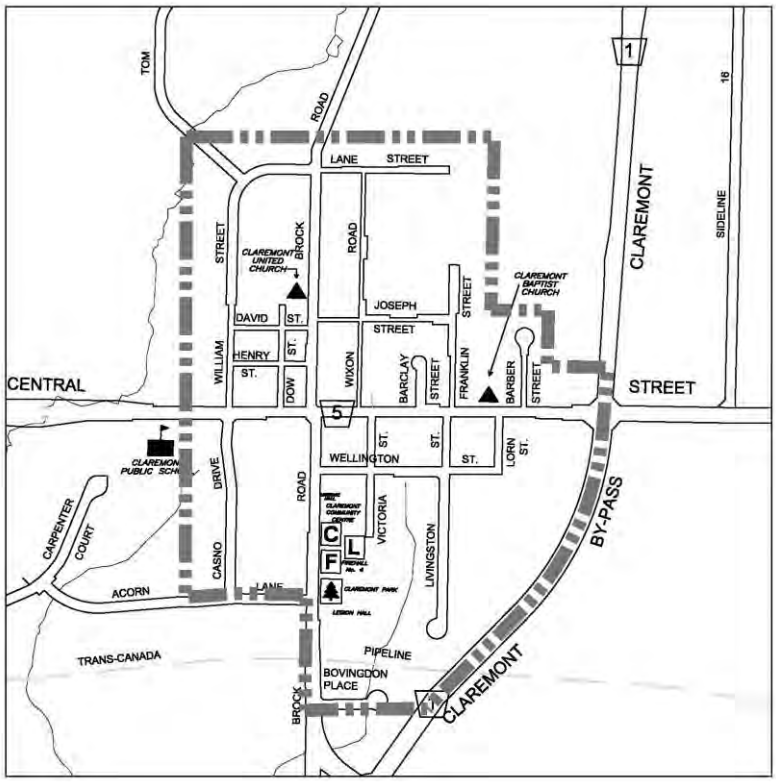
February 22, 2017

The Study

The City of Pickering is undertaking a Study to complete a comprehensive analysis of the drainage system, identify deficiencies and develop a comprehensive drainage management strategy for the Hamlet of Claremont. The Study Area is shown in the Key Map below. Amec Foster Wheeler Environment & Infrastructure has been retained by the City of Pickering to complete the Claremont Drainage Plan.

The Process

The study will be conducted in accordance with Approach #2 for Master Plans, as outlined in the Municipal Engineers Association's, Municipal Class Environmental Assessment (EA) (October 2000, amended 2007, 2011 and 2015). The Study is intended to address the first two phases of the Master Plan Class EA process, and consultation with stakeholders (public and agencies) will be a key component of the Study. Public Information Centres (PICs) will be held to discuss matters related to the study, including problems, opportunities, alternative solutions, evaluation criteria, environmental impacts and mitigation measures. PIC dates and details will be advertised as the Study progresses.



Customer Care Centre
T.905. 683.7575

customercare@pickering.ca
pickering.ca

Alternate formats available upon request at 905.683.7575

Comments

This Notice of Study Commencement is being issued to notify the stakeholders of the project and invite comment. Comments and information regarding the Study will be maintained for reference throughout the project and will become part of public record. The information is collected under the authority of the *Environmental Assessment Act* or is collected and maintained for the purpose of creating a record that is available to the general public as described in s. 37 of the *Freedom of Information and Protection of Privacy Act*. Personal information you submit will become part of a public record that is available to the general public unless you request that your personal information remain confidential.

For further information on this project please contact:

Irina Marouchko, P.Eng
Water Resources Engineer
City of Pickering
One The Esplanade
Pickering, ON L1V 6K7
T. 905.420.4660 ext. 2072
imarouchko@pickeringt.ca

Steve Chipps, P.Eng.
Consultant Project Manager
Amec Foster Wheeler Environment & Infrastructure
3215 North Service Road
Burlington, ON L7N 3G2
T. 905.335.2353
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City of PICKERING

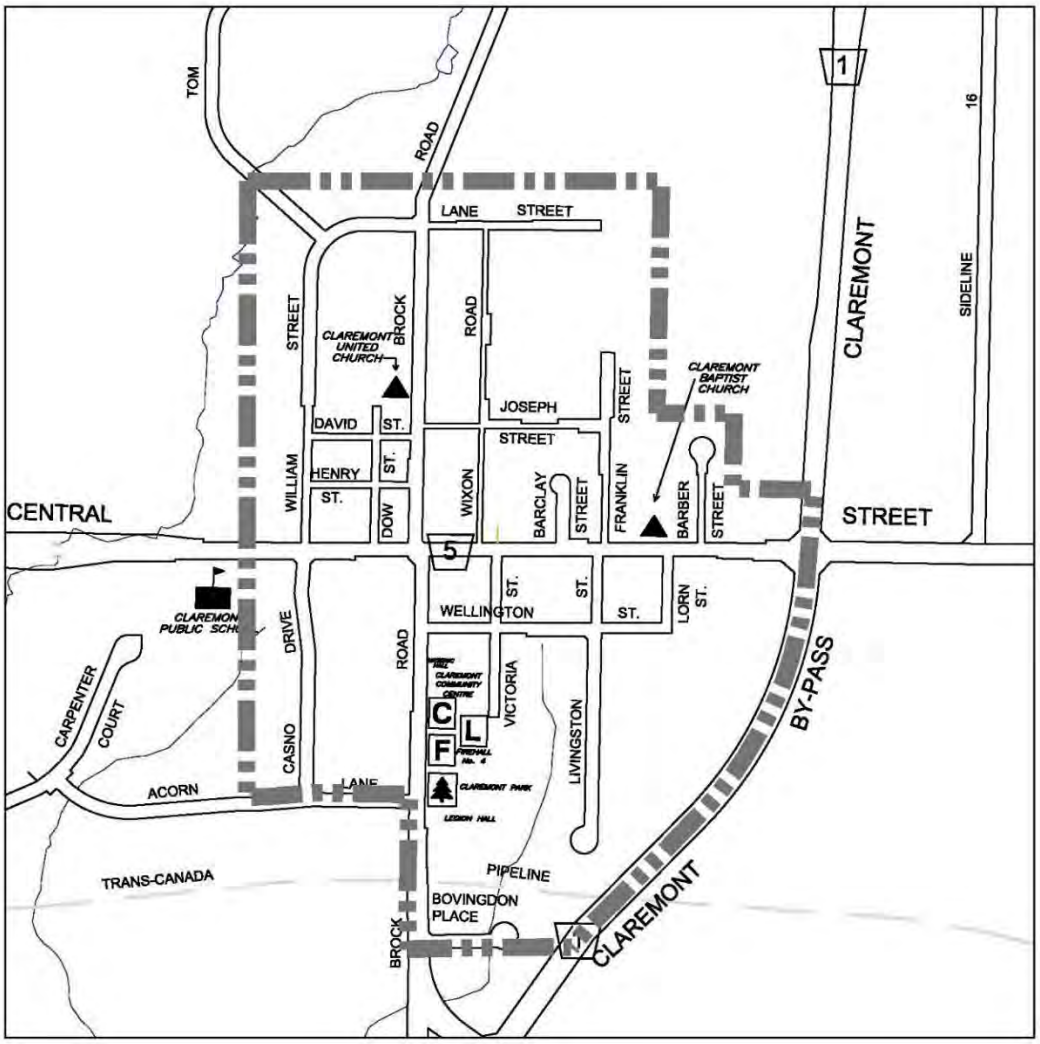
Notice of On-line Public Information Centre #1

City of Pickering
Claremont Drainage Plan

Engineering Services Department

Due to COVID-19 and the Premier's Emergency Orders to limit gathering and maintain physical distancing, the Engineering Services Department is holding an on-line Public Information Centre (PIC #1) for the Claremont Drainage Plan. The on-line PIC#1 will allow for all interested parties to review the details of the study and to provide input, feedback and comments to the study project team.

The City of Pickering is undertaking the Claremont Drainage Plan to complete a comprehensive analysis of the drainage system, identify deficiencies and develop a comprehensive drainage management strategy for the central area of the Hamlet of Claremont. The study is being conducted in accordance with Approach #2 for Master Plans, as outlined in the *Municipal Engineers Association's, Municipal Class Environmental Assessment* (EA) (October 2000, amended 2007, 2011 and 2015). The Study Area is shown on the Key Map below.



Key Map – Study Area

The purpose of PIC#1 is to introduce the project and the goals and objectives of the study and to present results of the existing storm system analysis, preliminary alternative solutions, evaluation criteria and the project schedule.

Please visit the study website at www.pickering.ca/claremont-drainage-plan to review the presentation slides and to submit your comments and feedback.

The PIC#1 presentation will be available on the City's website from:

Friday, November 20, 2020 to Friday, December 11, 2020

Please provide your comments and feedback on or before Friday, December 11, 2020

Comments? Feedback? Contact us!

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This notice issued on November 19, 2020

Alternate formats available upon request at 905.683.7575

Notice of Study Status

Claremont Drainage Plan
Class Environmental Assessment (EA)

Engineering Services Department

November 29, 2019

The Study Status

The City of Pickering initiated the Claremont Drainage Plan in February 2017 in order to complete a comprehensive analysis of the drainage system, identify deficiencies and develop a comprehensive drainage management strategy for the Hamlet of Claremont (see Key Map for Study Area).

Following a large rain event in June 2017, the City had to set aside the overall Claremont Drainage Plan to assess site specific risks within the Study Area. The City anticipates that work on the Claremont Drainage Plan and the EA process will resume in January 2020, and be completed by spring 2021. Given that the overall goal of the Drainage Plan is to take an integrated approach to improve the drainage system, several road projects within the Hamlet of Claremont have also had to be postponed until further information from the Drainage Plan was available. Analysis and results from the Claremont Drainage Plan will help determine design elements for these road projects, such as storm sewers, catch basins and curb and gutter work, specifically for roads that currently do not have these elements.

The next steps of the project will consist of preparing for a Public Information Centre (PIC), which will provide information pertaining to the goals and objectives, the existing conditions of the Study Area that have been documented to date, preliminary alternative solutions, evaluation criteria, and the project schedule. The PIC is anticipated to be held in spring 2020, with the time and location advertised in advance.

If you have any questions or wish to be added to the study mailing list, please contact:

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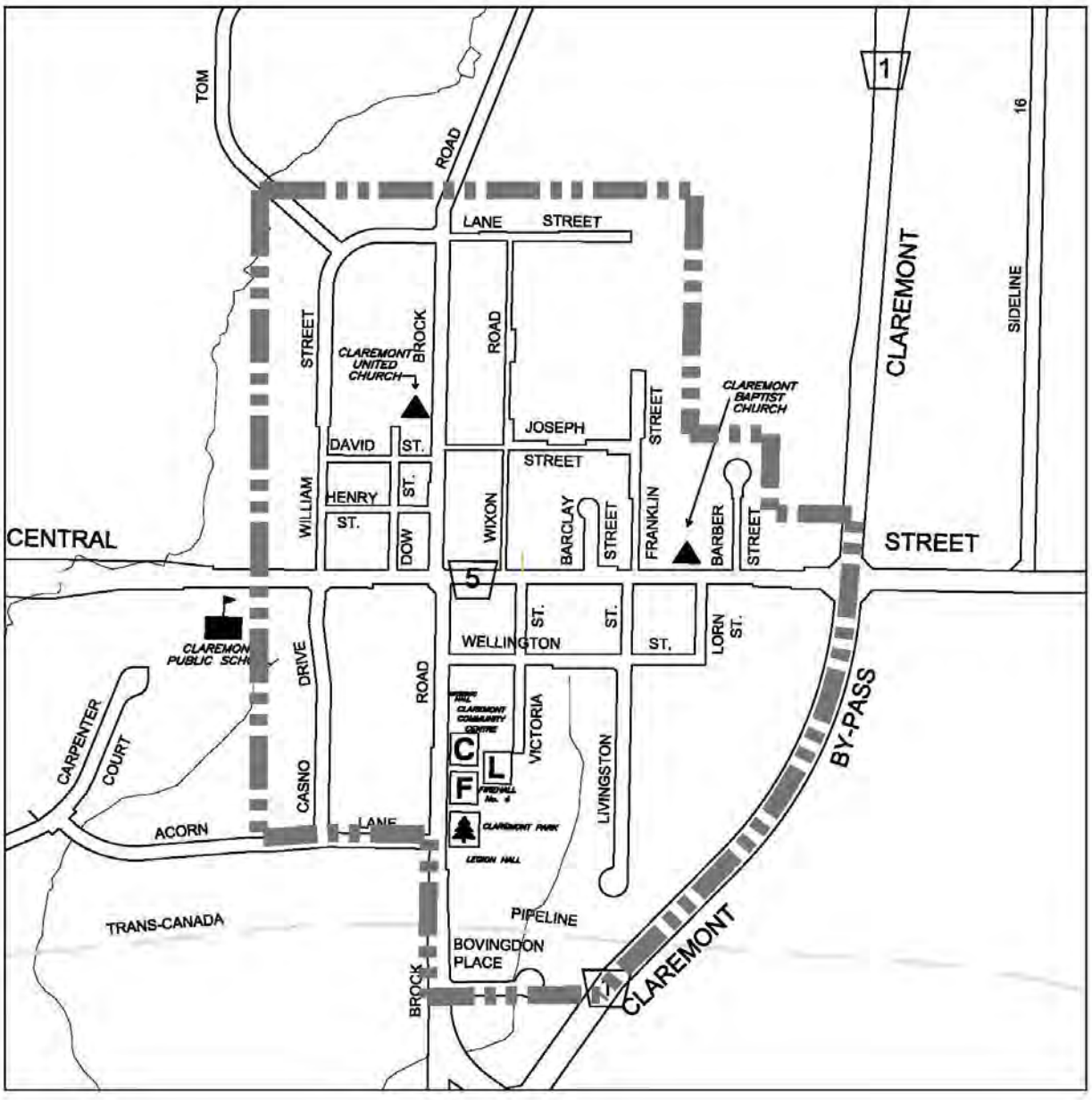


Key Map – Study Area

CDP Meeting Minutes Summary

Discussion with the Claremont property owner/resident - BW

Date: March 9, 2020

- The project team provided a brief overview of the study goals and objectives.
- BW provided background information of flooding issues related to his property.
- BW stated that the source of problem lays to the vacant farm field lands north of Franklin Street and the farmer has significantly changed elevations and has tile drained the field beyond drainage area limits.
- BW questioned the contour data and stated that the drainage area is greater than what has been shown on plan based on personal experience.
- The project team confirmed that LIDAR data was used in the assessment.
- BW stated this “flood” condition occurs all year round and described overland flow beyond capacity of minor system, i.e. CBs are surcharging.
- BW believes storm system was not designed correctly and undersized with capacity limitations at Central Street and the existing weir at Central Street storm sewer is creating flow problems upstream.
- BW indicated that the rock check dam has been installed jointly by him and City Forces to alleviate flows from farm field. Received permission approx. 18 years ago to build berms and ditches to help improve drainage.
- The Acutest Report shows chemicals exceed safe drinking water limits in well originating from farmer’s field. Test data was so bad that house was considered for tear-down.
- BW claims Veridian, formerly Pickering Hydro, cut his home’s weeping tile and capped it with concrete when installing services resulting in flooding/surcharge and the check valves which were installed also failed.
- BW concerned with potential power failure and inoperable sump pump causing flooding.
- BW recollects historic flooding within stream corridor south of William Street but believes homes have not been impacted due to proper offset. Same condition exists along Livingston Street and Bovingdon Place.
- BW states that it does not take a 100-year event to flood the system, partially due to surficial geology and subsurface clayey soils. Oak Ridges Moraine begins 500m north where glacial till is found.
- BW believes that the root cause is the Central Street redevelopment and poor engineering design.
- The project team to confirm extent of tile drain system to ensure drainage area is reflective.
- BW questioned about the project timelines.
- The project team indicated that the existing system analysis to be finalized with first PIC expected in late Spring and next steps are alternatives/evaluations followed by 2nd PIC discussing alternatives with residents.

- BW provided USB drive with flooding photo records.

City of PICKERING

wood.

Public Information Centre No. 1
Claremont Drainage Plan
Municipal Class Environmental Assessment
City of Pickering

November 20, 2020 - December 11, 2020

1. Study Overview and Purpose

- Due to the age of the development in the Hamlet of Claremont, the drainage infrastructure in the community was not built to meet formal and current engineering standards. The City of Pickering received drainage complaints of flooding within both public and private properties, in the Hamlet of Claremont.
- The City initiated the Claremont Drainage Plan in February 2017 to complete a comprehensive analysis of the existing drainage system, identify deficiencies and develop a comprehensive drainage management strategy for the central area of the Hamlet of Claremont to improve the drainage system and determine the appropriate level of service. The Study Area is shown on slide 6.
- Following a large rain event in June 2017, the City set aside the overall Claremont Drainage Plan to assesses site specific risks in the Study Area. The City resumed work on the Claremont Drainage Plan in late summer 2020.

2. Study Goals

- The goals of the Claremont Drainage Plan Municipal Class Environmental Assessment (EA) are to:
  - Understand the existing drainage system performance;
  - Determine the appropriate level of service and methods to improve the existing drainage system level of performance to reduce the flood risks to the public, property, buildings and infrastructure;
  - Develop an implementation plan that considers the drainage system existing performance and prioritizes system improvements that will provide the maximum benefit for the Hamlet.

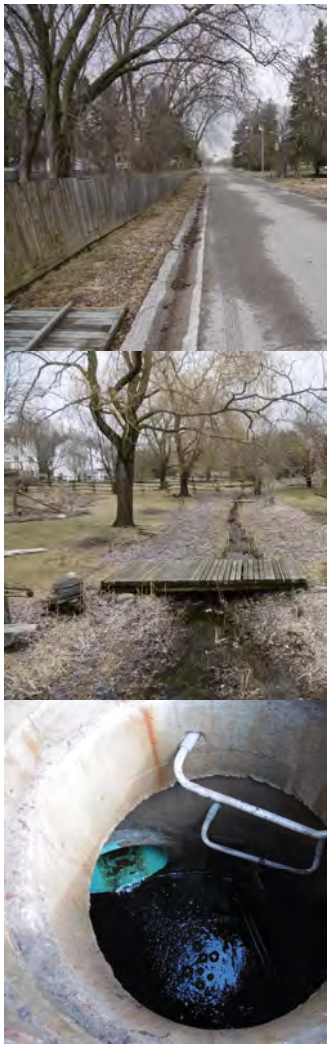
3. Study Approach and Methodology

Approach

- Assess the hydraulic performance of the existing drainage system
- Develop a long-term plan for improving the existing drainage system and reducing flood risk
- Establish a set of priority-based actions
- Recommend municipally-led capital works to address improvements to the existing drainage system within the Study Area

Methodology

- Data collection / reconnaissance
- Flow monitoring under the existing drainage system
- Numerical modelling to determine flows, flood elevations and velocities in the existing drainage system
- Performance evaluation of minor and major drainage systems
- Systematic alternative assessment, considering:
  - Natural environment
  - Social environment
  - Economic environment

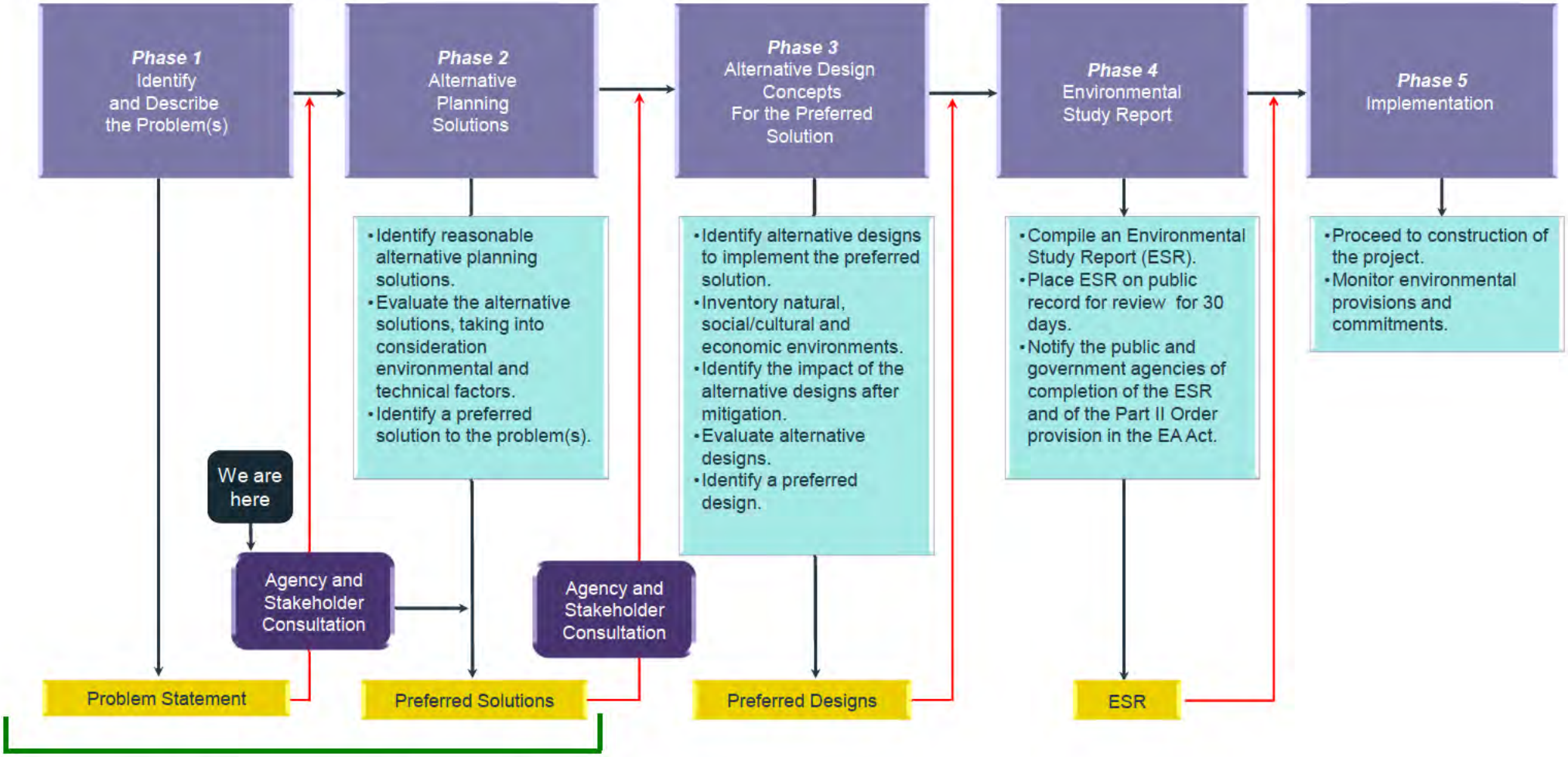


4. Municipal Class EA Process

- The Claremont Drainage Plan Municipal Class EA is following Approach #2 under Master Planning Process highlighted in Appendix 4 of the Municipal Class Environmental Assessment Document (Oct. 2000, as amended in 2007, 2011 & 2015) to satisfy Phases 1 and 2 of the Class EA Process.
- The Municipal Class EA will establish a comprehensive set of priority based recommendations to improve the existing drainage system performance and prevent flooding of private and public property and buildings.
- Project is split into two (2) phases:
  - Phase 1: Identify and Describe the Problem(s):
    - Focused on data collection, data gap filling, and establishing an understanding of the existing drainage system performance.
  - Phase 2: Alternative Planning Solutions
    - Building on the data collected in Phase 1 and the understanding of the existing drainage performance, this phase will focus on preparing prioritized options to improve the drainage system and prevent flooding.

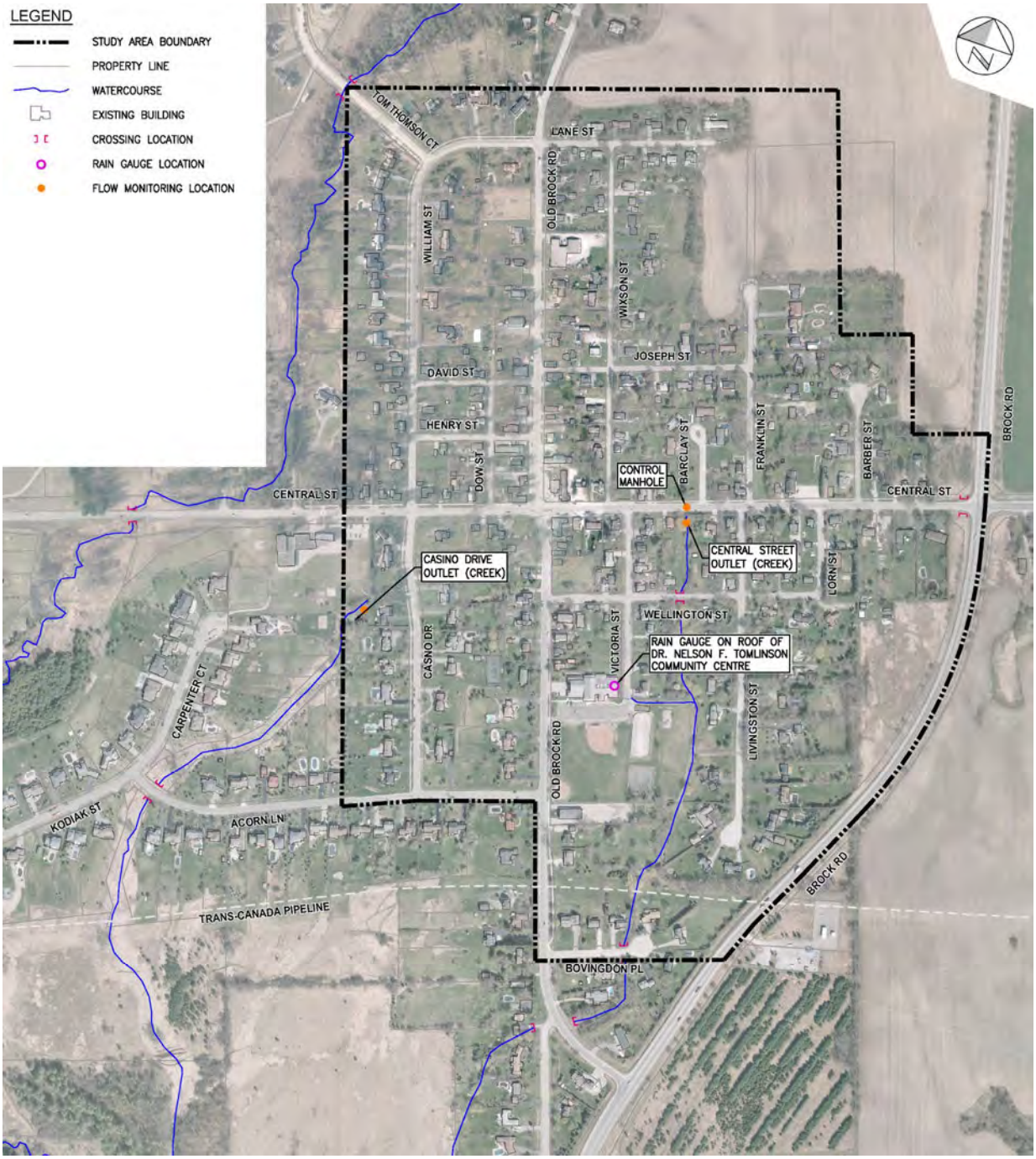
5. Municipal Class EA Process

City of PICKERING



Scope of the Claremont Drainage Plan

6. Study Area


LEGEND
STUDY AREA BOUNDARY
PROPERTY LINE
WATERCOURSE
EXISTING BUILDING
CROSSING LOCATION
RAIN GAUGE LOCATION
FLOW MONITORING LOCATION
TOM THOMSON CT
LANE ST
OLD BROCK RD
WILLIAM ST
WIXSON ST
JOSEPH ST
DAVID ST
HENRY ST
DOW ST
FRANKLIN ST
BARBER ST
BROCK RD
CONTROL MANHOLE
BARCLAY ST
CENTRAL ST
CENTRAL STREET OUTLET (CREEK)
CASINO DRIVE OUTLET (CREEK)
LORN ST
WELLINGTON ST
VICTORIA ST
RAIN GAUGE ON ROOF OF DR. NELSON F. TOMLINSON COMMUNITY CENTRE
CASINO DR
CARPENTER CT
LIVINGSTON ST
KODIAK ST
ACORN LN
TRANS-CANADA PIPELINE
BOVINGDON PL

7. Existing Drainage System Types

The existing drainage system within the Study Area comprises of the following types:


Rural roadway with storm sewer


Urban roadway with storm sewer

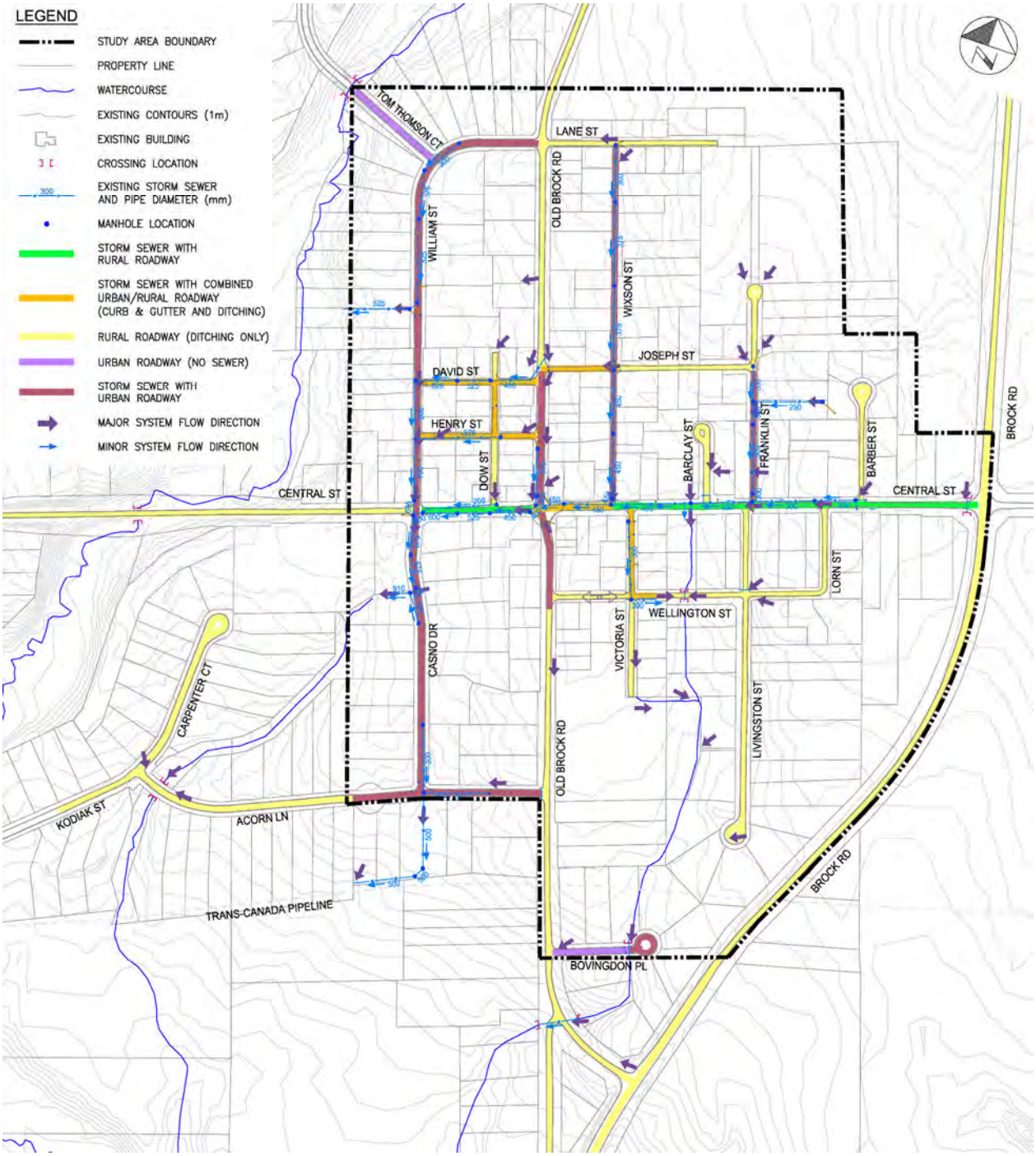

Rural roadway with ditches


Mixed rural and urban roadway with ditches and storm sewer


Storm sewer system

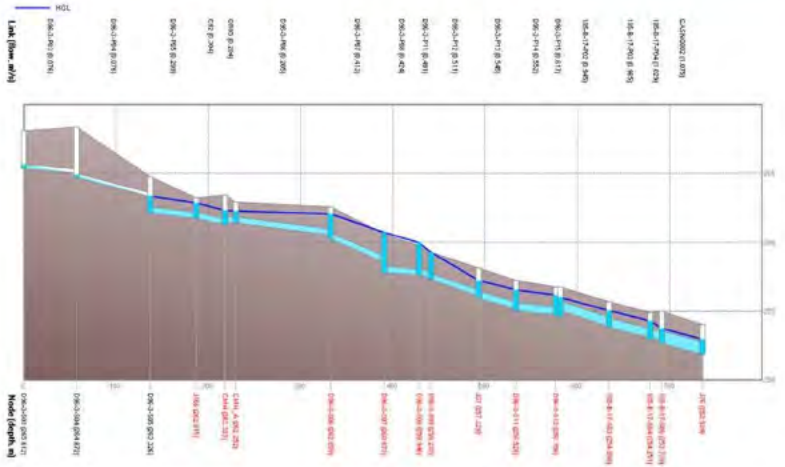

Open channel – overland flow

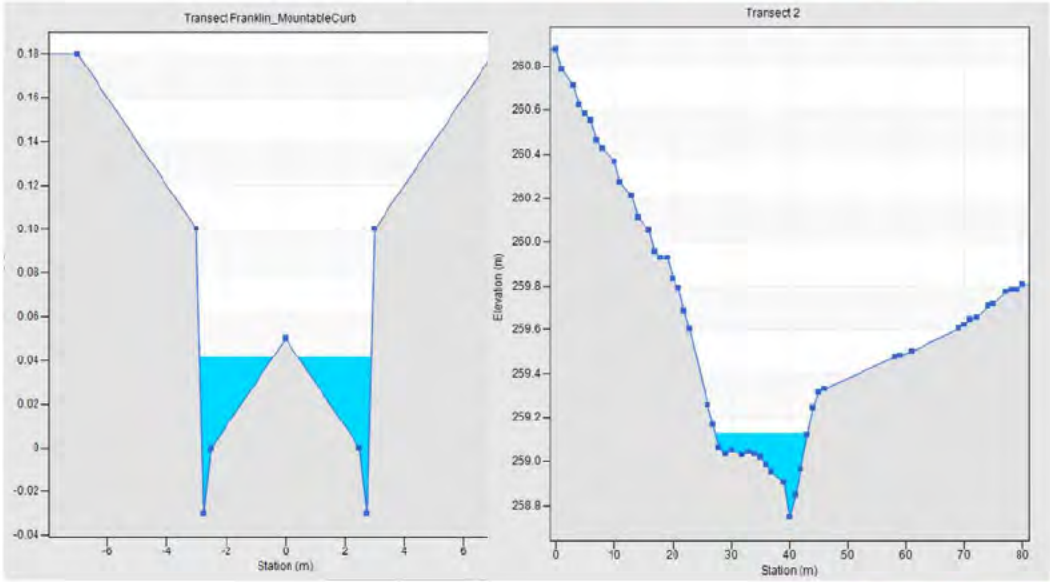
8. Existing Drainage System Overview



9. Modelling and Assessment Process

- Computer models were developed and calibrated using existing rainfall data to represent the existing drainage system to establish peak flows and water levels within sewers, ditches, roadways and watercourses.





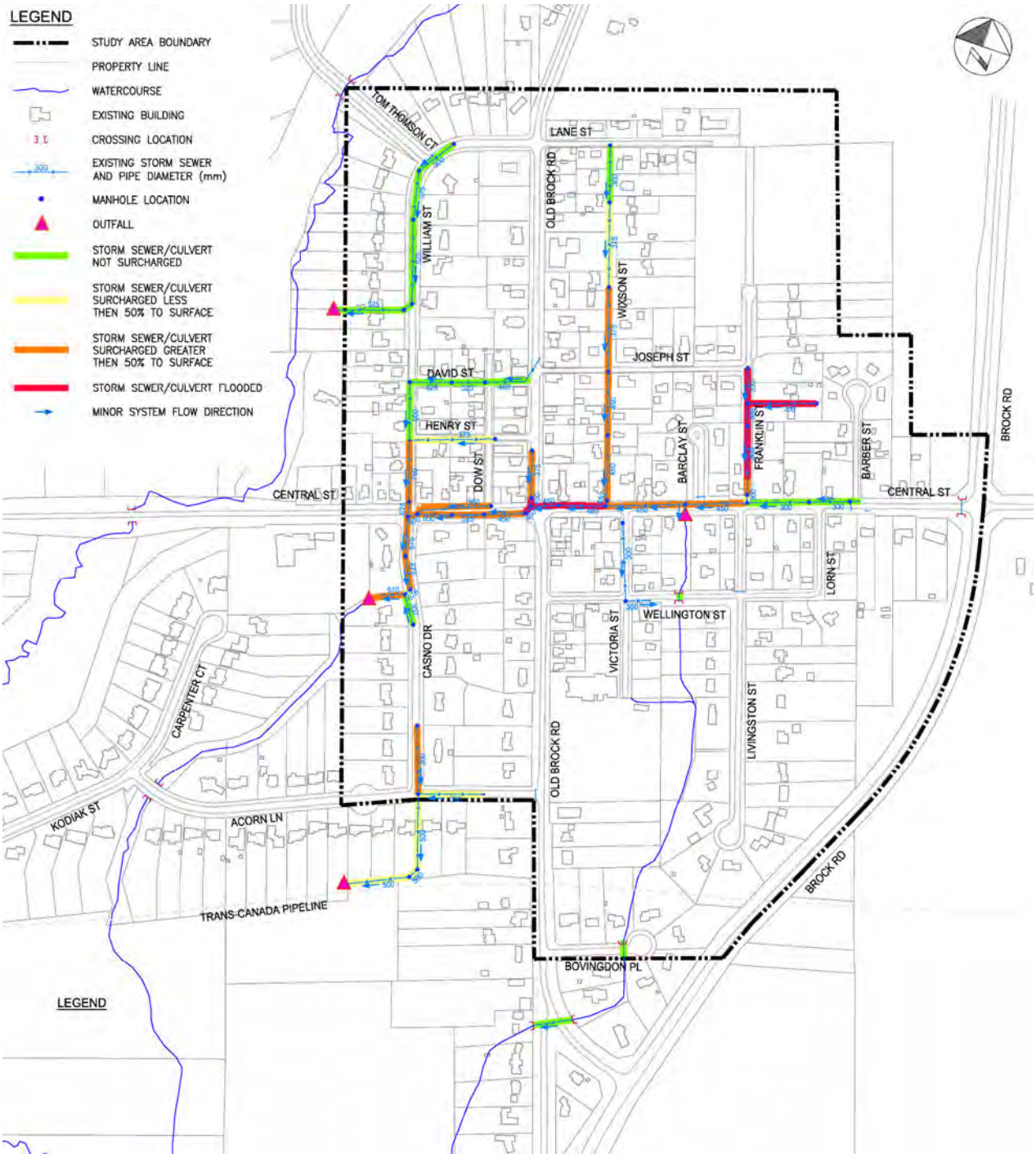
10. Causes of Flooding in Claremont

Flooding in Claremont can result from:

- Limited storm sewer and culvert capacity (minor system)
- Limited right-of-way capacity, ditches and roads (major system)
- Inadequate channel capacity (conveyance system)
- Lack of stormwater control
- Blockages due to debris and/or ice

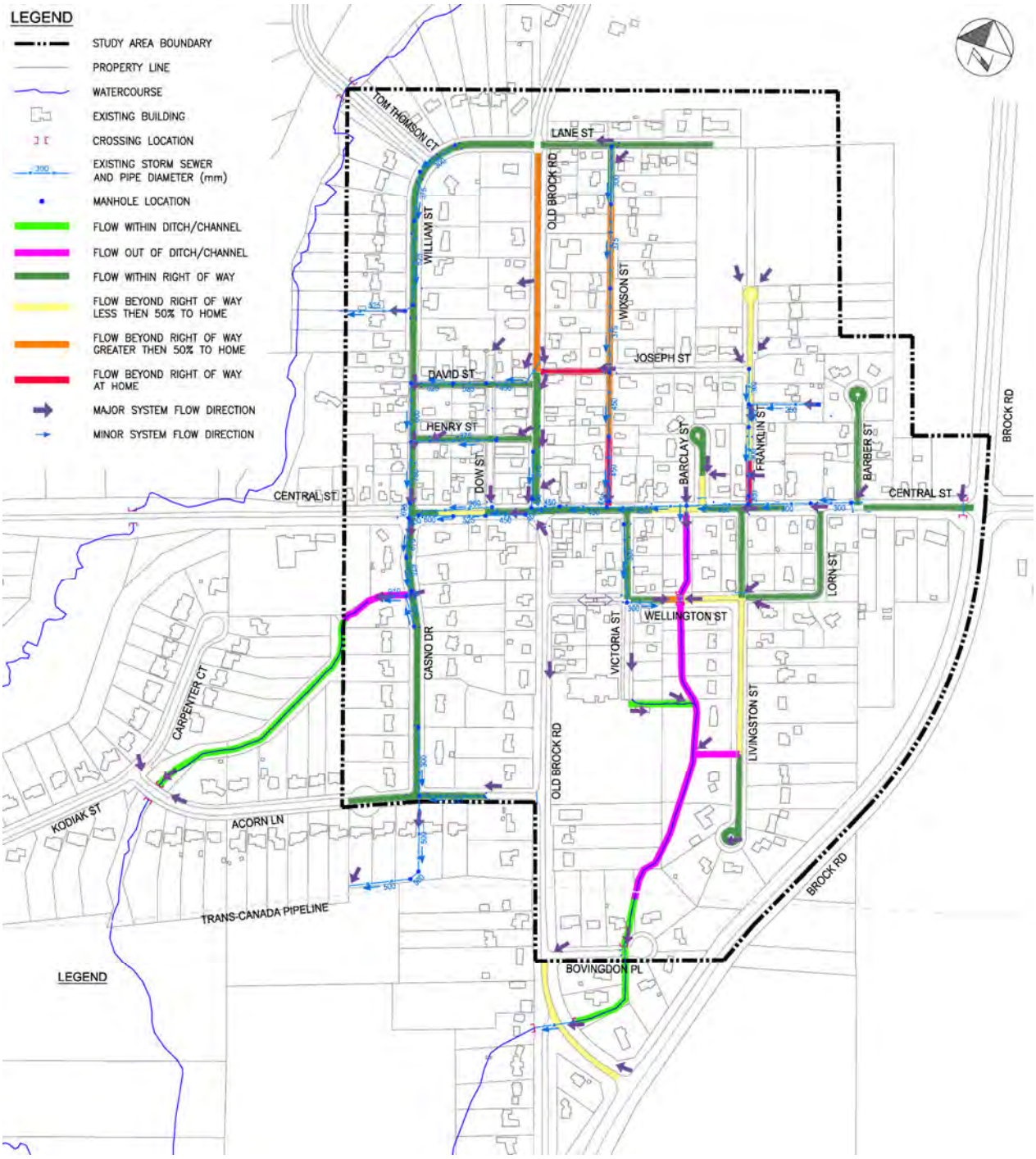
11. Minor Storm System Performance

Minor storm system is designed to capture and convey drainage resulting from frequent storm events (i.e. 5 year storm) and is shown on the map.

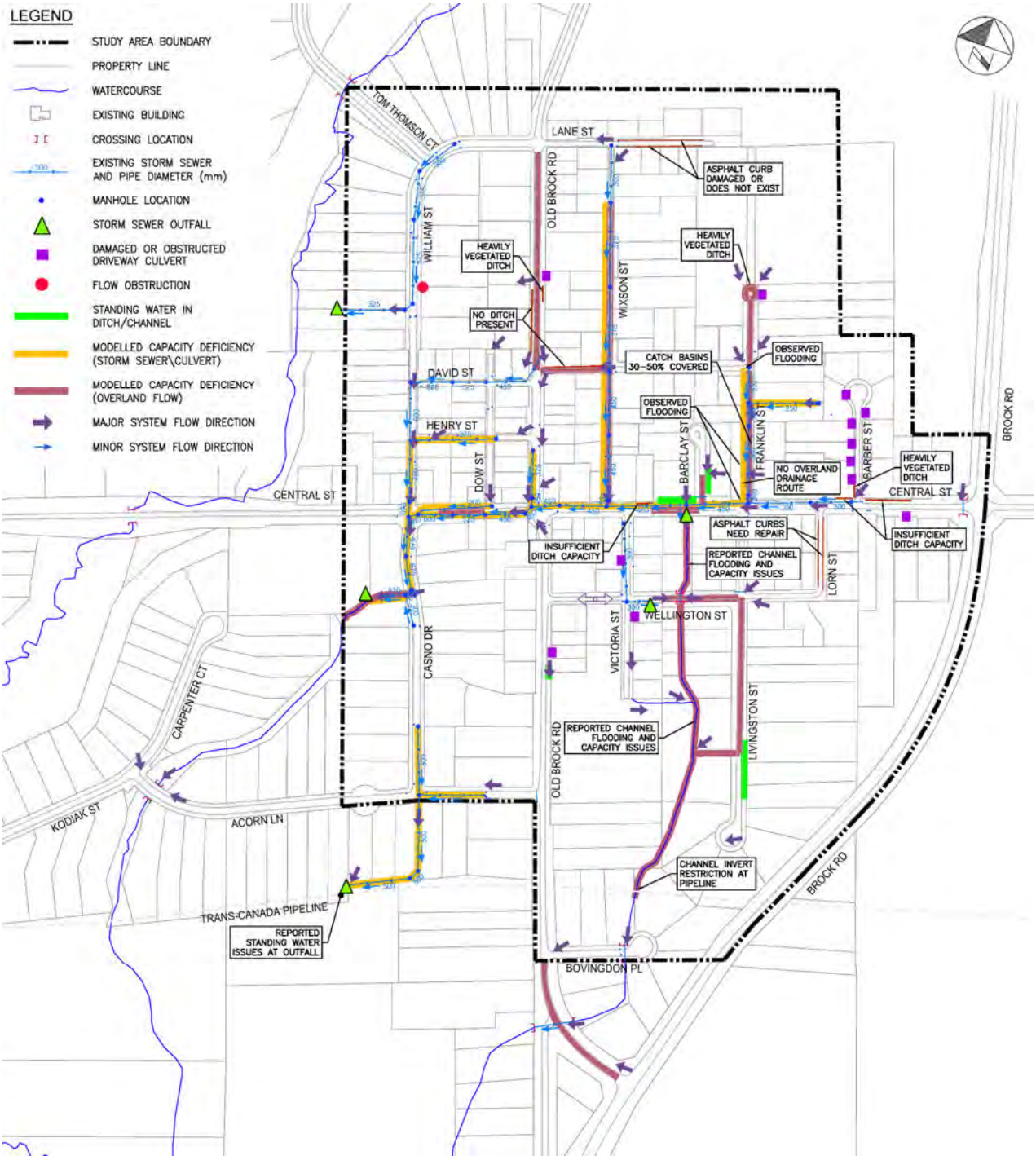


12. Major Storm System Performance

Major storm system is designed to convey flow above the capacity of the minor storm system (i.e. greater than the 5 year storm event) and is shown on the map.



13. Overall Drainage System Performance



14. Existing Drainage System Performance Summary

Summary of existing drainage system performance based on the computer modelling results:

- Storm sewers that do not have adequate capacity
  - Franklin Street
  - Central Street (Between Franklin Street and Canso Street)
  - Canso Drive (Just south of Central Street)
  - William Street (Between Henry Street and Central Street)

- Roadways that have insufficient overland flow capacity
  - Franklin Street, both north and south of Joseph Street
  - Barclay Street insufficient ditch capacity
  - Livingston Street insufficient ditch capacity
  - Wixson Street roadway crown overtopped
  - Canso Street roadway crown overtopped
  - Old Brock Road insufficient ditch capacity

15. Preliminary Alternatives

The following alternatives are being considered as part of a long-list to address the insufficient capacity of both the minor (storm sewer) and major (overland) drainage systems performance.

Long-list of Alternatives
1. Do Nothing
2. Increase size of storm sewers and culverts, or twinning
3. Super pipes to provide flow control (storm sewer)
4. On-site Stormwater Management (SWM) for private properties
5. Off-line storage areas within available public spaces
6. SWM facilities to provide additional flow control
7. Flow diversions (local inter-catchment)
8. Roof leader/foundation drain disconnection
9. Modify grading on private property
10. Modify grading within road right-of-way or other public property
11. Low Impact Development Best Management Practices (LID BMPs)
12. New drainage system outlets (storm sewers/ major system)
13. Inlet control devices (ICDs)
14. Combinations

16. Preliminary Alternatives Overview

- Increase size of storm sewers to allow more flow in pipes to reduce ponding and flooding of roads, ditches etc.
- Peak flows can be reduced by temporarily storing runoff in storage systems (i.e. super pipes, ponds and/or tanks) and releasing it when minor storm system flow capacity is available.
- Divert flow away from problematic flooding areas and sewers systems.
- Disconnect downspouts to reduce drainage directly to storm sewers.
- Modify grading on private or public property to improve flow conveyance and prevent flooding.

17. Preliminary Alternatives Overview

- Low Impact Development Best Management Practices can temporarily store or infiltrate local drainage for the more frequent storm events (i.e. 2 to 5 year), therefore reducing flows in storm sewers and overland drainage systems.
- New drainage systems (sewers, major system).
- Peak flows can be reduced in storm sewers by restricting flow from catch basins using inlet control devices

18. Alternative Evaluation Criteria

Alternatives will be assessed using an evaluation framework, to determine the suitability of each alternative against appropriate evaluation factors as outlined in the table below.

Evaluation Category	Evaluation Criteria	Criteria Description
Functional	Extent to which alternative improves drainage system	The degree to which the existing storm system (minor and major) flow capacity is improved.
Environmental	Impacts to Creek Systems (stream bank, erosion, water quality)	Any alternative which would result in degradation of the creek systems (including erosion) or would result in decreased water quality would be considered negative. Alternatives which are beneficial would be considered positive.
Social	Ability to Improve Public Safety	Depending on reduced flooding risk within both private and/ or public property, public safety would be improved to varying degrees.
	Impacts on Private Properties	Relates to the change in flood risk on private properties.
	Impacts on Public Lands	Depending on the alternative there are varying degrees of impact to flooding conditions on public lands including roadways.
Economic	Capital Costs	Lower costs are preferred over higher costs.
	Operations and Maintenance Costs	Lower costs are preferred over higher costs.
Constructability	Ease of Construction and Accessibility	The ease and accessibility of construction will vary depending upon alternative location.
	Construction staging and timing	Depending on the alternative and the extent of the proposed works, the project may need to be staged (multiple phases) and may require multiple years to construct.

19. Next Steps

- Receive public comments by December 11, 2020
- Incorporate public input into the Study
- Conduct screening of alternatives to a short-list of alternatives.
- Short-Listed Alternatives to undergo detailed assessment and input from agencies and stakeholders
- Develop details of Preferred Alternatives
- Consultation with agencies and stakeholders;
- Public Information Centre No. 2 – early 2021
- Prepare and File Environmental Study Report.

Please Share Your Experience and Provide Comments/ Feedback

Please complete an on-line Comment Sheet provided on the website:
https://www.pickering.ca/claremont-drainage-plan

- By Mail:

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Water Resources Engineer
City of Pickering
One the Esplanade
Pickering ON LIV 6K7

Steve Chipps, P.Eng.
Consultant Project Manager
Wood
3450 Harvester Road
Burlington ON L7N 3W5

- By Email:

E-mail: imarouchko@pickering.ca

E-mail: steve.chipps@woodplc.com

Please submit comments no later than
December 11 , 2020

Thank you for your participation!

TPB168152 – Claremont Drainage Plan PIC1 Resident Comment Summary					
Comment Date	**Response Date**	**Resident**	**Address**	**Comment**	**Response**
December 3, 2020	March 11, 2021	[redacted]	[redacted]	I received the Notice of Public Information Centre #1 and have read the text, viewed the images at the City of Pickering webpage www.Pickering.ca/Claremont-Drainage-Plan and have the following questions and comments: 1) Regarding the text on the webpage, it would be very helpful for you to arrange with the IT staff at the City to add numbers to the individual pages. While there is a page counter in the upper left of the webpage, it includes all pages and typically with such presentations, the cover page is not counted; 2) Regarding the description of the Plan in the Notice of Status, the Notice of Public Information Centre #1 and the webpage all refer to the plan as Claremont Drainage Plan. However, from the map of Claremont showing the study boundaries and the preamble of the webpage, the Plan is actually the Central Claremont Drainage Plan. Why do you not title the Plan for what it is? Part of my lot at 5269 Brock Road looks exactly like the photo on the extreme right of the cover page of the text in the webpage several times throughout the year. My lot is in Claremont. The property tax bill for the lot indicates the lot is in Claremont. Many, many staff from the City are aware of the drainage problem in my lot. But my lot is not in the study area, thus the plan is not a Claremont Drainage Plan; 3) Regarding 1. Study Overview and Purpose, there are printing errors throughout this first page of this section. When you arrange with the City's IT staff to number the pages, you should have them correct the errors to make it clear to those you wish to advise of the Plan. You should also indicate, in the first bullet point, that, in addition to the "City of Pickering received drainage complaints", the City did not act on those complaints, was sued, twice, losing both times and costing the tax payers a considerable amount of money; 4) Regarding 2. Study Goals, for the last line of the third point, before the word "Hamlet", add the following "for the central part of the" in order that readers will understand completely what area will be improved and which will not. Part of my lot also looks like the photo in this section several times a year; 5) Regarding 4. Municipal Class EA Process, please provide a link to a webpage where what is referenced in the first bullet point can be found in order that I might better understand this section; 6) Regarding 5.Municipal Class EA Process, please provide a list of the Agency(s) with which you are consulting at this stage. Will I be afforded an opportunity to ask questions and/or provide comments on Phase 3? Please advise. Please define "Part II Order provision in the EA Act". In Phase 5, why is there not a requirement to evaluate the performance of the alternate design that is chosen once construction is completed and some substantial rainfalls and/or snow melts have occurred? Please advise; 7) Regarding 9. Modeling and Assessment Process, why was snow melt, particularly in conjunction with rainfall at the same time, not considered in the modeling? Please advise. The axis points on the graph in the upper right are	Good Day [redacted] In response to your comments and questions the City provides the following: 1) Comment acknowledged. 2) The purpose of the study title is to specify a geographical/municipal location of the study area. The boundaries of the study area not always represent the municipal boundaries, as such the study area must be shown on a key plan. The description of the Claremont Drainage Plan Municipal Class Environmental Assessment (EA), provided in the notices, explains the scope and purpose of the study. In addition, the purpose of the study was clarified to you at the meeting with Councillor Butt and myself held in January 2020 in the City Hall. As indicated previously and stated in the notices, the Drainage Plan study was undertaken by the City to complete a comprehensive analysis of the drainage system (minor and major) for the area of the Hamlet of Claremont serviced by storm sewers, therefore a rural part of the community was not included in the study area. 3) Comment acknowledged. As indicated in the PIC#1 presentation, the City received drainage complains of flooding with both public and private properties. However, there aren't any records of law cases that you are referring to in your comments. 4) Comment acknowledged. 5) Please refer to the link: https://municipalclassea.ca/manual/page1.html 6) The list of Agencies is attached to this email. Further consultation will be completed in accordance with the Municipal Class EA requirements. 7) Modeling snow accumulation and snow melt in conjunction with rainfall is possible, with the appropriate climatic data being available and observed drainage conditions data being available to validate the model simulated results. The effort to conduct this type of assessment is significant, and was not within the scope of work assigned to the consultant. Regarding the axis of the upper right chart, the top axis indicates flow nodes and peak flow and the bottom axis indicates flow node and flow depth. The left axis for the Transect Franklin_Mountable Curb is depth; apologies for it being cut-off. The left axis for the graph labelled Transect 2 represents elevation above sea level. The graphs are provided as examples of some of the modelling, including the storm sewer system, road cross-section and natural channel. 8) The modelled 5 year storm event represent the City of Pickering's design storms from the City of Pickering's Stormwater Management Guidelines. The 5 year storm event does not represent a given year, but is based on historical rainfall data and calculations resulting in a representative 5 year storm event depth. The modelling was conducted with storm events up to the 100 year. There are no models that have combined snow melt and rainfall (please see the response to #9).

TPB168152 – Claremont Drainage Plan PIC1 Resident Comment Summary					
Comment Date	**Response Date**	**Resident**	**Address**	**Comment**	**Response**
				unclear even when expanded to +400%. The definition of the left axis for the graph labelled Transect Franklin_Mountable Curb is missing. Is the Elevation (m) for the left axis of the graph labelled Transcet 2 representing the elevation above sea level or Lake Ontario level or what? Please advise. Please provide a clear explanation of the three graphs in this section and their significance to the Plan; 8) Regarding 11. Minor Storm System Performance and 12. Major Storm System Performance, in what year was the model for a 5 year storm event and for a greater than 5 year storm event developed? And, are there any other models developed for any storm event that is much greater than a greater than 5 year event? And, are there any models for the 5 year storm event in combination with melting from a 5 year snow event? Please advise for all; 9) Regarding 14. Existing Drainage System Performance Summary, very poor performance of drainage particularly considering the deficiencies shown are in older areas of Central Claremont, newer areas and some areas aged in-between. Also, very poor on the City's part with heavily vegetated ditches existing in some places along with a significantly covered catch basin. From this, I would not be surprised if similar results were obtained should the study include all of Claremont. Please define the term "crown overtopped"; 10) Regarding 15. Preliminary Alternatives, please provide the complete long-list in order that I might understand all of the alternatives. I take it that, except what has been happening to date, the do nothing alternative, each of the alternatives on this list would not apply everywhere in Central Claremont. If that is correct, please provide an overlay showing where the alternatives would be suggested to be used and the time frame to start and complete such alternative; 11) Regarding 17. Preliminary Alternatives Overview, for the third bullet point, would restricting the flow into catch basins not result in flooding in the area of the catch basin? Please advise; 12) Regarding 18. Alternative Evaluation Criteria, clearly, the City by doing nothing is meeting the Economic criteria to the fullest extent possible for the Do nothing alternative. If you give the City the opportunity to construct whichever alternative(s) are selected in stages (multiple phases), as is shown in Constructability, the problem will never be completely solved. When Norah Stoner was a local councillor in the Town of Pickering during the late 1970s and early 1980s, she secured a commitment from the Town to reconstruct Old Brock Road from Central Street to the Pickering/Uxbridge Townline. Regrettably, Norah was told it had to be done in stages. Now 40 years later, the section of Old Brock Road from Hoxton Street of the Pickering/Uxbridge Townline has still not been done; Please email to me all future information regarding this study to the address shown when you receive this email. Based upon the Municipal Freedom of Information and Protection of Privacy Act, I do not wish to have any more of my personal information	9) The term "crown overtopped" means the centreline of road is flooded or under water. 10) The complete long-list of alternatives has been provided. The alternatives apply to the Study Area. The next stage of the Study is to assess the alternatives, as such, a plan showing where alternatives are preferred has not been generated to-date, but will be for the next stage of the Study. 11) Yes restricting the flow into catch basins would result in more overland flow, as such, it would only be considered in locations where overland flow would not result in flooding to private property. 12) The preferred alternatives will be prioritized based on reducing flood risk and cost, basically a cost/benefit assessment.

TPB168152 – Claremont Drainage Plan PIC1 Resident Comment Summary					
Comment Date	**Response Date**	**Resident**	**Address**	**Comment**	**Response**
				become part of the public record that what I have provided in this email. Please confirm you will accede to my wish. When major projects are contemplated in the City of Pickering, we often hear that there are not sufficient funds to either get the project done when it needs to be done or that the project will be delayed until there are sufficient funds. I would suggest to the Mayor and Council that for this project, they adopt the method the Mayor of Toronto employs – stick your hand out, before TV cameras and as many reporters as can be rounded up, and tell the Premier of Ontario and the Prime Minister of Canada their financial support is required. It always works for the Mayor of Toronto, even though Toronto residential tax payers are billed 80+% lower than Pickering residential tax payers. Please acknowledge receipt of this email stating how much time will be requires to respond to any questions I have posed, any term I need to be defined or anything I need clarified.	

City of PICKERING

Public Information Centre No. 1
Claremont Drainage Plan
Municipal Class Environmental Assessment
November 20, 2020 – December 11, 2020

Your views are important to us. P ease share your experience and provide comments/feedback. P ease submit your comments no ater than December 11, 2020. Thank you for your participation.

* Required fie d

F rst Name * [redacted]

Last Name * [redacted]

How wou d you prefer to rece ve nformat on about th s study n the future? *

◉ Ema (P ease prov de ema be ow) ○ I do not w sh to rece ve further nformat on

Street Address * [redacted]

Un t

C ty * [redacted]

Prov nce * ON

Posta Code * [redacted]

Phone Number [redacted]

Ema Address [redacted]

n order to receive a copy of the submitted form your email address is required

1. P ease prov de any genera comments on the nformat on presented.

2. Do you have any comments and/or concerns regard ng ex st ng dra nage cond t ons? P ease share your exper ences.

Happy to see that a drainage so ution is being considered. Drainage is a serious issue in [redacted] and being a resident on [redacted] it is high time that a so ution or so utions wi be put in p ace particu ar y given the exorbitant property taxes. My home had and sti has serious drainage issues in the backyard and I took measures to mitigate the situation short y after the home was bui t in 2004. Whi st the measures taken has a eviated some of the drainage issues much of the prob em sti remains. It is unfortunate that the City of Pickering approved the bui ding p an knowing the issues that the owner wou d face. I was advised at the time by a City of Pickering officia that my home was bui t "too ow".
Spring a ways brings f ooding in my backyard. Correction of this and the other drainage issues is ong overdue.

3. Do you have any comments and/or quest ons regard ng the pre m nary a ternat ves presented?

4. Do you have any comments and/or quest ons regard ng the a ternat ves eva uat on cr ter a presented?

5. P ease prov de any add t ona feedback and/or quest ons.

I wou d ike to be informed of the process and the so utions for any further input I may have.

Comments and information regarding this project are being co ected to assist The City of Pickering in meeting the requirements of the *Environmental Assessment Act*. This materia wi be maintained on fi e for use during the project and may be inc uded in project documentation. Information co ected wi be used in accordance with the *Freedom of Information and Privacy Act*. With the exception of persona information, a comments wi become part of the pub ic record.

A ternate formats avai ab e upon request at 905.683.7575.

ENG 2001-11/10

Submitted On

21-Nov-20

City of PICKERING

Public Information Centre No. 1
Claremont Drainage Plan
Municipal Class Environmental Assessment
November 20, 2020 – December 11, 2020

Your views are important to us. P ease share your experience and provide comments/feedback. P ease submit your comments no ater than December 11, 2020. Thank you for your participation.

* Required fie d

F rst Name* [redacted]

Last Name* [redacted]

How wou d you prefer to rece ve nformat on about th s study n the future?*

(•) Ema (P ease prov de ema be ow) ( ) I do not w sh to rece ve further nformat on

Street Address* [redacted]

Un t

C ty* [redacted]

Prov nce* ON

Posta Code* [redacted]

Phone Number [redacted]

Ema Address [redacted]

n order to receive a copy of the submitted form your email address is required

1. P ease prov de any genera comments on the nformat on presented.

2. Do you have any comments and/or concerns regard ng ex st ng dra nage cond t ons? P ease share your exper ences.

My sump pump runs constant y 24 hours per day, I hope your study takes into account residences ike mine who are de uged with water

3. Do you have any comments and/or quest ons regard ng the pre m nary a ternat ves presented?

4. Do you have any comments and/or quest ons regard ng the a ternat ves eva uat on cr ter a presented?

5. P ease prov de any add t ona feedback and/or quest ons.

Comments and information regarding this project are being co ected to assist The City of Pickering in meeting the requirements of the *Environmental Assessment Act*. This materia wi be maintained on fi e for use during the project and may be inc uded in project documentation. Information co ected wi be used in accordance with the *Freedom of Information and Privacy Act*. With the exception of persona information, a comments wi become part of the pub ic record.

A ternate formats avai ab e upon request at 905.683.7575.

ENG 2001-11/10

Subm tted On

01-Dec-20

City of PICKERING

Public Information Centre No. 1
Claremont Drainage Plan
Municipal Class Environmental Assessment
November 20, 2020 – December 11, 2020

Your views are important to us. P ease share your experience and provide comments/feedback. P ease submit your comments no ater than December 11, 2020. Thank you for your participation.

* Required fie d

F rst Name* [redacted]

Last Name* [redacted]

How wou d you prefer to rece ve nformat on about th s study n the future?*

◉ Ema (P ease prov de ema be ow) ○ I do not w sh to rece ve further nformat on

Street Address* [redacted]

Un t

C ty* [redacted]

Prov nce* ON

Posta Code* [redacted]

Phone Number [redacted]

Ema Address [redacted]

n order to receive a copy of the submitted form your email address is required

1. P ease prov de any genera comments on the nformat on presented.

On page 9 of the presentation, you identify Lane St as a rura roadway with ditching. However, if you performed a survey and came down Lane St, you wou d have seen that street actua y does not have a ditch and therefore has no drainage system to support it. I recommend you add “no ditch present” for Lane St on your map on page 14.

In addition, your rainfa data mode s on page 10 are f awed in their ana ysis, since you fai ed to provide sufficient data for the houses in c ose proximity the perimeter of the study area boundary – especia y the houses on the north end of the perimeter since water f ows North to South in C aremont. Since you on y co ected the direction of the f ow of water within your study area boundary, you do not have an accurate representation on which to base your decision of what kind of support is needed and where. For examp e, you inc ude the fie d that f ows into Frank in St and Barber St but fai ed to do so for Lane St which has a significant amount of fie d north of it. This p ays a considerab e ro e in the water f ow and subsequent support required for the surrounding properties. It a so heavi y biases your conc usions on what streets require support. This affects a the mode ing prepared on pages 12, 13, and 14.

2. Do you have any comments and/or concerns regard ng ex st ng dra nage cond t ons? P ease share your exper ences.

On page 9, there is a purp e arrow indicating that there is a “major system f ow direction” heading west on Lane St towards O d Brock Rd. That, coup ed with the ack of drainage system on Lane St (I reiterate, there is no ditch to speak of), and the inadequate ditching on O d Brock Rd often resu ts with f ooding where the two roads meet, even with moderate rainfa . This poses significant risk to the nearby houses on Lane St and O d Brock Rd. In the spring of 2019, we at 1710 Lane St had 5 inches of water in our basement fo owing a heavy rainfa that f ooded the streets. In addition, the ack of ditch is a major factor in our weeping ti e of our septic becoming comp ete y saturated. We have had to have the septic pumped twice in the past year, and we wi ike y need to rep ace it in the spring. The ack of drainage system in C aremont has cost us a significant amount of money and wi continue to do so un ess addressed. This is why I am having a hard time understanding why Lane St is not isted as a priority within your p an.

3. Do you have any comments and/or quest ons regard ng the pre m nary a ternat ves presented?

Why does your ist of pre iminary a ternatives not inc ude providing ditching to properties that do not current y have it? Whi e I do think grading the private properties that are prone to f ooding is a good idea, if the property has no ditch, how are you p anning of diverting the water? The a ternative to enhance existing storm sewers does nothing for the properties who have no drainage p an whatsoever. It is important to ensure we are a connected to that drainage system to address the issue for everyone affected.

4. Do you have any comments and/or quest ons regard ng the a ternat ves eva uat on cr ter a presented?

5. P ease prov de any add t ona feedback and/or quest ons.

Whi e you may think a so ution for Lane St does not affect many peop e since it is a dead end street, if you conducted a traffic f ow ana ysis, you wou d have found that many peop e who ive in the boundary area use the Wixson St to Lane St to O d Brock Rd corridor to head north out of C aremont. The Lane St and O d Brock Road f ooding affects that traffic significant y.

Comments and information regarding this project are being co ected to assist The City of Pickering in meeting the requirements of the *Environmental Assessment Act*. This materia wi be maintained on fi e for use during the project and may be inc uded in project documentation. Information co ected wi be used in accordance with the *Freedom of Information and Privacy Act*. With the exception of persona information, a comments wi become part of the pub ic record.

A ternate formats avai ab e upon request at 905.683.7575.

ENG 2001-11/10

Subm tted On

03-Dec-20

From: Marouchko, Irina <imarouchko@pickering.ca>
Sent: Wednesday, November 25, 2020 10:52 AM
To: [redacted]@outlook.com>
Cc: Chipps, Steve <steve.chipps@woodplc.com>
Subject: RE: Claremont Drainage Plan Resident Feedback - [redacted]

CAUTION: External email. Please do not click on links/attachments unless you know the content is genuine and safe.

Good day [redacted],

Thank you for the provided information. Your comments and the video will be reviewed by the project team.

For reporting purposes, we kindly ask you to submit your comments below via the on-line form: https://www.pickering.ca/en/city-hall/claremont-drainage-plan.aspx#

Regards,
Irina Marouchko

From: [redacted]>
Sent: Wednesday, November 25, 2020 10:20 AM
To: Marouchko, Irina <imarouchko@pickering.ca>; steve.chipps@woodplc.com
Subject: Claremont Drainage Plan Resident Feedback - 1710 Lane St

Good morning Ms. Marouchko and Mr. Chipps,

My name is [redacted] and I am a resident of [redacted], Claremont. I am writing to you to provide feedback on The Claremont Drainage Plan. In addition to my feedback below, please also review the video at this link: https://we.tl/t-MXseI7mnd6. The online submission form on the website does not allow for attachments and I wanted to exemplify some of the misinformation your report is based upon.
Please kindly acknowledge receipt so that I know my comments have been accounted for – they are listed below.

Thank you and I look forward to your reply,
[redacted]

On page 9 of the presentation, you identify Lane St as a rural roadway with ditching. However, if you performed a survey and came down Lane St, you would have seen that street actually does not have a ditch and therefore has no drainage system to support it. I recommend you add “no ditch present” for Lane St on your map on page 14.

In addition, your rainfall data models on page 10 are flawed in their analysis, since you failed to provide sufficient data for the houses in close proximity the perimeter of the study area boundary – especially the houses on the north end of the perimeter since water flows North to South in Claremont. Since you only collected the direction of the flow of water within your study area boundary, you do not have an accurate representation on which to base your decision of what kind of support is needed and

where. For example, you include the field that flows into Franklin St and Barber St but failed to do so for Lane St which has a significant amount of field north of it. This plays a considerable role in the water flow and subsequent support required for the surrounding properties. It also heavily biases your conclusions on what streets require support. This affects all the modelling prepared on pages 12, 13, and 14.

On page 9, there is a purple arrow indicating that there is a “major system flow direction” heading west on Lane St towards Old Brock Rd. That, coupled with the lack of drainage system on Lane St (I reiterate, there is no ditch to speak of), and the inadequate ditching on Old Brock Rd often results with flooding where the two roads meet, even with moderate rainfall. This poses significant risk to the nearby houses on Lane St and Old Brock Rd. In the spring of 2019, we at 1710 Lane St had 5 inches of water in our basement following a heavy rainfall that flooded the streets. In addition, the lack of ditch is a major factor in our weeping tile of our septic becoming completely saturated. We have had to have the septic pumped twice in the past year, and we will likely need to replace it in the spring. The lack of drainage system in Claremont has cost us a significant amount of money and will continue to do so unless addressed. This is why I am having a hard time understanding why Lane St is not listed as a priority within your plan.

While you may think a solution for Lane St does not affect many people since it is a dead end street, if you conducted a traffic flow analysis, you would have found that many people who live in the boundary area use the Wixson St to Lane St to Old Brock Rd corridor to head north out of Claremont. The Lane St and Old Brock Road flooding affects that traffic significantly.

MHBC
PLANNING
URBAN DESIGN
& LANDSCAPE
ARCHITECTURE

Authorized commenting Agency for
TC Energy

KITCHENER
WOODBRIDGE
LONDON
KINGSTON
BARRIE
BURLINGTON

December 9, 2020

Ms. Irina Marouchko, P.Eng.
Senior Water Resources Engineer
City of Pickering
One The Esplanade
Pickering, ON
L1V 6K7

Via email: imarouchko@pickering.ca

Dear Ms. Marouchko:

Re: City of Pickering Claremont Drainage Plan
Our File No. PAR 44159

We are the planning consultants for TransCanada PipeLines Limited (TCPL), an affiliate of TC Energy Corporation (TC Energy). This letter is in response to notification of the Environmental Assessment (EA) for the Claremont Drainage Plan. TCPL has two high-pressure natural gas pipelines crossing the study area.

TCPL's pipelines and related facilities are subject to the jurisdiction of the Canada Energy Regulator (CER) – formerly the National Energy Board (NEB). As such, certain activities must comply with the Canadian Energy Regulator Act (Act) and the National Energy Board Damage Prevention Regulations (Regulations). The Act and the Regulations noted can be accessed from the CER's website at www.cer-rec.gc.ca.

Following are our comments for inclusion in the Environmental Study Report:

1. An engagement meeting with TC Energy is recommended to discuss any proposed stormwater management infrastructure changes within 30m of TCPL pipelines passing through the study area.

2. Written consent must be obtained from TransCanada prior to undertaking the following activities:
    a. constructing or installing a facility across, on, along or under a TransCanada pipeline right-of-way.
    b. conducting a ground disturbance (excavation or digging) on TransCanada's pipeline right-of-way or within 30 meters of the centreline of TransCanada's pipe (the "Prescribed Area");

c. driving a vehicle, mobile equipment or machinery across a TransCanada pipeline right-of-way outside the travelled portion of a highway or public road; and
d. using any explosives within 300 meters of TransCanada's pipeline right-of-way; and,
e. use of the prescribed area for storage purposes.

3. How to apply for written consent:
   - Determine the location of your work relative to TCPL's facilities.
     - When planning, and before any of the work or activities, listed above, can begin, a request for written consent must be submitted to TCPL through our online application form
     - We no longer accept applications through email
     - Location of the work is required, along with the proximity to TCPL's rights-of-way
     - This information can be obtained through survey plans, or through a locate request
   - Make a locate request either online (ClickBeforeYouDig.com) or by calling your local One-Call Centre.
     - The One-Call Centre will notify owners of buried utilities in your area, who will send representatives to mark these facilities with flags, paint or other marks, helping you avoid damaging them. Often written consent for minor activities can be obtained directly from a regional TC Energy representative through a locate request.
   - Apply for written consent using TCPL's online application form or call 1-877-872-5177.

4. Storage of materials and/or equipment on TCPL's right-of-way is not permitted.

5. Original depth of cover over the pipelines within TCPL's right-of-way shall be restored after construction. This depth of cover over the pipelines shall not be compromised due to rutting, erosion or other means.

6. Facilities shall be constructed to ensure drainage is directed away from the right-of-way so that erosion that would adversely affect the depth of cover over the pipelines does not occur.

7. Should pooling of water or erosion occur on the right-of-way as a result of any facility installation or landscaping, the owner will be responsible for the remediation of the pooling or erosion to TCPL's satisfaction.

Thank you for the opportunity to comment. Kindly forward a copy of the decision to the undersigned by mail or by email to dpresley@mhbcplan.com. If you have any questions, please do not hesitate to contact our office.

Sincerely,

Darlene Quilty,
Planning Co-ordinator
on behalf of TransCanada PipeLines Limited

Toronto and Region Conservation Authority

December 18, 2020

CFN 56857

BY E-MAIL ONLY (imarouchko@pickering.ca)

Irina Marouchko
Water Resources Engineer
City of Pickering
One the Esplanade
Pickering ON LIV 6K7

Dear Ms. Marouchko:

Re: Response to PIC #1
Claremont Drainage Plan – Master Plan
Duffins Watershed; City of Pickering; Regional Municipality of Durham

Toronto and Region Conservation Authority (TRCA) staff received the Public Information Centre (PIC #1) dated for the above-noted Master Plan on November 20, 2020.

PROJECT OVERVIEW

Staff understands that the City of Pickering is undertaking the Claremont Drainage Plan Municipal Class Environmental Assessment (Phase 1 and 2 of the Class EA process) to complete a comprehensive analysis of the drainage system, identify deficiencies and develop a comprehensive drainage management strategy for the central area of the Hamlet of Claremont. The purpose of the PIC #1 is to introduce the project and the goals and objectives of the study and to present results of the existing storm system analysis, preliminary alternative solutions, evaluation criteria and the project schedule.

TRCA COMMENTS

TRCA staff has completed a review of the above-note submission and provides the following comments:

1. As storm systems ultimately outlet to watercourses, the existing peak flows and runoff volumes for the 2-year to 100-year (design storm distributions that the City is using) to the watercourses should not exceed existing conditions for any proposed solutions so that there are no adverse impacts or potential erosion risk to existing watercourses.

2. It is noted that there are many overly vegetated ditches in the area. Maintenance of the ditches at these locations via manicuring (grass cutting) can be promoted. In addition, once groundwater tables are established in the area, there may be opportunities to include infiltration trenches with gravel at the bottom of the swales for greater permeability and perforated pipe system in the infiltration trench and 0.15 m height permanent checks dams along the grassed swales to allow for greater storm capacity and storage along the swales.

3. With regard to the Natural Environmental Assessment (NEA), TRCA staff is happy to work with the municipality in order to scope the TOR for the NEA, should the City of Pickering wish.

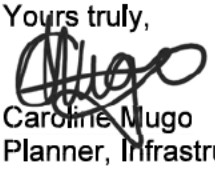
4. The alternative evaluation criteria (slide 19) for 'Environment' should also include potential impacts to aquatic and terrestrial habitat. Please note that TRCA's screening map shows unevaluated wetlands south of the study area and a Provincially Significant Wetland (PSW) northwest of the study area.

5. Staff recommends consultation with MECP regarding SAR (Species at Risk) requirements associated with the proposal.

6. Please note that there is TRCA property on the north-western part of the study area and archeological investigation by TRCA staff must precede any access/disturbance to TRCA property.

Should you have any questions, please contact me at extension 5689 or at caroline.mugo@trca.ca.

Yours truly,



Caroline Mugo
Planner, Infrastructure Planning and Permits
Development and Engineering Services

/CM

BY E-MAIL
cc: Wood: Steve Chipps (steve.chipps@woodplc.com)

Notice of Online Public Information Centre #2

City of Pickering
Claremont Drainage Plan

Engineering Services Department

Due to COVID-19 and the current Provincial requirements to limit indoor and maintain physical distancing, the Engineering Services Department is holding an online Public Information Centre (PIC #2) for the Claremont Drainage Plan. The online PIC#2 will allow for all interested parties to review the details of the study and to provide input, feedback and comments to the study project team.

The City of Pickering is undertaking the Claremont Drainage Plan to complete a comprehensive analysis of the existing drainage system, identify deficiencies and develop a comprehensive drainage management strategy for the central area of the Hamlet of Claremont. The study is being conducted in accordance with Approach #2 for Master Plans, as outlined in the *Municipal Engineers Association's, Municipal Class Environmental Assessment* (EA) (October 2000, amended 2007, 2011 and 2015). The Study Area is shown on the Key Map below.

Key Map – Study Area

The purpose of PIC#2 is to present the alternative solutions, the criteria which was used to evaluate the alternatives, the preferred solution, the project schedule and the next steps.

Please visit the study website at www.pickering.ca/claremont-drainage-plan to review the presentation slides and to submit your comments and feedback.

The PIC#2 presentation will be available on the City's website from:

Thursday, August 19, 2021 to Thursday, September 16, 2021

Please provide your comments and feedback on or before **Thursday, September 16, 2021**

Comments? Feedback? Contact us!

Irina Marouchko, P.Eng
Senior Water Resources Engineer
City of Pickering
One The Esplanade
Pickering, ON L1V 6K7
T. 905.420.4660 ext. 2072
imarouchko@pickering.ca

Steve Chipps, P.Eng.
Consultant Project Manager
Wood PLC
3215 North Service Road
Burlington, ON L7N 3G2
T. 905.335.2353
steve.chipps@woodplc.com

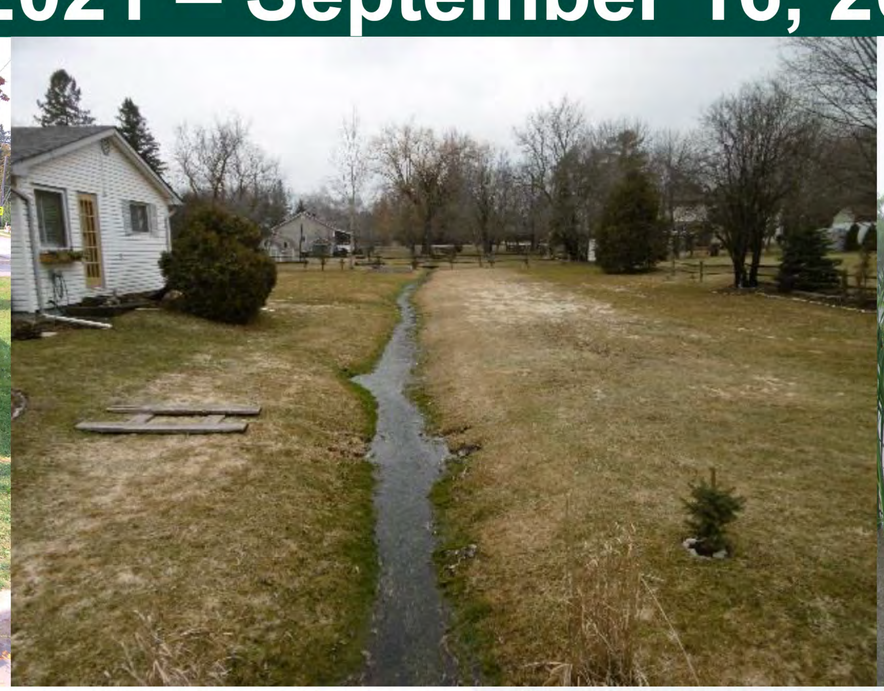
This notice issued on Thursday, August 19 2021

Under the *Municipal Freedom of Information and Protection of Privacy Act*, unless otherwise stated in the submission, any personal information included in a submission will become part of the public record.

Alternate formats available upon request at 905.683.7575

Public Information Centre No. 2
Claremont Drainage Plan
Municipal Class Environmental Assessment
City of Pickering

August 19, 2021 – September 16, 2021



1. Study Overview and History

- The historic development of the Hamlet of Claremont has existing stormwater drainage infrastructure that does not meet current design standards and is not adequate for current stormwater flows. This results in flooding on public and private properties in some areas of the Hamlet during heavy rainfalls.
- The City initiated the Claremont Drainage Plan in February 2017 to complete a comprehensive analysis of the existing drainage system performance, identify deficiencies and develop a comprehensive drainage management strategy for the central area of the Hamlet of Claremont to improve the drainage system and determine the appropriate level of service. The Study Area is shown on slide 6.
- Following a large rain event in June 2017, the City set aside the overall Claremont Drainage Plan to assesses site specific risks in the Study Area. The City resumed work on the Claremont Drainage Plan in late Summer 2020.
- Public Information Centre No. 1 (November 20, 2020 to December 11, 2020) presented the existing drainage system characterization and preliminary long-list of alternatives.

2. Study Goals

- The goals of the Claremont Drainage Plan Municipal Class Environmental Assessment (EA) are to:
  - Understand the existing drainage system performance;
  - Determine the appropriate level of service and methods to improve the existing drainage system performance to reduce the flood risks to the private and public property, buildings and infrastructure;
  - Develop an implementation plan that will prioritize improvements based the existing drainage system performance in accordance with the recommended level of service.

3. Study Approach and Methodology

Approach

- Assess the hydraulic performance of the existing drainage system
- Develop a long-term plan for improving the existing drainage system and reducing flood risk
- Establish a set of priority-based actions
- Recommend municipally-led capital works to address improvements to the existing drainage system within the Study Area

Methodology

- Data collection / reconnaissance
- Flow monitoring under the existing drainage system
- Numerical modelling to determine flows, flood elevations and velocities in the existing drainage system
- Performance evaluation of minor and major drainage systems
- Systematic alternative assessment, considering:
  - Natural environment
  - Social environment
  - Economic environment



4. Municipal Class EA Process

- The Claremont Drainage Plan Municipal Class EA is following Approach #2 under Master Planning Process highlighted in Appendix 4 of the Municipal Class Environmental Assessment Document (Oct. 2000, as amended in 2007, 2011 & 2015) to satisfy Phases 1 and 2 of the Class EA Process.
- The Municipal Class EA will establish a comprehensive set of priority-based recommendations to improve the existing drainage system performance and prevent flooding of private and public property, buildings and infrastructure.

- Project consists of two (2) phases:
- Phase 1: Identify and Describe the Problem(s):
  - Focused on data collection, data gap filling, and establishing an understanding of the existing drainage system performance.

- Phase 2: Alternative Planning Solutions
  - Building on the data collected in Phase 1 and the understanding of the existing drainage system performance, this phase will focus on preparing prioritized options to improve the drainage system and prevent flooding.

4. Municipal Class EA Process

Phase 1 Identify and Describe the Problem(s)

Phase 2 Alternative Planning Solutions

- Identify reasonable alternative planning solutions.
- Evaluate the alternative solutions, taking into consideration environmental and technical factors.
- Identify a preferred solution to the problem(s).

Phase 3 Alternative Design Concepts For the Preferred Solution

- Identify alternative designs to implement the preferred solution.
- Inventory natural, social/cultural and economic environments.
- Identify the impact of the alternative designs after mitigation.
- Evaluate alternative designs.
- Identify a preferred design.

Phase 4 Environmental Study Report

- Compile an Environmental Study Report (ESR).
- Place ESR on public record for review for 30 days.
- Notify the public and government agencies of completion of the ESR and of the Part II Order provision in the EA Act.

Phase 5 Implementation

- Proceed to construction of the project.
- Monitor environmental provisions and commitments.

We are here

Agency and Stakeholder Consultation

Agency and Stakeholder Consultation

Problem Statement

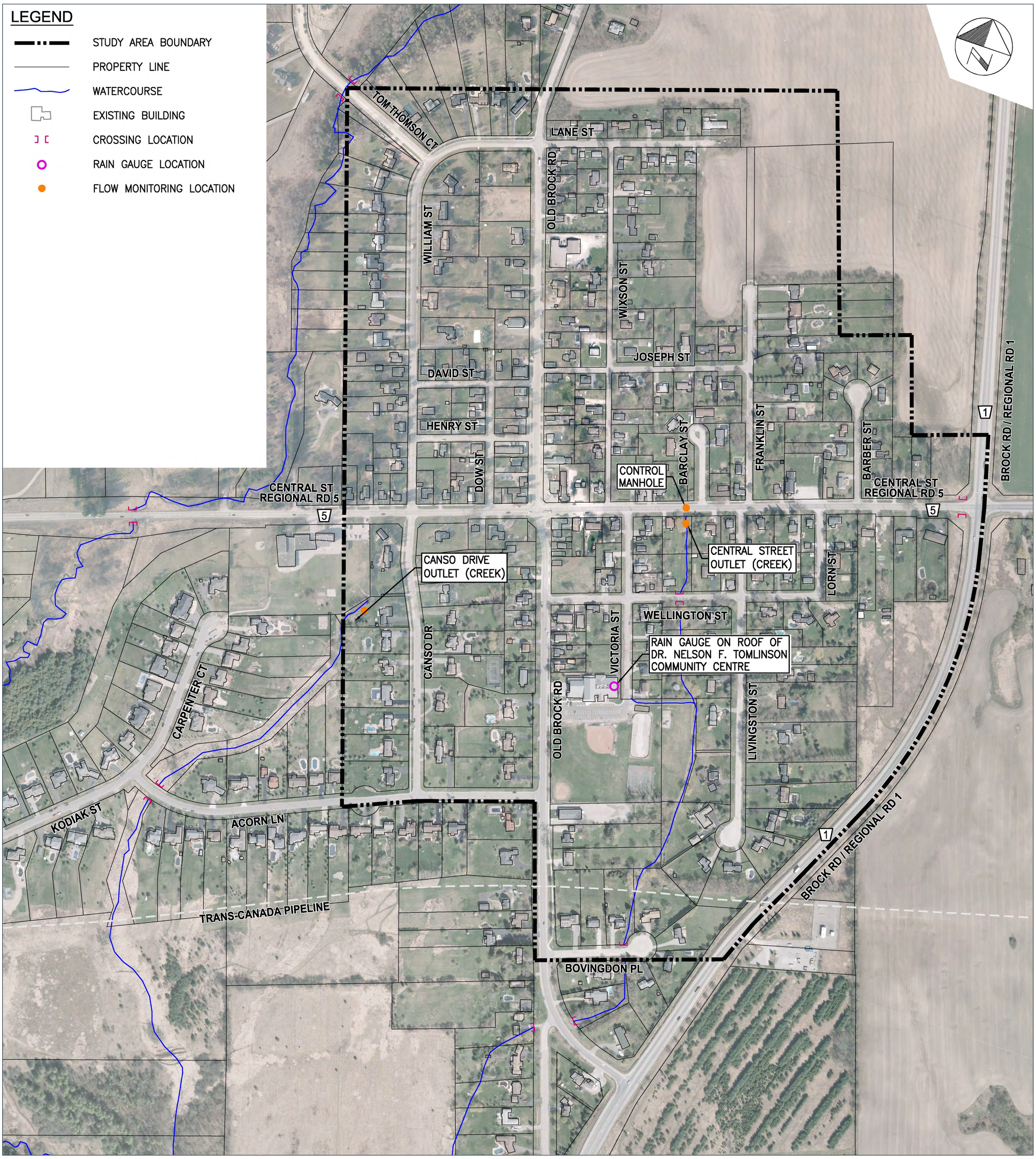
Preferred Solutions

Preferred Designs

ESR

Scope of the Claremont Drainage Plan

5. Study Area


LEGEND
STUDY AREA BOUNDARY
PROPERTY LINE
WATERCOURSE
EXISTING BUILDING
CROSSING LOCATION
RAIN GAUGE LOCATION
FLOW MONITORING LOCATION
TOM THOMSON CT
LANE ST
OLD BROCK RD
WILLIAM ST
WIXSON ST
JOSEPH ST
DAVID ST
HENRY ST
DOW ST
FRANKLIN ST
BARBER ST
BARCLAY ST
CONTROL MANHOLE
CENTRAL ST REGIONAL RD 5
BROCK RD / REGIONAL RD 1
CANSO DRIVE OUTLET (CREEK)
CENTRAL STREET OUTLET (CREEK)
LORN ST
WELLINGTON ST
VICTORIA ST
RAIN GAUGE ON ROOF OF DR. NELSON F. TOMLINSON COMMUNITY CENTRE
CANSO DR
CARPENTER CT
LIVINGSTON ST
KODIAK ST
ACORN LN
TRANS-CANADA PIPELINE
BOVINGDON PL

6. Existing Drainage System Types

The existing drainage system within the Study Area comprises of the following types:

Rural roadway with storm sewer

Urban roadway with storm sewer

Rural roadway with ditches

Mixed rural and urban roadway with ditches and storm sewer

Storm sewer system

Open channel – overland flow

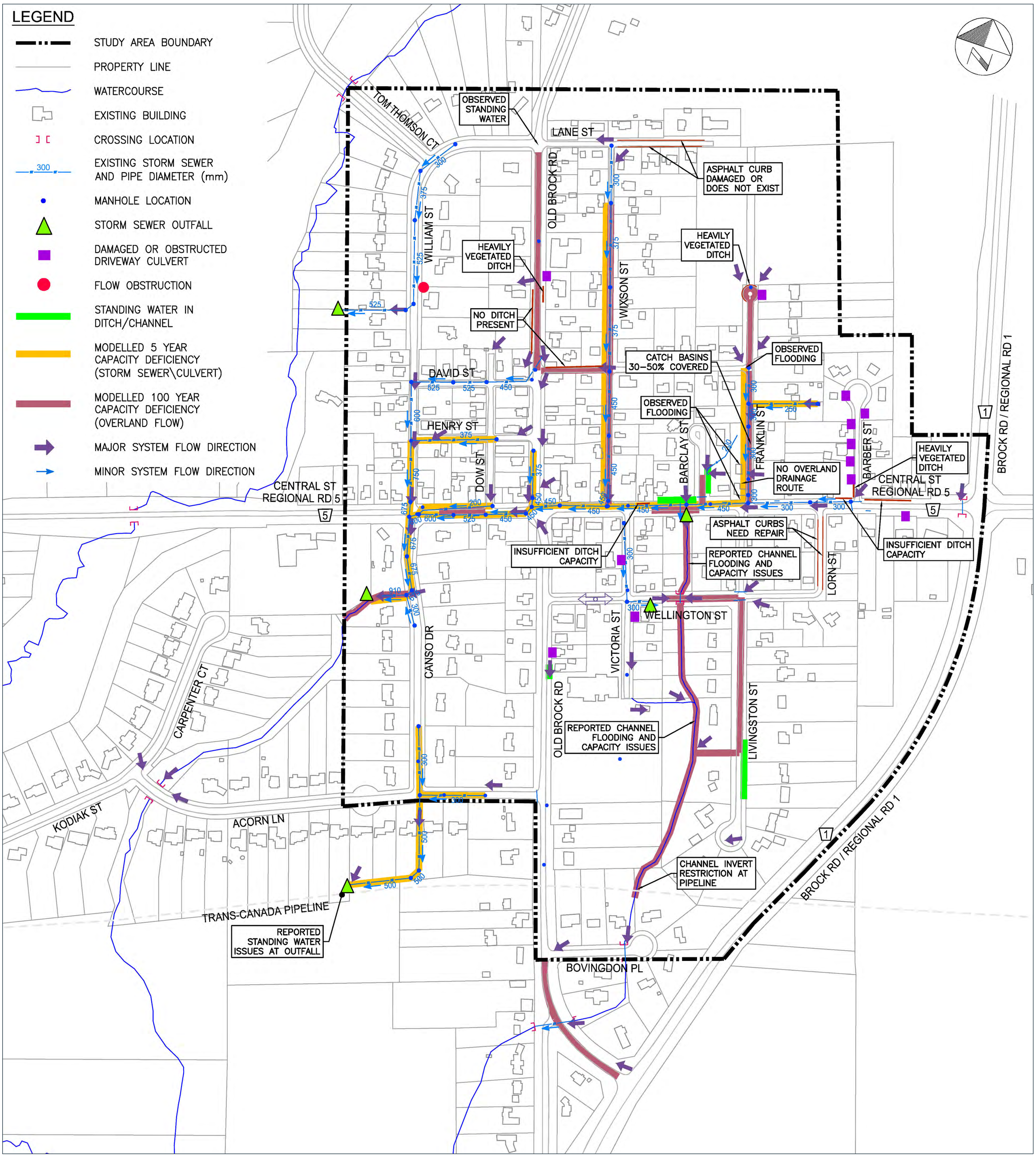
7. Causes of Flooding in Claremont

Flooding in Claremont can result from:

- Limited minor system capacity (storm sewers and culverts)
- Limited major system capacity (road right of ways)
- Inadequate channel capacity (conveyance system)
- Lack of stormwater quantity control
- Operational/Maintenance issues such as blockages due to debris and/or ice

Source: CTV News

8. Existing Drainage System Performance



9. Long-list of Alternatives

The following alternatives are being considered as part of a long-list to address the insufficient capacity of both the minor (storm sewer and culverts) and major (right-of-ways) drainage systems performance.

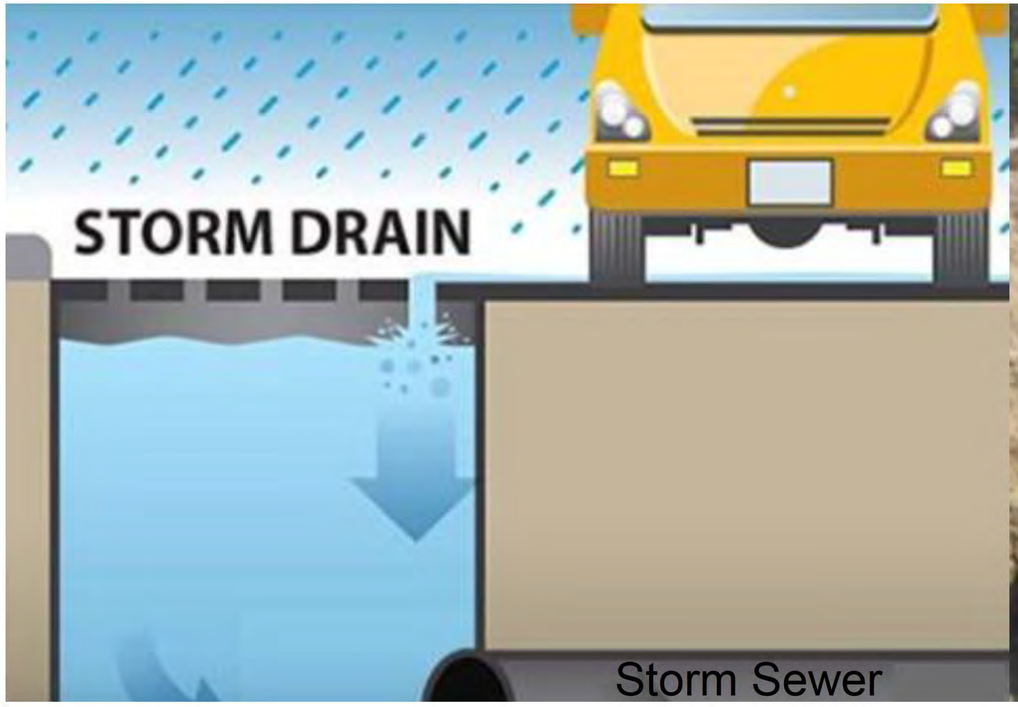
Long-list of Alternatives
1. Do Nothing
2. Increase size of storm sewers and culverts, or twinning
3. Super pipes to provide flow control (storm sewer)
4. On-site Stormwater Management (SWM) for private properties
5. Off-line storage areas within available public spaces
6. SWM facilities to provide additional flow control
7. Flow diversions (local inter-catchment)
8. Roof leader/foundation drain disconnection
9. Modify grading on private property
10. Modify grading within road right-of-way or other public property
11. Low Impact Development Best Management Practices (LID BMPs)
12. New drainage system outlets (storm sewers/ major system)
13. Inlet control devices (ICDs)
14. A combination of some of the above alternatives

10. Alternatives Overview

- Increase size of storm sewers to allow more flow in pipes to reduce ponding and flooding of roads, ditches etc.
- Peak flows can be reduced by temporarily storing runoff in storage systems (i.e. super pipes, ponds and/or underground tanks) and releasing it when minor storm system flow capacity is available.
- Divert flow away from problematic flooding areas and sewers systems.
- Disconnect downspouts to reduce drainage directly to storm sewers.
- Modify grading on private or public property to improve flow conveyance and prevent flooding.

10. Alternatives Overview

- Low Impact Development Best Management Practices can potentially store or infiltrate local drainage for the more frequent storm events (i.e. 2 to 5 year storm event or 20% to 50% chance of occurring in a year), therefore reducing flows in storm sewers and overland drainage systems.
- Peak flows can be reduced in storm sewers by restricting flow from catch basins using inlet control devices
- New drainage systems (sewers, major system).



11. Alternative Evaluation Criteria

Alternatives will be assessed using an evaluation framework, to determine the suitability of each alternative against appropriate evaluation factors as outlined in the table below.

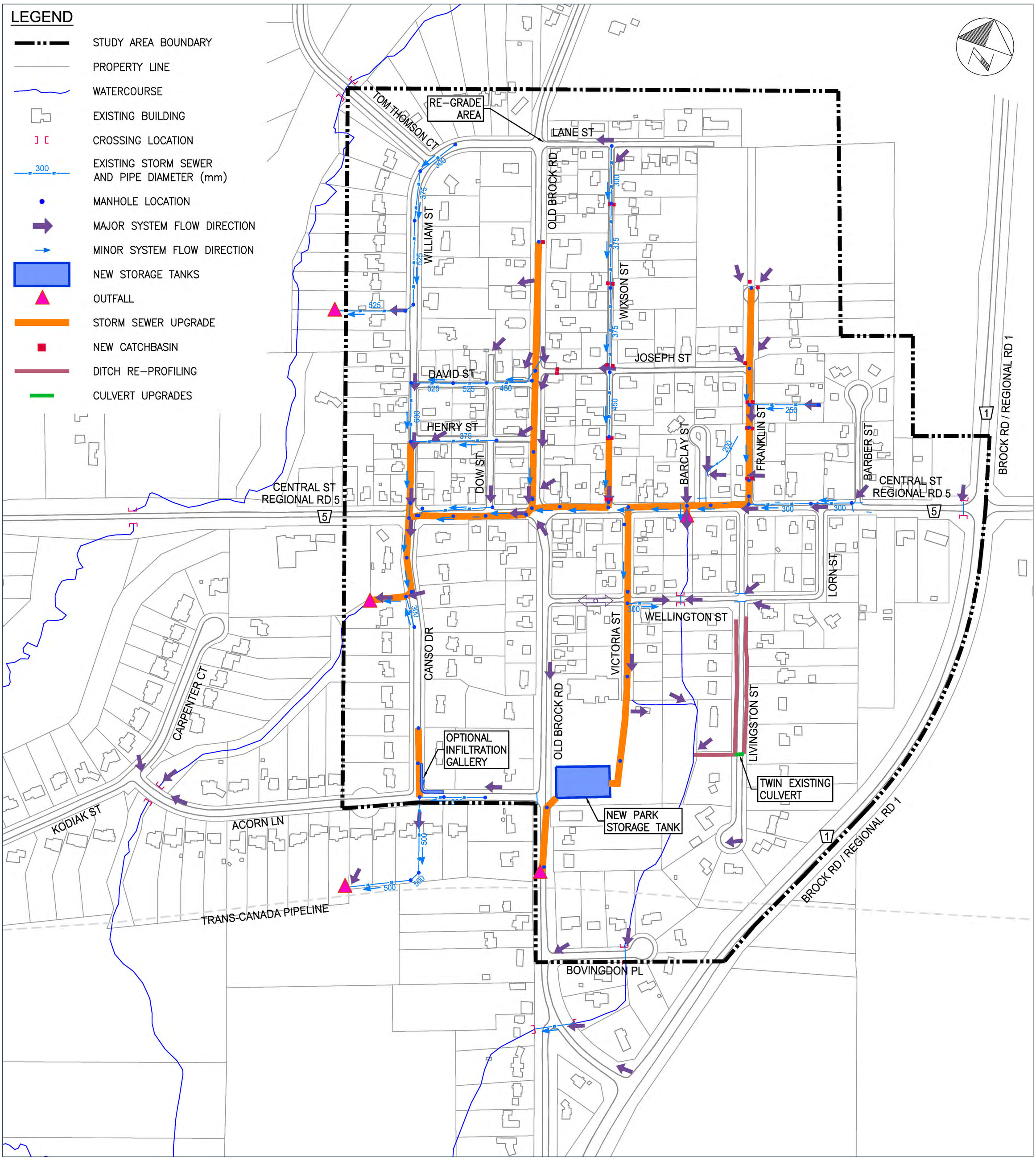
Evaluation Category	Evaluation Criteria	Criteria Description
Functional	Extent to which alternative improves drainage system	The degree to which the existing drainage system (minor and major) flow capacity is improved.
Environmental	Impacts to Creek Systems (stream bank, erosion, water quality)	Any alternative which would result in degradation of the creek systems (including erosion) or would result in decreased water quality would be considered negative. Alternatives which are beneficial would be considered positive.
Social	Ability to Improve Public Safety	Depending on reduced flooding risk within both private and/ or public property, public safety would be improved to varying degrees.
	Impacts on Private Properties	Relates to the change in flood risk on private properties.
	Impacts on Public Lands	Depending on the alternative there are varying degrees of impact to flooding conditions on public lands including roadways.
Economic	Capital Costs	Lower costs are preferred over higher costs.
	Operations and Maintenance Costs	Lower costs are preferred over higher costs.
Constructability	Ease of Construction and Accessibility	The ease and accessibility of construction will vary depending upon alternative location.
	Construction staging and timing	Depending on the alternative and the extent of the proposed works, the project may need to be staged (multiple phases) and may require multiple years to construct.

12. Short-Listed Alternatives

- Two (2) Primary alternatives that have been evaluated involve conveying runoff from the Franklin Street and Central Street area to an alternate outlet:
  - Alternative 1 - Divert runoff to an offline underground storage tank within the Claremont Memorial Park and discharge to the ditch on Old Brock Road.
  - Alternative 2 - Convey runoff to three (3) online underground storage tanks within the Central Street right-of-way at the intersection with Canso Drive.
- Sub alternatives which are common for both primary alternatives include:
  - Increase size of storm sewers and culverts, or twinning sewers and culverts.
  - Super pipes to provide flow control.
  - Modify grading within the road right-of-ways.
  - Low Impact Development Best Management Practices (LID BMPs), to provide storage and infiltration (where the permeability and capacity of the soils permit).

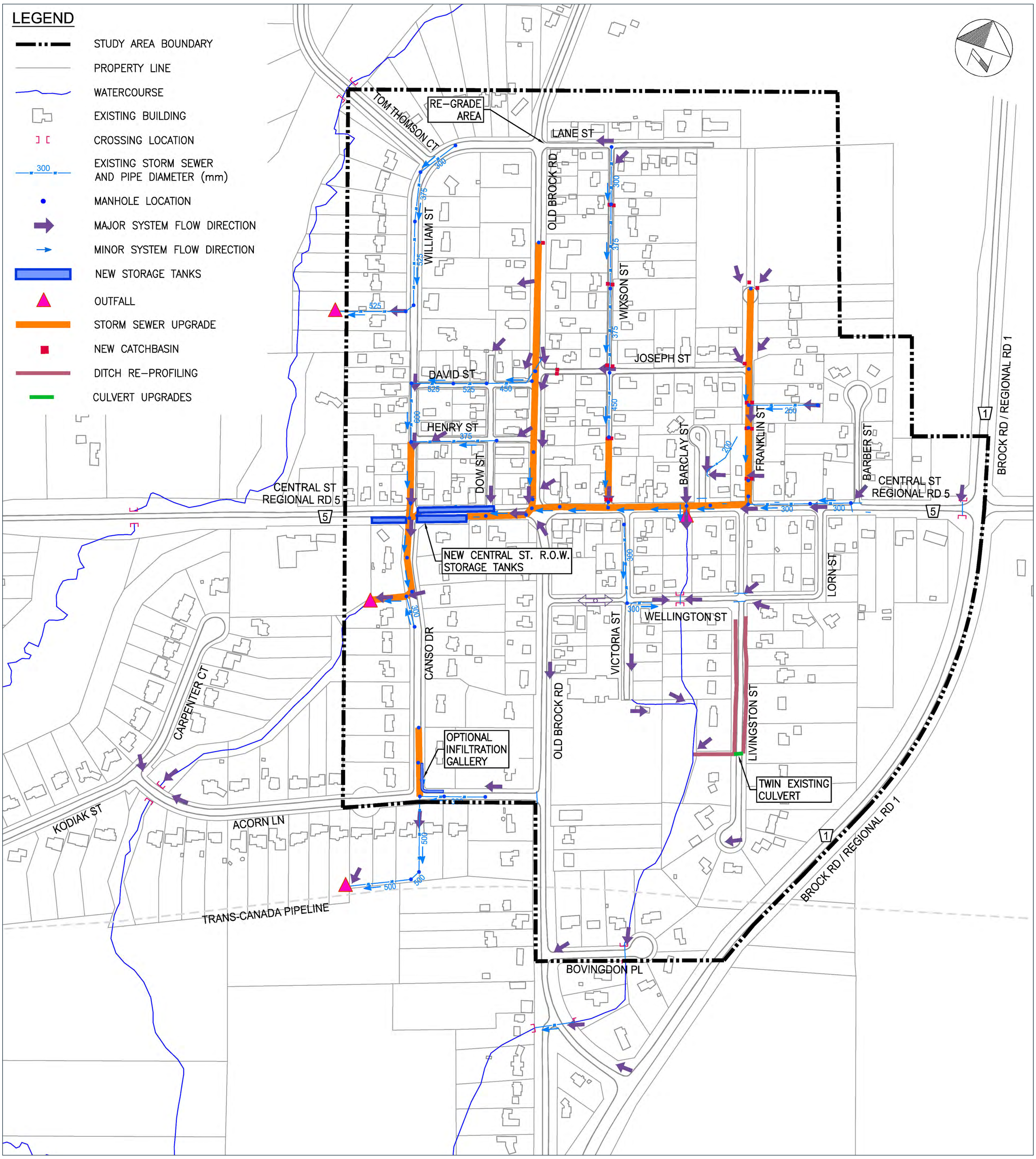
13. Alternative Assessment

Alternative 1 Claremont Memorial Park Storage Tank Drainage System Upgrades



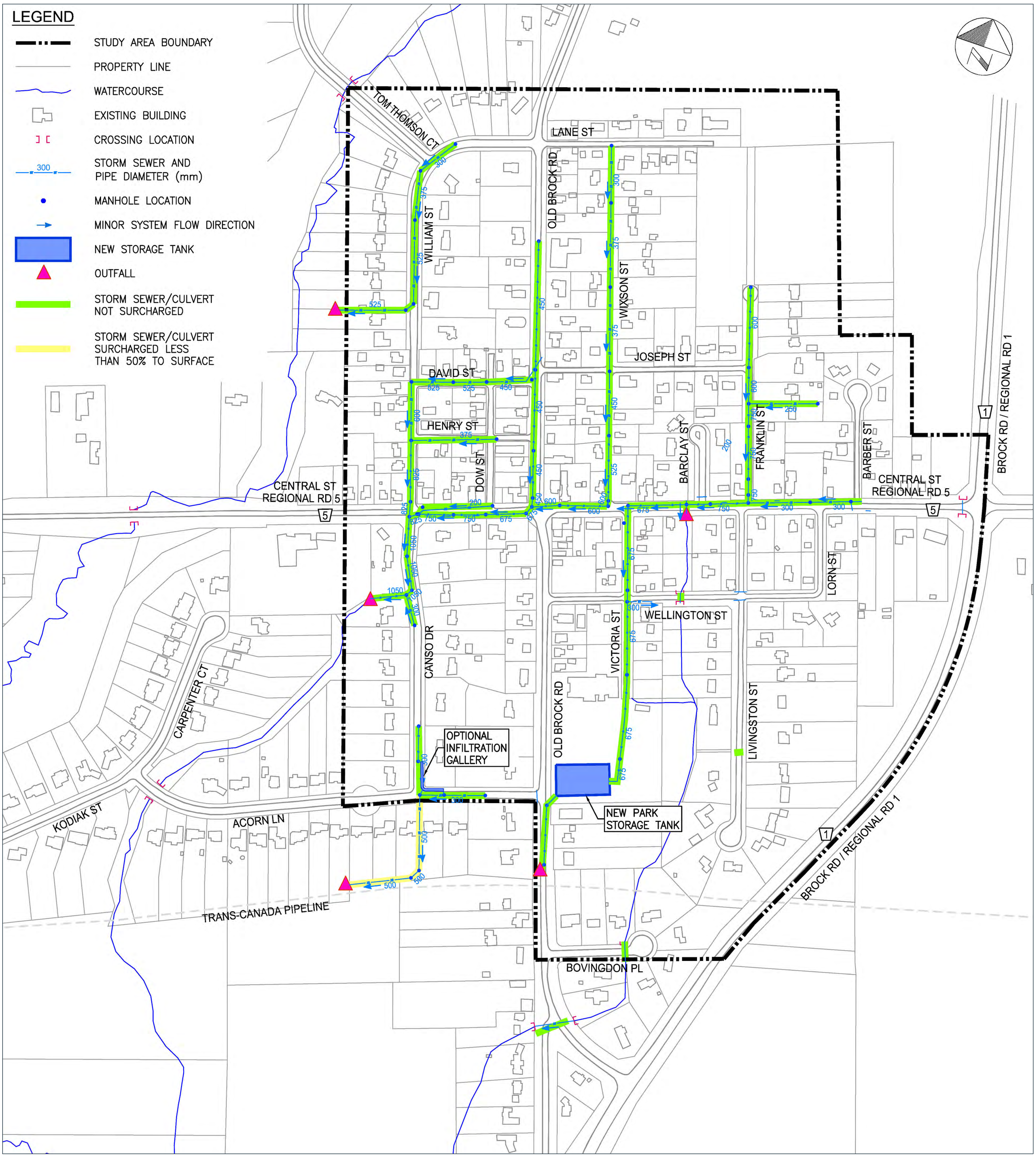
13. Alternative Assessment

Alternative 2 Central Street Right-of-Way Storage Tanks Drainage System Upgrades



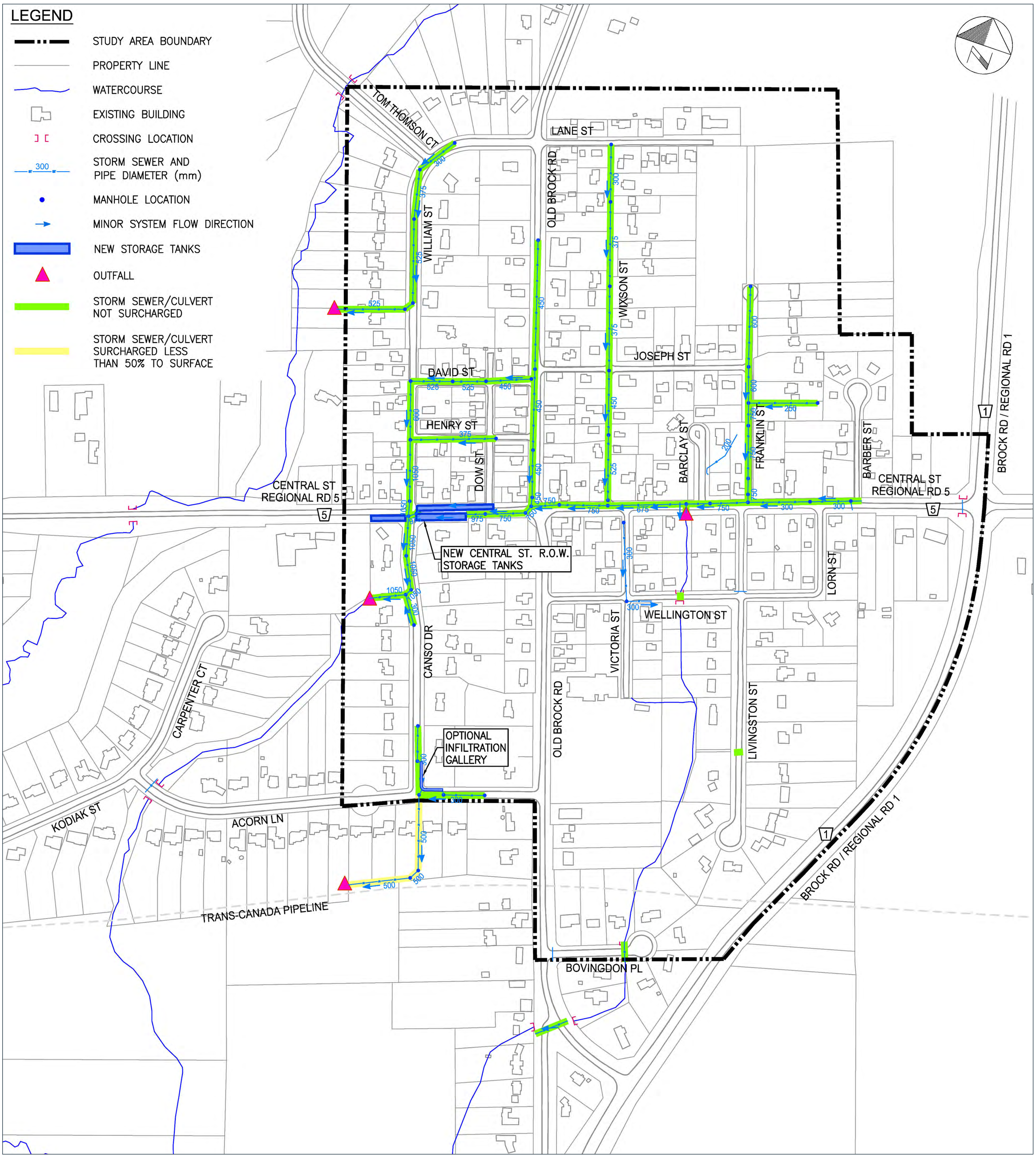
13. Alternative Assessment

Alternative 1 Claremont Memorial Park Storage Tank Minor System 5 Year Performance Assessment



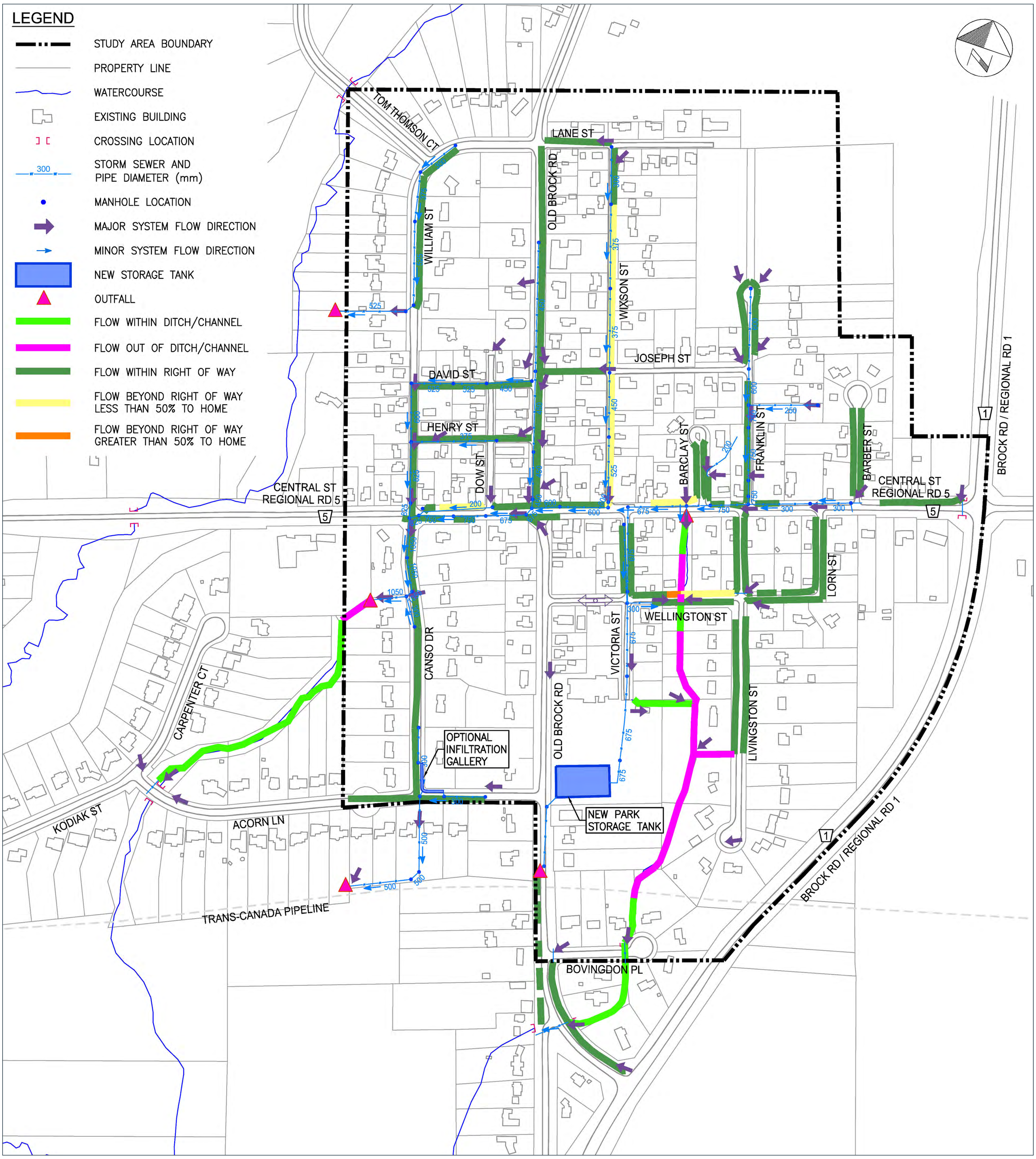
13. Alternative Assessment

Alternative 2 Central Street Right-of-Way Storage Tanks Minor System 5 Year Performance Assessment



13. Alternative Assessment

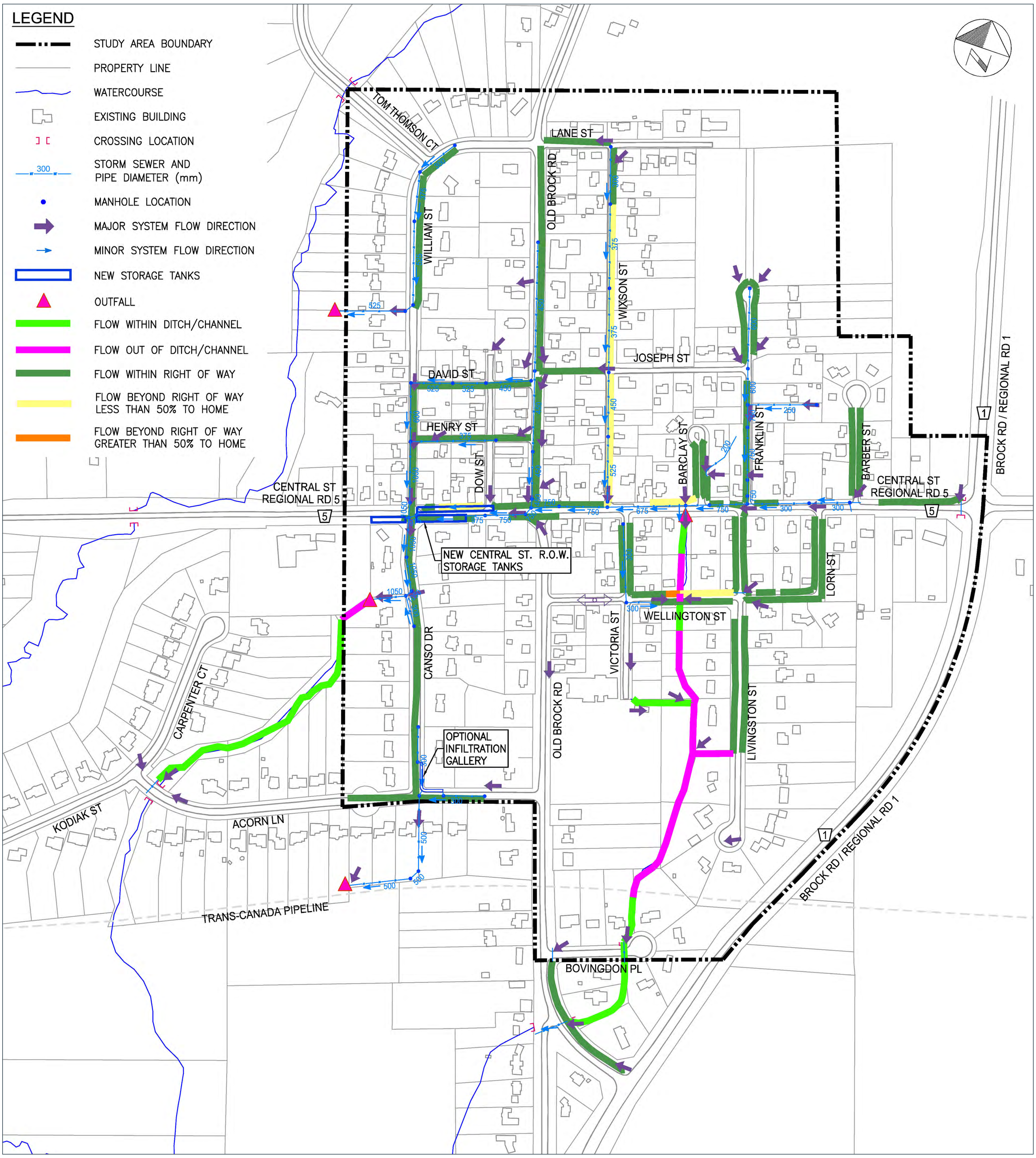
Alternative 1 Claremont Memorial Park Storage Tank Major System 100 Year Performance Assessment



Flow conveyance improvements have been identified to mitigate major system flooding conditions to the extent feasible. Select major systems have been mitigated to eliminate the flooding risk of buildings, however, a flow condition beyond the right-of-way remains at a few locations.

13. Alternative Assessment

Alternative 2 Central Street Right-of-Way Storage Tanks Major System 100 Year Performance Assessment



Flow conveyance improvements have been identified to mitigate major system flooding conditions to the extent feasible. Select major systems have been mitigated to eliminate the flooding risk of buildings, however, a flow condition beyond the right-of-way remains at a few locations.

14. Alternative Evaluation

Evaluation Criteria	Alternative 1 Claremont Memorial Park Storage Tank	Alternative 2 Central Street Right-of-Way Storage Tank
Functional	• Mitigates major and minor drainage system flooding.	• Mitigates major and minor drainage system flooding..
Environmental	• East Channel peak flow rate is maintained at Old Brock Road culvert. • West Channel reduced peak flow rate at Canso Drive outfall.	• East Channel peak flow rate is maintained at Old Brock Road culvert • West Channel reduced peak flow rate at Canso Drive outfall.
Social	• Improved public safety. • Mitigated flooding impacts to private property. • Construction impacts to park and ROW.	• Improved public safety. • Mitigated flooding impacts to private property. • Construction impacts to ROW.
Economic	• Preliminary capital cost $ 6,518,000.[1] • Preliminary annual O & M cost $3,000.	• Preliminary capital cost $ 5,474,000. [1] • Preliminary annual O & M cost $3,000.
Constructability	• Construction impacts to recently improved public park and Victoria Street. • Staging and timing would be less restrictive due to implementation within the park.	• Construction impacts to the Central Street right-of-way requires Region of Durham approval. • Staging and timing would be more restrictive due to implementation within the Central Street right-of-way.

Note [1]: The preliminary capital cost estimate does not include the full reconstruction of the Central Street right-of-way and the cost feasibility may be impacted by the restoration costs. The Region of Durham will be reconstructing Central Street as part of a separate project undertaking.

15. Alternative Capital Cost

Item	Alternative 1 Claremont Memorial Park Storage Tank	Alternative 2 Central Street Right-of-Way Storage Tank
Storm Sewers and Culverts	$ 2,441,000	$ 2,032,000
Manholes, Catch Basins, Leads, and Outfalls	$ 990,000	$ 875,000
Storage Facilities	$ 1,302,000	$ 1,044,000
Ditch Reprofiling	$ 14,000	$ 14,000
Lane St/Old Brock Road Intersection Regrading	$ 10,000	$ 10,000
Infiltration Gallery	$ 125,000	$ 125,000
Subtotal	**$ 4,883,000**	**$ 4,100,000**
15% Contingency	$ 732,000	$ 615,000
Construction Mobilization (Survey, Markup, Hoarding, Laydown Area)	$ 122,000	$ 103,000
Traffic Controls (Signage, Flagmen, Barriers, Permits)	$ 293,000	$ 246,000
Engineering	$ 488,000	$ 410,000
Total	**$ 6,519,000**	**$ 5,474,000**

16. Preliminary Preferred Alternative

- Roadway and storm sewer surcharging conditions identified through this assessment would be mitigated to the extent feasible with both alternatives.
- Alternative 2 (Central Street Underground Tank) is the preliminary preferred alternative due to the lower capital cost and the location of the infrastructure within the Central Street right-of-way, while not disturbing the recently improved Claremont Memorial Park or Victoria Street.
- An implementation plan will prioritize improvements based on the existing drainage system performance.
- The selection of the preferred alternative is subject to input from the Region of Durham and review by the public; implementation of the preferred alternative will require approval from the Region of Durham.

17. Next Steps

- Receive public comments by September 16, 2021.
- Incorporate public input into the Study.
- Prepare Draft Environmental Study Report.
- Further consultation with the Region of Durham regarding the preferred alternative.
- Consultation with City, agencies and stakeholders.
- Update and File Environmental Study Report late 2021.

Please complete an on-line Comment Sheet provided on the website:
https://www.pickering.ca/en/city-hall/claremont-drainage-plan.aspx#

Contact Information

- By Mail:

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Consultant Project Manager
Wood
3450 Harvester Road
Burlington ON L7N 3W5

- By Email:

E-mail: imarouchko@pickering.ca

E-mail: steve.chipps@woodplc.com

Please submit comments no later than
September 16, 2021

Thank you for your participation!

TPB168152 – Claremont Drainage Plan PIC2 Resident Comment Summary					
Comment Date	**Response Date**	**Resident**	**Address**	**Comment**	**Response**
August 23, 2021	August 26, 2021	[redacted]	[redacted]	Good afternoon! My name is [redacted]. I live in [redacted]. I have received the Claremont Drainage Plan Key Map. I am sending this email to raise few concerns. My property is located at the back of Claremont Public school and corner of Central St. Based on the map, the drainage improvement will be behind my property. My dug well and pool system are situated a few feet away from school fence and my property. My questions are, Will it be close to my dug well? once the improvements have been completed, will it reduce, restrict and disturb my water system performance and water quality? Will it be free of contamination? I sincerely thank you for taking into consideration my concerns.	Thank you, [redacted] for your email and interest in the Claremont Drainage Plan Municipal Class Environmental Assessment and the information provided as part of Public Information Centre No. 2. We understand that your property at [redacted], located at the northwest corner of the Canso Drive and Central Street intersection, would be adjacent to the underground storage tank that has been identified as part of the preliminary preferred drainage improvement alternative. Please note that current tank size and layout, are considered conceptual and that should the preliminary preferred alternative be selected and recommended as part of the Class Environmental Assessment, there would be a detailed design process that would require extensive detailed local investigations, engineering assessments and consultation with property owners that are located adjacent to the recommended drainage improvement works, to make sure there would be no post construction impacts to private property. Any potential construction impacts such as temporary lawn disturbance will be discussed with property owners and mitigated prior to construction completion. Regarding your property, we note that the pool is located behind your house and away from the Central Street right-of-way, as such we would not anticipate impacts to its performance and condition. The details of your dug well location are not known, although we note, as per your email, it is close to your property line and in the rear of your property. The preliminary underground storage tank location is offset from the property line within the Central Street right of way, and the tank location will be refined in detailed design to not result in impacts to private property. The tank itself would be lined and contained, therefore, no drainage seepage to private property would occur. In closing, we do not anticipate impacts to your dug well or pool as a result of the preliminary preferred drainage improvements, but we would be happy to discuss further with you, should you desire.
August 26, 2021	September 13, 2021	[redacted]		I have read the PIC#2 and have a few questions I am hoping you could answer to help me better understand the presentation. 1) The large rain event in June 2017 that is mentioned in 1. Would that have been classified as a 5, 10, 50 or 100 year event or neither of these? 2) I see references to stormwater. Did you also include in the study melt water resulting from snowpack? 3) What are the materials of construction for the underground storage tanks mentioned in alternatives 1 and 2? 4) What would be the anticipated construction time period for both alternates 1 and 2 taking it that the Region of Durham would co-operate for the alternates when Central Street is scheduled for re-construction? 5) What if any Federal or Provincial grants would be available to the City of Pickering and Region of Durham for alternate 1 and 2?	You provided questions related to the Claremont Drainage Plan Municipal Class Environmental Assessment. In response to your questions the City provides the following responses: 1) As part of the flow monitoring that occurred in 2017 for the Claremont Drainage Plan, the City had a rainfall gauge in Claremont that recorded 50.8 mm of rainfall on June 23rd in 8.5 hrs. Based on the local rainfall data the storm event is approximately a 5 year event. 2) The snow melt was not included in the assessment, as that was not part of the Claremont Drainage Plan scope. 3) There are various materials that could be considered. Currently no specific material has been selected. Typically, these tanks use prefabricated plastic cells that are lined. 4) The Region will be conducting a separate Municipal Class Environmental Assessment for Central Street that would incorporate the preferred alternative, with detailed design to follow the study. Construction timing is dependent on

TPB168152 – Claremont Drainage Plan PIC2 Resident Comment Summary					
Comment Date	**Response Date**	**Resident**	**Address**	**Comment**	**Response**
				6) Do you envision either of alternative 1 of 2 having to be done in stages? If so, please provide detail. 7) When do you expect to advise the public of the implementation plan?	the Region's capital work budget, which would have to be set for the City to provide a timeline, as such a construction timeline has not been determined to-date. 5) Both the City and the Region will be considering funding from the Province and Federal Governments for the preferred alternative. Discussion on available grants will be included within the final Class Environmental Assessment, incorporating input from the City and the Region. Specific grants at this time are unknown. 6) There will have to be construction stages, which will be dependent on the recommendations of the future Municipal Class Environmental Assessment for Central Street, Region and City's funding and coordination with other capital projects being conducted by both the City and Region, as such detailed staging at this time has not been determined. 7) The implementation plan will be part of the Municipal Class Environmental Assessment Report, which is anticipated to be prepared by the end of 2021.
August 29, 2021	September 9, 2021	[redacted]	[redacted]	I have been a resident of Claremont for 9 years. The ditches are not well maintained by the City nor is much attention paid to the cracked roads along Joseph St for example. One can't just keep waiting for the developer to possibly move forward on the Ward property. This is a situation that needs immediate and meaningful action. Before I moved into the Hamlet I was unaware of how this hamlet is treated much like an afterthought and it is extremely disappointing because we pay taxes just like those south of Highway 7. The fact that storm sewers do not have adequate capacity should be a priority for the city to address. We need proper drainage along Central Street and in the ditches on Barclay St. Multiple residents have complained about the ditches in this area over the years. I can't even mow next to the ditch on Barclay St very well, as the ground is so wet even when it hasn't rained that it is hard to move the mower across and becomes a safety hazard. The ditch needs major attention and a more effective drainage system. Why the City spends money on Drive safe signs now in the hamlet rather than improvements that actually matter to the residents is infuriating. Also when you walk from Livingston St using the pathway over the grass to the playground the grass is waterlogged. This is unacceptable in a City of Pickering boundary. I look forward to work being started to insufficient ditch capacity and proactively prevent flooding of private property and city property. We need the City of Pickering to invest in the best plan for the Hamlet, taking in future environmental concerns and what the residents have had to deal with already not just the cheapest. We need work to begin to fix these issues - not another study - but a plan forward and a real timeline for the work to begin so we don't have to continue living with these issues as the weather gets more unpredictable.	Thank you for your comments on Public Information Centre No. 2 for the Claremont Drainage Plan Municipal Class Environmental Assessment. Your comments will be reviewed by the project team.
September 2, 2021	September 9, 2021	[redacted]	[redacted]	I am a Claremont resident residing at [redacted].	Thank you for your email and interest in the Claremont Drainage Plan Municipal Class Environmental Assessment and the information provided as part of Public Information

TPB168152 – Claremont Drainage Plan PIC2 Resident Comment Summary					
Comment Date	**Response Date**	**Resident**	**Address**	**Comment**	**Response**
				I would like to comment on the Drainage Plan you are working on, of which I am included in the boundary located therein. I would like to bring to your attention of a watercourse/drainage area located at the rear most portion of my property share with my neighbour herein copied as well as more neighbours directly to the south of my property. I do not see that this waterway is mentioned in any report and would like some assurance that this waterway is being taken into consideration for the drainage plan eventually adopted and associated works carried out. In the past I have spoken to the City of Pickering regarding this "makeshift" waterway with little success. As you can appreciate this being an unsightly area is one thing but of more import is the standing water which has the potential for west nile virus conditions. Your assistance in this matter would be greatly appreciated and would you please keep me informed?	Centre No. 2. The project team has reviewed comments provided in your email. Based on the available information, the rear ditch located within the 5076 Old Brock Road property and other adjacent properties, is a part of the existing area grading and drainage scheme. The runoff from the 5076 Old Brock Road property and several adjacent properties is conveyed via this ditch south-west, towards Williams Street. These existing drainage conditions have been reflected in the drainage system analysis (PCSWMM model). Since this ditch is a part of the private property grading and drainage scheme, it is the property owners' responsibility to ensure the property is adequately protected from storm water, by properly maintaining the original drainage scheme. The City is not responsible for drainage/flooding issues that maybe caused by any grade alterations (pools, sheds, patio construction etc.) completed by property owners. For more information regarding lot drainage and grading please refer to the City's website https://www.pickering.ca/en/living/lotdrainagegrading.aspx.
September 8, 2021	September 9, 2021	[redacted]		On the Existing Drainage System Performance, you fail to include in the map that the north portion of Lane St between Wixson and Old Brock does not a curb or ditch. Since you did not include that fact in the initial observation, there are no proposed solutions. Our property is flush to the road with no means of draining and has a Major Systems Flow on that portion of the road. We are listed as a Major Systems flow but there is no ditching or proposed solution for our part of the street.	Thank you for your comments on Public Information Centre No. 2 for the Claremont Drainage Plan Municipal Class Environmental Assessment. You provided the following comments, related to the drainage system at Lane Street and Wixson Street to which the City has provided for your consideration a response in *italics* to each of your comments. 1. On the Existing Drainage System Performance, you fail to include in the map that the north portion of Lane St between Wixson and Old Brock does not a curb or ditch. Since you did not include that fact in the initial observation, there are no proposed solutions. Our property is flush to the road with no means of draining and has a Major Systems Flow on that portion of the road. *The Existing Drainage Performance Figure based on your comments has been revised to indicate a note stating 'observed standing water' in the vicinity of Lane Street and Old Brock Road. This includes the section of Lane Street to Wixson Street. The Figure was revised with a note stating 'asphalt curb damaged or does not exist'. We do note that there is a shallow asphalt gutter along the north side of Lane Street between Wixson Street and Old Brock Road to convey drainage, which is in a poor condition and should be replaced with an approved wide gutter and potentially semi mountable curb and local boulevard grading.* 2. We are listed as a Major Systems flow but there is no ditching or proposed solution for our part of the street. *Both alternatives and the preferred alternative indicate a note stating 're-grade area' in the vicinity of Lane Street and Old Brock Road, which would apply to all of Lane Street. In the Class EA document there will be a recommendation for an approved wide gutter and potentially semi*

TPB168152 – Claremont Drainage Plan PIC2 Resident Comment Summary					
Comment Date	**Response Date**	**Resident**	**Address**	**Comment**	**Response**
					mountable curb and local boulevard grading along Lane Street, which will improve overland flow conveyance. Should you have further comments or questions, please contact us.
September 13, 2021		[redacted]		Thank you for providing the opportunity to comment on the Public Information Centre for the Claremont Drainage Plan. We do not currently have specific comments. However, we look forward to the opportunity to comment on more detailed designs and reports.	

File #:	**1470**
Date:	**September 23, 2021**

Ms. Irina Marouchko, P.Eng.
City of Pickering
Pickering Civic Complex
One the Esplanade
Pickering, ON L1V 6K7

Dear Ms. Marouchko:

Re: **Comments on PIC No. 2 Presentation**
Claremont Drainage Plan Municipal Class EA
City of Pickering

On behalf of our client, Claremont Developments Inc. (CDI), we are writing to provide comments on the presentation for the Public Information Centre (PIC) No. 2 for the Claremont Drainage Plan Municipal Class Environmental Assessment (EA).

CDI has an interest in the approximately 38 ha property at 5113 Old Brock Road in the Claremont community, located north of Central Street (north of the existing residential lots on Lane Street, Franklin Street and Barber Street), between Brock Road (Claremont Bypass) and Old Brock Road.

We met with the City, Wood and representatives from CDI on December 10, 2020 and provided the following comments on the PIC No. 1 presentation:

- *The study area should be expanded to include the limits of the existing contributing drainage from all the external lands, as they are part of the Claremont drainage system. There is approximately 8.7 ha of the CDI property that currently drains south to the north limit of Franklin Street, as illustrated in the attached Existing Storm Drainage Plan from the Functional Servicing Report prepared by SCS (March 2018);*
- *We would like the City to confirm that the existing conditions PCSWMM modelling completed by Wood incorporates this external drainage area from the CDI lands;*
- *We request a copy of the existing conditions PCSWMM modelling to understand the inputs related to the existing CDI lands; and*
- *It is our position that Phase 2 of the Municipal Class EA process must evaluate all possible alternatives, including solutions which involve works on private lands. As outlined during our discussion, the proposed development of the CDI lands includes the diversion of the majority of the existing runoff currently draining to Franklin Street over to a proposed stormwater management facility adjacent to Brock Road. This proposed diversion will result in a significant (97%) reduction in the 100 year peak flows and runoff volumes to Franklin Street, dramatically improving the current drainage condition and providing a significant public benefit.*

Upon review of the PIC No. 2 materials, it is not clear if the study area was expanded to include the limits of the 8.7 ha of the CDI property that currently drains south to Franklin Street or if the PCSWMM modelling incorporates this external drainage from the CDI lands, as a copy of the requested modelling has not been provided. We request that the City please confirm.

It is also evident that the EA has not included our request to consider the proposed drainage diversion of runoff from the CDI lands that currently outlets to Franklin Street to a proposed SWM facility adjacent Brock Road (which is proposed to outlet to the westerly Brock Road ditch system, south of Central Street) as one of the potential solutions. This proposed drainage diversion was documented in a revised Functional Servicing and Stormwater Management Report (FSSR), prepared by SCS Consulting Group Ltd., dated July 2021, that was included in a revised Draft Plan of Subdivision application submission to the City in July 2021.

As per our past discussions and as documented in the July 2021 FSSR, **this proposed diversion will result in a significant (97%) reduction in the 100 year peak flows and runoff volumes to Franklin Street, dramatically improving the current drainage condition and providing a significant public benefit**. Copies of the Existing Storm Drainage Plan and Proposed Storm Drainage Plan from our July 2021 FSSR have been attached for your reference.

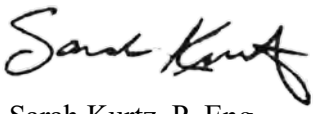
We respectfully request that the EA include the proposed diversion as a potential solution, or, at a minimum, the PCSWMM model be run to simulate the proposed diversion and the results be made available to understand the magnitude of the potential benefit to the downstream system.

We appreciate the opportunity to review the PIC No. 2 presentation and provide our comments.

Please contact the undersigned if you have any questions or require any additional information.

Sincerely,

SCS Consulting Group Ltd.

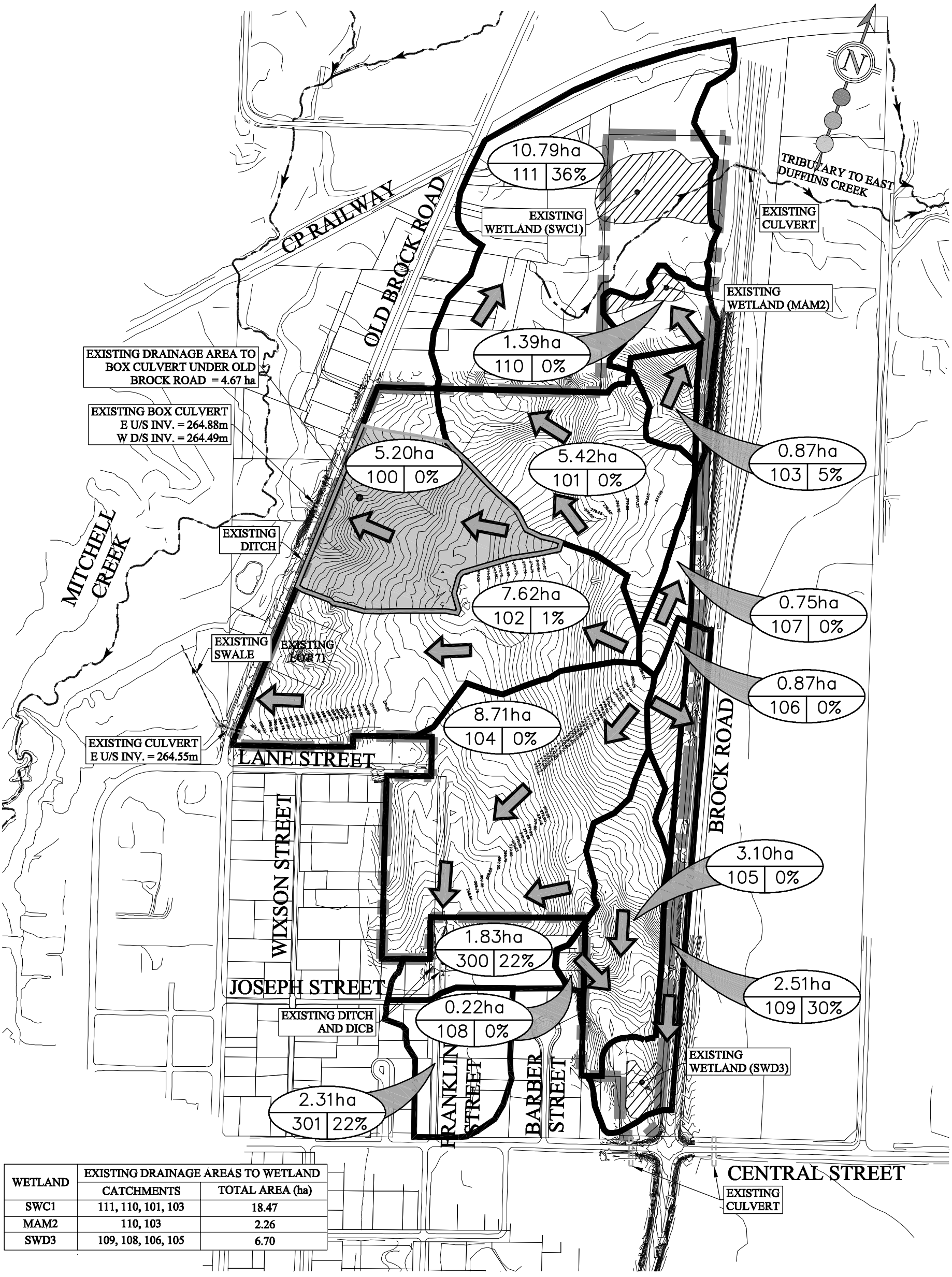


Sarah Kurtz, P. Eng.
skurtz@scsconsultinggroup.com

Attachments: Figure 2.1 – Existing Storm Drainage Plan
Figure 2.2 – Proposed Storm Drainage Plan

c. Mr. Cody Morrison, City of Pickering
Ms. Lori Riviere Doersam, Durham Region
Mr. Matthew Cory, Malone Given Parsons
Ms. Farrah Ward, Claremont Development Inc.

P:\1470 Toko - Claremont (Pickering)\Correspondence\Letters\Pickering-Claremont Drainage PIC#2 Comments-sek-23Sep21.docx



WETLAND	EXISTING DRAINAGE AREAS TO WETLAND	
	CATCHMENTS	TOTAL AREA (ha)
SWC1	111, 110, 101, 103	18.47
MAM2	110, 103	2.26
SWD3	109, 108, 106, 105	6.70

LEGEND:

- PROPERTY BOUNDARY
- STORM DRAINAGE BOUNDARY
- WATERCOURSE
- 270.25 EXISTING CONTOUR
- 12.52ha / 211 | 25% — DRAINAGE AREA (HECTARES); % IMPERVIOUSNESS; CATCHMENT ID
- OVERLAND FLOW
- EXISTING WETLAND

CLAREMONT DEVELOPMENTS INC.
3190 STEELES AVE. EAST, SUITE 300
MARKHAM, ONTARIO L3R 1G9
TEL: (905) 477-1177
FAX: (905) 477-1279

SCS consulting group ltd
30 CENTURIAN DRIVE, SUITE 100
MARKHAM, ONTARIO L3R 8B8
TEL: (905) 475-1900
FAX: (905) 475-8335

5113 BROCK ROAD - FSSR

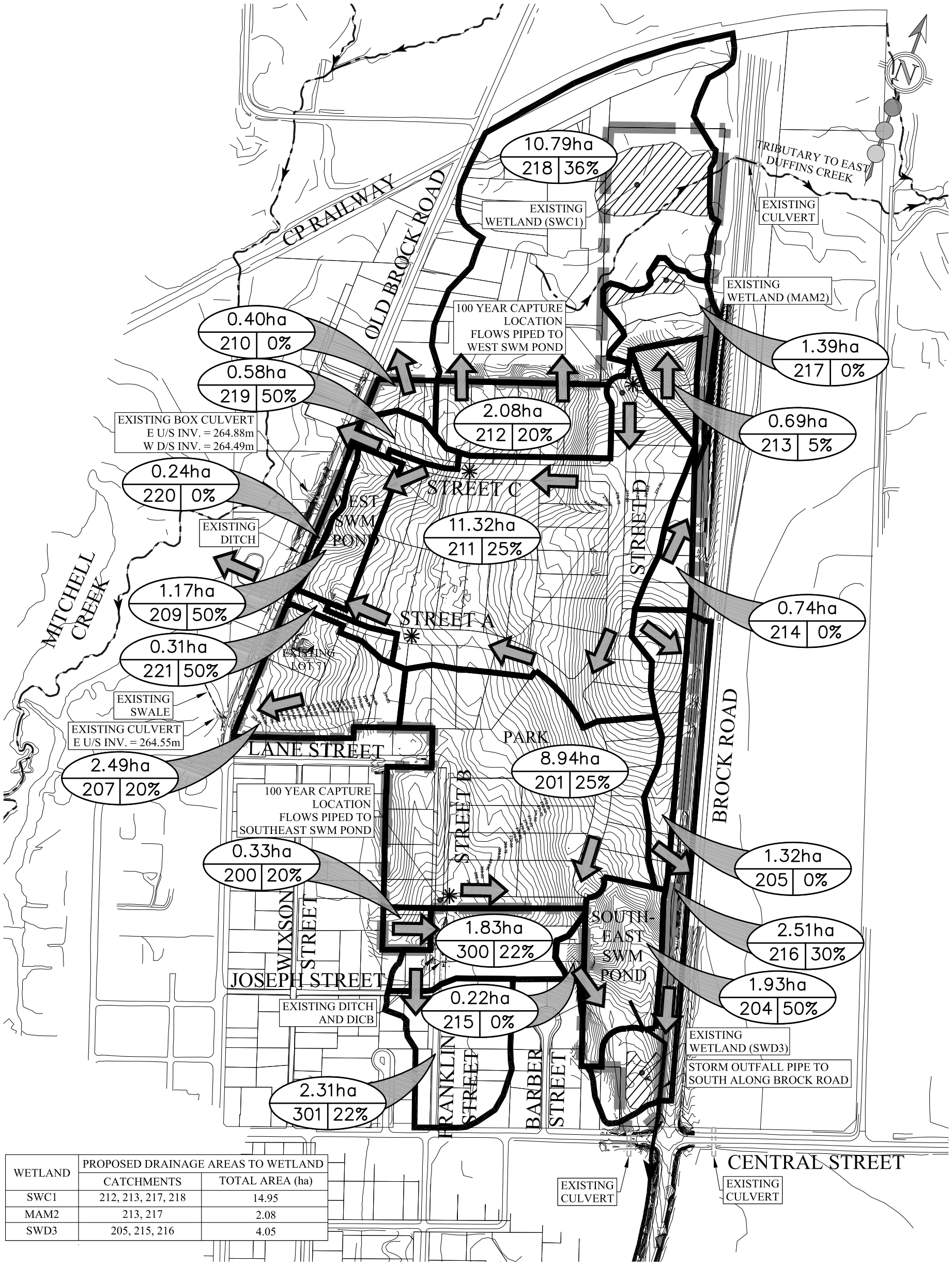
EXISTING STORM DRAINAGE PLAN

DESIGNED BY:	L.C.M.	CHECKED BY:	S.E.K.
SCALE:	1:5000	DATE:	JUNE 2021

PROJECT No: 1470

FIGURE No: 2.1

File: P:\1470 Toko – Claremont (Pickering)\Drawings\FSP\Fig\Report Figures\1470P-STRM-EXST-2.1.dwg – Revised by <EWHITE> : Tue, Jun 22 2021 – 11:05am



WETLAND	PROPOSED DRAINAGE AREAS TO WETLAND	
	CATCHMENTS	TOTAL AREA (ha)
SWC1	212, 213, 217, 218	14.95
MAM2	213, 217	2.08
SWD3	205, 215, 216	4.05

*NOTE: LAYOUT IS SCHEMATIC ONLY, DETAILS TO BE PROVIDED AT DETAILED DESIGN STAGE.

LEGEND:

- PROPERTY BOUNDARY
- STORM DRAINAGE BOUNDARY
- WATERCOURSE
- 270.25 EXISTING CONTOUR
- 12.52ha / 211 | 25% — DRAINAGE AREA (HECTARES); % IMPERVIOUSNESS; CATCHMENT ID
- OVERLAND FLOW
- EXISTING WETLAND
- 100 YEAR CAPTURE POINT

CLAREMONT DEVELOPMENTS INC. 3190 STEELES AVE. EAST, SUITE 300 MARKHAM, ONTARIO L3R 1G9 TEL: (905) 477-1177 FAX: (905) 477-1279	5113 BROCK ROAD - FSSR		PROPOSED STORM DRAINAGE PLAN
SCS consulting group ltd 30 CENTURIAN DRIVE, SUITE 100 MARKHAM, ONTARIO L3R 8B8 TEL: (905) 475-1900 FAX: (905) 475-8335	DESIGNED BY: L.C.M.	CHECKED BY: S.E.K.	PROJECT No: 1470 / FIGURE No: 2.2
	SCALE: 1:5000	DATE: JUNE 2021	

File: P:\1470 Toko – Claremont (Pickering)\Drawings\FSP\Fig\Report Figures\1470P-STRM-PROP-2.2.dwg – Revised by <DDILAY> : Fri, Jun 11 2021 – 1:50am

From: Marouchko, Irina <imarouchko@pickering.ca>
Sent: Monday, November 8, 2021 1:15 PM
To: 'Kurtz, Sarah' <skurtz@scsconsultinggroup.com>
Cc: Morrison, Cody <cmorrison@pickering.ca>; Lori Riviere-Doersam <Lori.Riviere-Doersam@Durham.ca>; Matthew Cory <mcory@mgp.ca>; 'Cheryl Shindruk' <cheryls@geranium.com>; Farrah Ward <farrahw@geranium.com>; Schaefer, Steve <sschaefer@scsconsultinggroup.com>; Chipps, Steve <steve.chipps@woodplc.com>; MacDonald, Patrick <patrick.macdonald@woodplc.com>
Subject: RE: Comments on Claremont Drainage Plan PIC#2

Good afternoon Sarah,

Thank you for the comments submitted in your letter dated September 23, 2021 which was received by email on October 1, 2021 on the PIC#2 for the Claremont Drainage Plan. In response to your comments the City provides the following responses:

- The Claremont Drainage Plan Study was undertaken by the City to complete a comprehensive analysis of the existing drainage system (minor and major) for the area of the Hamlet of Claremont serviced by storm sewers, therefore the study boundary was established to reflect the central part of the Claremont. However, since the existing system analysis is based on the overall contributing drainage catchments, the undeveloped external drainage area north of Franklin Street has been incorporated into the PCSWMM model. The area has been divided into two sub-catchments (ref. attached screen shot of the PCSWMM model) totaling 8.3 ha (+/-); the delineated drainage area slightly differs in comparison to the SCS delineated external drainage area of 8.7 ha (+/-). The Study boundary will remain as is.
- The existing drainage system analysis/PCSWMM model incorporates the existing drainage from the Claremont Developments Inc. (CDI) property, in accordance with the existing drainage conditions.
- A copy of the PSCWMM model will be available upon request once the Municipal Class EA report is finalized.
- The Claremont Drainage Plan Municipal Class EA Study includes evaluation of all possible alternative solutions based on the existing conditions. Future developments (draft plan or site plan approved) were not included in the study,

as recommended proposed alternative solutions shall not rely or depend on any private development schedules, business plans, etc. If the proposed CDI lands development is approved and constructed prior the Claremont Drainage Plan implementation schedule, any changes to the external drainage area will be considered at the detailed design stage of the implementation plan.

Regards,

Irina Marouchko, P.Eng.
Senior Water Resources Engineer | Water Resources & Development Services
905.420.4660 ext. 2072 | 1.866.683.2760 | TTY. 905.420.1739
imarouchko@pickering.ca

From: Kurtz, Sarah <skurtz@scsconsultinggroup.com>
Sent: Friday, October 1, 2021 9:41 AM
To: Marouchko, Irina <imarouchko@pickering.ca>
Cc: Morrison, Cody <cmorrison@pickering.ca>; Lori Riviere-Doersam <Lori.Riviere-Doersam@Durham.ca>; Matthew Cory <mcory@mgp.ca>; 'Cheryl Shindruk' <cheryls@geranium.com>; Farrah Ward <farrahw@geranium.com>; Schaefer, Steve <sschaefer@scsconsultinggroup.com>
Subject: Comments on Claremont Drainage Plan PIC#2

Good morning Irina, please see the attached letter with our comments on the 2nd PIC for the Claremont Drainage Plan.

Sarah

Sarah Kurtz, P.Eng.

SCS Consulting Group Ltd.
30 Centurian Drive, Suite 100
Markham, ON, L3R 8B8
(T) 905.475.1900 Ext. 2246
(F) 905.475.8335
(M) 647.881.7900
skurtz@scsconsultinggroup.com
www.scsconsultinggroup.com

Toronto and Region Conservation Authority

September 28, 2021

CFN 56857

BY E-MAIL ONLY (imarouchko@pickering.ca)

Irina Marouchko
Water Resources Engineer
City of Pickering
One the Esplanade
Pickering ON LIV 6K7

Dear Irina Marouchko:

Re: Response to PIC #2
Claremont Drainage Plan – Master Plan
Duffins Watershed; City of Pickering; Regional Municipality of Durham

Toronto and Region Conservation Authority (TRCA) staff received the Public Information Centre (PIC #2) dated for the above-noted Master Plan on August 19, 2021.

PROJECT OVERVIEW

Staff understands that the City of Pickering is undertaking the Claremont Drainage Plan Municipal Class Environmental Assessment (Phase 1 and 2 of the Class EA process) to complete a comprehensive analysis of the drainage system with the following goals:

- Understanding the existing drainage system performance.
- Determining the appropriate level of service and methods to improve the existing drainage system performance to reduce the flood risks to the private and public property buildings and infrastructure.
- Develop an implementation plan that will prioritise improvements based on the existing drainage system performance in accordance with the recommended level of service.

The purpose of the PIC #2 is to present the alternative solutions, the criteria which was used to evaluate the alternatives, the preferred solution, the project schedule, and next steps.

TRCA REVIEW AND COMMENTS

TRCA staff has completed a review of the above-note submission and provides the following comments:

Staff appreciate that the East Channel peak flow rate is maintained at Old Brock Road culvert and the West Channel reduced peak low rate at Canso Drive outfall. As such, it does not appear that peak flows are increased at any location.
However, staff did not receive any responses to previous comments sent out in relation to the PIC #1 material. These and additional comments have been included below for your convenience.

PIC #1 Comments

1. It is noted that there are many overly vegetated ditches in the area. Maintenance of the ditches at these locations via manicuring (grass cutting) can be promoted. In addition, once groundwater tables are established in the area, there may be opportunities to include infiltration trenches with gravel at the bottom of the swales for greater permeability and perforated pipe system in the infiltration trench and 0.15 m height permanent checks dams along the grassed swales to allow for greater storm capacity and storage along the swales.

2. With regard to the Natural Environmental Assessment (NEA), TRCA staff is happy to work with the municipality in order to scope the TOR for the NEA, should the City of Pickering wish.

3. The alternative evaluation criteria (slide 19) for 'Environment' should also include potential impacts to aquatic and terrestrial habitat. Please note that TRCA's screening map shows unevaluated wetlands south of the study area and a Provincially Significant Wetland (PSW) northwest of the study area.

4. Staff recommends consultation with MECP regarding SAR (Species at Risk) requirements associated with the proposal.

5. Please note that there is TRCA property on the north-western part of the study area and an archeological investigation by TRCA staff must precede any access/disturbance to TRCA property.

Pic #2 Comments

1. Please provide a more detailed evaluation matrix with any future submissions with a detailed scoring system.

2. The Environmental Evaluation criterion should be revised to look at all natural heritage features (watercourses, wetlands, areas of groundwater discharge, wildlife habitat, significant woodland/valleylands, Species at Risk etc.) within the study area and assess potential impacts to the form and function of aquatic and terrestrial habitat to determine suitable alternatives.

    a. Wetlands: There are unevaluated wetlands and Provincially Significant Wetlands within and adjacent to the study area that should be identified, characterized, and assessed for impact of the proposed alternatives.
    b. Redside Dace habitat (RSD) habitat: There is occupied and contributing RSD habitat within and directly adjacent to the study area that should be identified and assessed for impact of the proposed alternatives.
    c. Hydrology: The study should look at any potential impacts to the hydrology of the wetlands, tributaries, and watercourses within and adjacent to the study area.
        i. A risk evaluation for feature-based water balance as per TRCA Guidelines should be undertaken as part of the EA to inform feature-based water balance requirements.
    d. Consultation with provincial and federal agencies such as MECP, MNRF, and DFO should be undertaken at this stage of the EA process. Please confirm consultation has begun.
    e. Please see figure below highlighting some features of concern (wetlands/watercourses/tributaries) below:

Should you have any questions, please contact me at extension 5689 or at caroline.mugo@trca.ca.

Yours truly,

Caroline Mugo
Senior Planner, Infrastructure Planning and Permits
Development and Engineering Services

/CM

BY E-MAIL
cc: Wood: Steve Chipps (steve.chipps@woodplc.com)

From: Antony Manoharan <Antony.Manoharan@durham.ca>
Sent: Monday, June 20, 2022 11:17 AM
To: Marouchko, Irina <imarouchko@pickering.ca>
Subject: RE: Claremont Drainage Plan EA draft report

Good Morning Irina,

Please find the following comments as requested:

1. Region's and Municipalities' current policy is that authorities will maintain respective storm infrastructures within their ROW. In light of this, proposing a massive underground storage tank within the Region's Central Street ROW to rectify local drainage issues is not a correct approach. It is noted that report does not demonstrate that reasonable efforts have be taken to identify a location within City's property or ROW for the proposed underground storage tank. Region will be willing to upsize the Central Street sewer to accommodate more flow from City roads to resolve the drainage issues but installing massive underground storage tanks within the Regional ROW would be discouraged as it would require additional maintenance requirements for the Regional staff and definitely will be an additional replacement cost for the Region.

   As discussed at the June 21st meeting, the City has considered alternative locations for a storage tank, including the Claremont Memorial Park and Franklin Street. Based on the assessment and considering the functionality of an underground tank the location of Central Street and Canso Drive was determined to be the best location. Wood will add text related to the assessment of Franklin Street as a potential location for a tank. The City has also indicated that the City would have an easement over the tank, the City will operate and maintain the tank and that construction costs, operation and maintenance costs and replacement costs will be provided by the City .

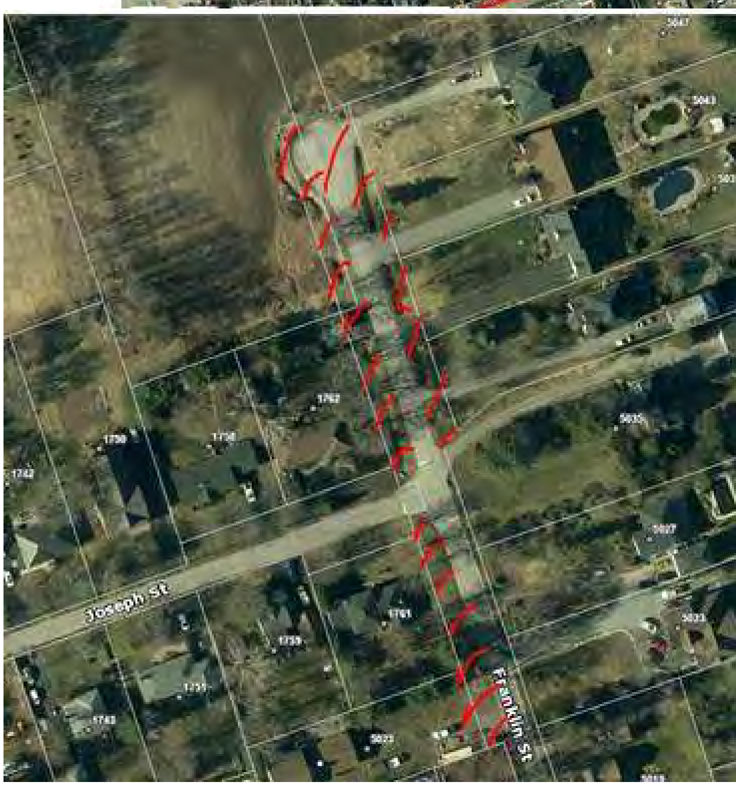
2. The report does not provide any dimensions of the proposed tanks. Based on our estimation, the proposed underground tanks would take remaining width (5.5m to 6.5 m on both sides with a total length of 196 m) of the ROW (road edge to property line) which might have conflicts with existing utilities as well as it would interfere with the future expansion of the road since widening of roadway on top a **plastic** tank would be a major issue.

   Tank dimensions can be added to the report. Available utility information has been considered in the layout of the tank, with the expectation that during detailed design, further review of utilities would be conducted. The tank would be configured for future active loads. As discussed text will be added to indicate that part of the tank could be considered within the Canso Drive ROW.

3. it appears that the cause for the flooding along Franklin St is mainly due to the runoff contributed by an external drainage area - open agriculture field with an extent of _ ~8 ha located on the north as shown below. Since the entire runoff from Franklin St including external drainage would be captured within the proposed Franklin St sewer, it is not clear why providing on site storage within

Franklin St ROW was not considered as an alternative in the study? Combination of underground storage within the right of way and ditch storage could be utilized to control the flows to 5 year or allowable rate that can be released to East channel. Site visit revealed that Franklin Street has got reasonable ROW width on north and south of Joseph Street, which may be sufficient enough to accommodate the required size of the storage tank. Franklin Street, being a local road and with cul-de-sac at the end, it would be a preferable location for the underground storage tank which has very less utility conflicts and would eliminate proposed underground tanks and upsizing storm sewer to convey 100 year flows. This option to be investigated and documented.


Brock Rd
Wixson St
Joseph St
Barber St
Central St


Joseph St
Franklin St

This option as discussed at the meeting was considered by the City. Additional text will be added to the report to explain why the tank was not located on Franklin Street. The main issue with Franklin Street is that the tank would require a significant part of the right of-way to control flows based on available depth, with utilities limiting the space available and the tank being at considerable depth at the north end of the tank. In addition a tank would still be required at Central Street and Canso Drive to reduce flows to the west drainage outlet, as such this option was not considered practical and was not considered further.

4. As per the site visit and available mapping, it appears there are adequate space available within the Canso Drive ROW from Central Street to outfall. Have this location or any other locations (Victoria Street) investigated instead of the u/g tank within Central Street ROW ? If not, this should be investigated and documented.

5. Based on the topography, there is a high point noted west of East channel on Central Street, which implies that Franklin Street runoff naturally drains to East channel. If the residents have concerns with flooding along the East channel, it could be due to the capacity of the cross culverts or any maintenance issues along the Channel. This could be investigated and if required, release rate should be adjusted to existing rates. TRCA communication made to believe that they do not have any objection as along as the existing flows are maintained.

As discussed at the meeting channel improvements have been investigated within a separate assessment prior to the Class EA and have been reviewed within the Class EA. The channel has significant grading constraints due to the existing TCPL pipeline, being located within a wetland area and within private property, as such improving channel flow capacity is not considered an option.

6. Alternative 1- The proposed underground storage tank in Memorial Park was sized with very low outflow which eventually increased the tank storage capacity, resulted high cost for this alternative. Increasing the release rate to the available ditch capacity would lower the size of the tank. Portion of the underground storage can be combined with the surface storage (Ex. storage required above 50 year storm) which can be accommodated within the land found at the south west corner of the park property with some grading change. This will lower the cost of the underground storage tank. Currently, the section of preferred alternative is based on cost only.

As discussed at the meeting the City has plans for Memorial Park which would prevent use of the southwest corner of the park for a tank. For above ground storage to be considered, berming would be required to provide storage. Increasing flows to the immediate receiving ditch flow capacity was considered, but that would impact the peak flows further downstream within the system.

7. It appears there is a development proposal for the external area on the north of Franklin Street. Any diversion of external flow away from the Franklin St would definitely improve the drainage situation and minimize any additional financial needs required for the proposed works. City should explore this option with TRCA to limit any external flows to Franklin Street.

The Class EA has been prepared based on existing drainage conditions, without considering drainage works within future potential private development. As discussed, depending on timing, should the development go ahead and drainage be diverted, there may be an opportunity to

review the storage tank sizing with the Region during the future Central Road Class EA and during detailed design of the drainage improvements.

8. It has been noted that PCSWMM model generates more flows than rational method which ends with the oversized sewers and storage tanks. This should be confirmed and sewers and storage tanks to be sized reasonably.

   The PCSWMM model parametrization was validated through using observed rainfall and flows at 2 locations within the community, therefore the model is considered reasonable for frequent storm events. In addition, as discussed the model has used the City of Pickering's 12 hour AES storm distribution and rainfall depths, which is also considered reasonable, as such the model will not be updated further within the Class EA.

Thanks,
Antony

Claremont Drainage Plan - Municipal Class Environmental Assessment – Master Plan, Approach #2
MECP Comments (later dated 22 June 2022) and Wood's Responses (September 29, 2022)

ID	Comment	Wood Response
Additional information required for Approach #2		
1.1	As described in Appendix 4 of the MCEA Manual (2015), an Approach #2 Master Plan involves the preparation of a Master Plan document at the conclusion of Phases 1 and 2 of the MCEA process where the level of investigation, consultation and documentation are sufficient to fulfill the requirements for Schedule B projects. Accordingly, the final public notice for the Master Plan could become the Notice of Completion for the Schedule B projects within it. Any Schedule C projects, however, would have to fulfil Phases 3 and 4 prior to filing an ESR(s) for public review. The Master Plan would provide the basis for future investigations for the specific Schedule C projects identified within it. In order to meet the documentation requirements for Schedule B projects, the content described in section A.4.1 of the MCEA Manual must be included in the Master Plan report: • background to the project and earlier studies • the nature and extent of the problem or opportunity, to explain the source of the concern or issue and the need for a solution • **description *I* inventory of the environment** • the alternative solutions considered and the evaluation process followed to select the preferred solution • follow-up commitments, including any monitoring necessary • the public consultation program employed and how concerns raised have been addressed.	This Master Plan proposed Schedule A/A+ projects. Table 7.1: Summary of the Preferred Alternatives and the Prioritization has been updated to identify the Municipal Class EA Schedule for each of the proposed activity. Similar table in the Executive Summary section has also been updated. These projects are exempted from the requirements of the Environmental Assessment Act and can proceed to detailed design phase. In the light of the above, and the information available to satisfy Class EA documentation and consultation requirements, this Class EA is being concluded under Approach #1 of the Municipal Class EA process.
1.1 (a)	Additionally, Section A.2.3 (Phase 2) of the MCEA Manual, describes Step 2 of the process as including "preparation of a physical description of the area where the project is to occur, and a general inventory of the natural, social and economic environments which are to be considered when reviewing the effects of a project in that area". Step 3 involves identifying mitigating measures.	An inventory of the natural, social and economic environments is provided in Section 3.0 of the report. With respect to potential effects, the proposed projects fall under Schedule A/A+ categories, and will be implemented within the municipal road right of ways in existing residential areas. These projects are anticipated to have minimal effects on natural, social and economic environments. Any mitigation measures (for example, erosion and sediment control plans; tree protection plans; etc.) will be developed during detailed design phases of the proposed projects.
1.1 (b)	Section 3.4.5 (Potential Environmental Impacts, Proposed Mitigation and Approvals) of the Master Plan states that "preliminary mitigation measures have been developed" that "are intended to be starting points and should be further developed throughout subsequent Project stages". It is noted that consultation with authorities may be required to "support the creation of Project-specific mitigations". This includes confirming the presence or no detection of natural heritage features and Species at Risk and their habitats during future design phases. The summary of this section notes that the improvements "may intersect with several environmental constraints, including Key Hydrological Features (permanent/intermittent streams, wetlands), Key Natural Heritage Features (wetlands, woodlands, significant wildlife habitat, fish habitat), and SAR and/or their habitats. In advance of the execution of any drainage improvements, site-specific inventories of these features (if works are proposed within minimum areas of influence) and the habitat of SAR should be conducted to determine the need for additional	Comment noted. The report will be updated to note the need for consultation with regulatory agencies during detailed design to confirm the need for additional technical investigations; develop project specific mitigation measures; and also confirm permitting requirements.

ID	Comment	Wood Response
	assessment (e.g., Natural Heritage Evaluation), mitigation, and permitting". Sections 7.2 and 9.2 state that "site-specific inventories of the key Natural Heritage features and the habitat of SAR should be conducted to determine the need for additional assessment, mitigation, and permitting".	
1.1(c)	Based on the amount of project-specific information available in this report, it appears that this Master Plan is more closely aligned with Approach #1. Approach #1 involves the preparation of a Master Plan document at the conclusion of Phases 1 and 2 of the MCEA process. Typically, a Master Plan following Approach #1 is completed at a broad level of assessment, thereby requiring more detailed investigations at the project-specific level in order to fulfill MCEA documentation requirements for the specific Schedule B and C projects identified within the Master Plan. Therefore, the Master Plan would become the basis for, and be used in support of, future investigations for the specific Schedule B and C projects identified within it. Schedule B projects would require the filing of the Project File Report for public review, while Schedule C projects would have to fulfill Phases 3 and 4 prior to filing an Environmental Study Report (ESR) for public review.	The Study Team agrees that the project falls under Approach #1 category of the Master Plan process. The report has been updated to include references to Approach #1. All the proposed projects within the Master Plan fall under Schedule A/A+ categories under the Municipal Class EA process and are exempted from the requirements of the Environmental Assessment Act. These projects can proceed to detailed design phase.
1.1 (b)	Additional information is needed for the Master Plan to meet the documentation requirements for Schedule B projects. The Master Plan must clearly identify which Schedule B projects are covered under this report and provide a general inventory of the areas where the Schedule B projects are to occur, including project-specific natural heritage features and other environmental constraints (e.g. key hydrological features and key natural heritage features). Based on the identified environmental constraints in the project area, the report should include project-specific mitigation measures for the Schedule B projects intended to be covered by this report. Please provide additional information about the Schedule B projects or revise/clarify the Master Plan approach.	Please see response above.
Section 16 Order Requests		
1.2	Requests for a Section 16 Order are only possible for those projects identified in the Master Plan as Schedule B or C projects, not for the Master Plan itself. The final Master Plan and Notice of Completion must provide information about the opportunity for Section 16 order requests. Both the Notice and Master Plan must clearly identify which Schedule B projects are subject to Section 16 order requests as part of this Master Plan. Currently, Table 7.1 "Summary of the Preferred Alternatives and the Prioritization" does not indicate what EA Schedule each alternative is subject to. Without this information, it is unclear which projects are subject to Section 16 order requests. This information must be clearly provided. For information about Section 16 Order requests and the information that must be provided, please refer to: Class environmental assessments: Section 16 Order | ontario.ca	This statement in Section 1.3 has been revised to provide clarification that only Schedule 'B' and 'C' projects identified in a Master Plan are subject to Section 16 Order Request process. Clarification has also been added that Claremont Drainage Master Plan identified only Schedule A/A+ projects, which are exempted from the requirements of the Environmental Assessment Act. Accordingly, these projects will not be subject to Section 16 Order Request process.
1.3	Section 1.3 states that "as part of the review process, the public and/or agencies can request an order from the Minister of the Ministry of the Environment, Conservation and Parks (MECP) to require revisions to the report". This statement is made in association with information about the Environmental Study Report, which has not been prepared for this project, so it is unclear how Section 16 order requests apply to this Master Plan. Please clarify this section.	Please see response above.
Section 1.3: Class Environmental Assessment Process		

ID	Comment	Wood Response
1.4	Section 1.3 states that "Part 2 represents Phases 2 and 3 of the Municipal Class Environmental Assessment Process". However, earlier in this section it is stated that "the Master Plan has adopted Approach #2 in the 2015 MEA Documentation" and that "Approach #2 involves the preparation of a Master Plan document at the conclusion of Phases 1 and 2 of the Municipal Class EA process". This report does not address Phase 3 of the MCEA process. Please revise or remove this statement.	This section has been updated to clarify that this Class EA addressed Phases 1 and 2 of the Municipal Class EA process. Reference to Municipal Class EA Phase 3 has been removed.
1.5	Section 1.3 also states that "Part 3 Project File represents Phase 4 (ref. Figure 1.1) of the Municipal Class Environmental Assessment Process, the Environmental Study Report (ESR)". This Master Plan does not meet the requirements for a Phase 4 Environmental Study Report. Please remove or revise this section to make it clear that only Phases 1 and 2 of the MCEA process are being completed under this Master Plan and that this documentation serves as a Master Plan, not an Environmental Study Report. The PIC materials also incorrectly reference the preparation of an Environmental Study Report.	This section has been updated to clarify that this Class EA addressed Phases 1 and 2 of the Municipal Class EA process. Reference to Municipal Class EA Phase 4 has been removed.
1.6	Please update Table 7.1, Summary of the Preferred Alternatives and the Prioritization, to include the EA schedule associated with each activity. It must be clear which projects are Schedule B projects intended to have the EA requirements met as part of this Master Plan report and which projects are Schedule C activities that are subject to further EA requirements (Phases 3 and 4) in the future, where applicable.	Table 7.1: Summary of the Preferred Alternatives and the Prioritization has been updated to identify the Municipal Class EA Schedule for each of the proposed activity. Similar table in the Executive Summary section has also been updated. It is important to note that all the proposed projects within the Master Plan fall under Schedule A/A+ categories under the Municipal Class EA process and are exempted from the requirements of the Environmental Assessment Act. These projects can proceed to detailed design phase. In the light of the above, and the information available to satisfy Class EA documentation and consultation requirements, this Class EA is being concluded under Approach #1 of the Municipal Class EA process.
1.7	Please include additional information to clarify that any Schedule C projects need to undergo further project-specific environmental assessments that address consultation and documentation requirements under Phases 3 and 4 of the Municipal Class Environmental Assessment process. All Schedule C projects will have to fulfill Phases 3 and 4 prior to filing an Environmental Study Report for public review.	Following statement has been added in Section 13: Under *Approach #1*, Schedule B projects would require the filing of the Project file for public review while Schedule C projects would have to fulfil Phases 3 and 4 prior to filing an Environmental Study Report (ESR) for public review. However, as discussed in Section 7 of this report, this Master Plan only proposed Schedule A/A+ projects. These projects are exempted from the requirements of the Environmental Assessment Act. These projects can proceed to detailed design phase.
Section 1.4: Public/Agency Consultation		
1.8	The report references meetings with local residents on March 9, 2020 and a meeting with Geranium Homes and engineering consultant on December 10, 2020. Please provide a summary of any concerns or comments during these meetings in the main report and full meeting minutes in the Appendix.	Summaries can be added in the main report. Detailed minutes are not available.
1.9	Please include correspondence from Durham Region as part of consultation in the Appendix.	Noted, consultation will be included.

ID	Comment	Wood Response
1.10	Appendix L includes two form submissions for PIC #1. Similar to the other public comments, please provide a summary or copy of the proponent's response.	Noted. Responses were not provided to the two forms. A response to the resident on Lane Street who also provided an email in addition to one of the forms, will be added to the appendix.
Appendix L: Indigenous Consultation		
1.11	The main report should include a discrete section for Indigenous consultation, with supporting information and correspondence provided in the Appendix.	The main report has been updated with a section dedicated to Indigenous consultation, with supporting documents (I.e., emails) provided in Appendix M - Consultation
1.12	It is recommended to follow up with Curve Lake First Nation about their interest in a meeting prior to or as part of the distribution of the Notice of Completion. If a meeting occurs, please provide meeting minutes in the Appendix.	Wood followed-up with Curve Lake First Nation (CLFN) on July 20, 2022 via email.
1.13	It is recommended to follow up with Mississaugas of Scugog Island First Nation prior to or as part of the distribution of the Notice of Completion. Given no response has been received, it is recommended that the project team use an alternative means of contact to confirm receipt (e.g. phone call, different email address).	Wood followed-up with Mississaugas of Scugog Island First Nation (MSIFN) on July 20, 2022 via email. On the same day, MSIFN responded noting no comments on the Public Information Centre materials at this time and requested the Environmental Study Report for review once completed. Wood acknowledged this email and noted that the Master Plan Report will be provided when available. This correspondence has been recorded in the Indigenous consultation section of the main report. Once the Notice of Completion is distributed and the Master File Report is placed for public review, Wood will notify MSIFN via email and phone call.
Section 3.4.2: Provincial Legislation		
1.14	*Endangered Species Act:* It is the responsibility of the proponent to ensure that Species at Risk are not killed, harmed, or harassed, and that their habitat is not damaged or destroyed through the proposed activities to be carried out on the site. Please contact SAROntario@ontario.ca for any questions and concerns related to Species at Risk and authorizations under the *Endangered Species Act*. As noted in the report, the attached, Client's Guide to Preliminary Screening for Species at Risk, should be utilized to determine potential for conflicts with species subject to the ESA. The results of this screening, along with a completed checklist, should be provided to SAR Ontario Branch in the case where there is a potential to impact species at risk or their habitat.	The proposed works (noted in Table 7.1) will occur with municipal road right of ways that are in a developed residential area. Impacts on Species at Risk and their habitat are not anticipated as a result of the proposed works.
1.15	*Planning Act:* This section states that "municipally, the Project falls under the jurisdiction of the City of Windsor Official Plan". Please revise.	Thank you for flagging this. Reference to the municipality has been corrected.
Section 3.4.5: Potential Environmental Impacts, Proposed Mitigation, and Approvals		
1.16	It is recommended that the project team consider the potential requirement for Permit(s) to Take Water for construction dewatering, where applicable.	This would be part of the future detailed design process.

ID	Comment	Wood Response
1.17	It is recommended that the project team develop a Sediment and Erosion Control Plan during detailed design.	This would be part of the future detailed design process.
Section 3.5: Cultural Heritage Assessment		
1.18	Please provide a copy of the Notice of Completion and final report to the Ministry of Heritage, Sport, Tourism and Culture Industries.	Noted. The Study Team will send the Notice of Study Completion to the Ministry of Tourism, Culture and Sport. The Notice will identify where to access the Master Plan/Project File Report during the formal review period.
1.19	Please clarify whether any of the 64 identified heritage resources are associated with impacts that are characterized as higher than "low". If so, please identify these resources in the report.	None of the cultural heritage resources are associated with impacts that are characterized as higher than "low".
Section 5.0: Short-Listed Alternative Assessment		
1.20	It is recommended that the Social category of the evaluation criteria include consideration of impacts to residences and businesses in the area during construction and operation, where applicable.	Impacts to residences and businesses in construction areas will be added to the Social Category.
1.21	Please include a brief description of the scoring used for the evaluation criteria. For example, are all the criteria scored between -1 and 1?	A brief description will be added.
Stage 2 Archaeological Assessments (Sections 7.2 and 9.2)		
1.22	It is recommended that Stage 2 archaeological assessments be completed as part of the Class EA process to inform the selection of the preferred alternatives. However, if being completed after the Class EA, the assessments must be completed as early as possible during detailed design.	Stage 2 archaeological assessments would be completed as part of the future detailed design.
1.23	The report currently states that "a Stage 2 archaeological assessment by means of test pit survey should be conducted" and that "a pedestrian archaeological survey should be conducted". Please revise this language to state that these assessments will be completed prior to conducting detailed design, where there is archaeological potential. Please revise this statement in any other sections of the report that use this language (e.g. Executive Summary).	As per the response to Comment # 1.22 Stage 2 archaeological assessments would be conducted as part of the future detailed design. Language has been revised to indicate "would" instead of "should".
1.24	Please include a commitment in the report to engage with the Indigenous communities that have expressed interest in the archaeological assessments prior to and during the Stage 2 assessment.	Text will be added to the report.
1.25	Please include a map in the main report identifying which proposed work may require Stage 2 archaeological assessments and where these assessments may be required.	Please refer to Figures 6a-6i as part of the Archaeological Assessment.
Section 9.2: Recommendations		
1.26	Section 9.2 states that construction impacts should be mitigated to limit the disruption to the community and that excessive construction noise and dust could impact the natural heritage systems. The Master Plan states that mitigation measures should be considered at the next stages of planning and design. Given Approach #2 is being used, the Master Plan should include consideration of construction impacts on local residences and businesses and include mitigation measures for construction noise and dust. These can be further refined during detailed design, but they should be discussed in the plan, giving the public an opportunity to review and provide comments during the public comment period.	Approach # 1 will be used as indicated in the previous responses. Mitigation to potential construction impacts will be determined during detailed design of the implemented alternatives.
Climate Change		
1.27	The document "Considering Climate Change in the Environmental Assessment Process" (Guide) is now a part of the Environmental Assessment program's Guides and Codes of Practice. The Guide sets out the MECP's expectation for considering climate change in the preparation, execution and documentation of	The City of Pickering as part of the Class EA will recommend that climate change and associated assessments will be incorporated into the detailed design of the

ID	Comment	Wood Response
	environmental assessment studies and processes. The guide provides examples, approaches, resources, and references to assist proponents with consideration of climate change in EA. Proponents should review this Guide in detail. MECP expects proponents of Class EA projects to: 1. Consider during the assessment of alternative solutions and alternative designs, the following: a. the project's expected production of greenhouse gas emissions and impacts on carbon sinks (climate change mitigation); and b. resilience or vulnerability of the undertaking to changing climatic conditions (climate change adaptation). 2. Include a discrete section in the report detailing how climate change was considered in the EA. How climate change is considered can be qualitative or quantitative in nature and should be scaled to the project's level of environmental effect. In all instances, both a project's impacts on climate change (mitigation) and impacts of climate change on a project (adaptation) should be considered.	recommended alternatives, integrated with the Region of Durham's Climate Adaptation Plan and as per the MECP's Sub Comment 1.
Source Water Protection		
1.28	In October 2015, the MEA Parent Class EA document was amended to include reference to the Clean Water Act (Section A.2.10.6) and indicates that proponents undertaking a Municipal Class EA project must identify early in their process whether a project is or could potentially be occurring with a vulnerable area. Section 3.4.4. states that the entirely of the study area is "encompassed by Groundwater Recharge Areas, while select areas are identified as High Aquifer Vulnerability Areas". Appendix E is referenced but there is no map or additional information related to these areas in this appendix.	Maps will be added from the TRCA Source Water Protection Plan in Appendix E. The maps indicate at a high level the Highly Vulnerable Aquifer Areas located predominantly on the west and south side of the community.
Excess Soils Management		
1.29	In December 2019, MECP released a new regulation under the Environmental Protection Act, titled "On-Site and Excess Soil Management" (O. Reg. 406/19) to support improved management of excess construction soil. New risk-based standards referenced by this regulation help to facilitate local beneficial reuse which in turn will reduce greenhouse gas emissions from soil transportation, while ensuring strong protection of human health and the environment. For more information, please visit https://www.ontario.ca/page/handling-excess-soil. Where applicable, the report should reference that activities involving the management of excess soil should be completed in accordance with O. Reg. 406/19 and the MECP's current guidance document titled "Management of Excess Soil – A Guide for Best Management Practices" (2014).	The report will reference the new regulation and indicate that the detailed design assesses alternatives based on the new regulation.

APPENDIX A: TRCA COMMENTS AND PROPONENT RESPONSES

ITEM	TRCA COMMENTS (June 30, 2022)	PROPONENT/CONSULTANT RESPONSE	TRCA COMMENTS (October 17, 2022)	CONSULTANT RESPONSE
General:				
1.	At the detailed design stage, please ensure that the erosion and sediment control (ESC) plan, construction sequencing, staging/storage, access, dewatering plan, removals, restoration and compensation plan, and other pertinent information is provided. Please refer to the Erosion and Sediment Control Guide for Urban Construction (2019) for further guidance. Engineering drawings should be prepared showing all necessary details and specifications. These drawings must be signed and sealed by a Licensed Professional Engineer.	Detailed design will include the items indicated by TRCA.	To be addressed at detailed design	No further comment
2.	It is recommended that a meeting be set up with TRCA staff at the commencement of the detailed design stage to ensure that our permit requirements are clearly identified.	A meeting with TRCA staff could occur as part of the detailed design process.	Meeting to be arranged at the detailed design stage.	No further comment
3.	Please note that permits will be required for the installation/relocation of any utilities	Noted.	Thank you.	No further comment

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	within the TRCA regulated areas once these are located.			
Ecology:				
4.	Staff notes that Section 3.4.4. of the draft ESR examines the existing conditions of the Natural Environment. To support that section, please map all natural heritage features, vegetation communities and other environmental features (watercourses, wetlands, areas of groundwater discharge, significant woodland and/or wildlife habitat etc.) and/or other environmental constraints on a current high quality ortho-air photo. Please refer to the figure submitted in the PIC#2 comments for guidance.	Please note that no alternative is located within the Natural Heritage System, with all alternatives located in the urban area of Claremont and within urban right-of-ways, as such this request for full mapping of natural features is not considered required. The reader can be referred to Appendix E Wetland Assessment that includes Figures 2-3 indicating vegetation and wetland areas.	Not addressed. There are alternatives in proximity of the Natural Heritage System (NHS), therefore, a figure showing all natural heritage features within the study area should be provided in the ESR as a requirement.	Figure 13 is provided to support the identification of the local and regional NHS, KNHFs, and KHFs.
5.	The Environmental Evaluation criteria in Section 5 of the Draft ESR should be revised to look at all natural heritage features (watercourses, wetlands, areas of groundwater discharge, significant wildlife habitat, significant woodland/valleylands, Species at Risk etc) within the study area. Ensure the criteria is broken down into sub-categories to capture the various natural features within the study area.	Please see response to comment #4 related to the location of proposed storm sewer infrastructure; alternatives are also located within urban right-of-ways.	Not addressed. The location of the alternatives are in proximity to the NHS. There should be a consideration for refinement of the sub categories as requested due to the presence of wetland, contributing redside dace habitat (SAR) etc.	Sub-categories for Environmental Evaluation Category added (Aquatic, Terrestrial, and NHS) to Table 5.1.

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6.	Staff note that the detail assessment criteria in Section 6 (Table 6.6) includes aquatic and terrestrial habitat, however, please break down the environmental evaluation category into sub-categories to capture the environmental criteria mentioned in comment #5 above.	The evaluation criteria as applied in Table 6.6 applies to alternatives located in the urban area of Claremont and within urban right-of-ways., with the wetland assessment providing guidance on the downstream potential impacts. Adding additional criteria is not considered to further the evaluation of alternatives.	Not addressed. Please refer to response in Comment # 5.	Sub-categories for Environmental Evaluation Category added (Aquatic, Terrestrial, and NHS) added to Section 6.
7.	Within the aquatic habitat assessment, please consider identifying potential impacts associated with water quality, quantity, erosion, and temperature regulation caused by the proposed alternatives and respective mitigation measures.	The proposed alternatives are not considered to impact quality, quantity, erosion and temperature based on the alternatives being primarily storm sewer upgrades. As part of the detailed design for the splitter manhole and tanks, it is recommended that the wetland assessment be advanced as requested by TRCA.	Not addressed. These details should be included and expanded in the evaluation matrix.	Section 3.4.5 has been updated to include impacts to water quality, erosion, and temperature. Suggested mitigations have been included to reduce the potential effects.
8.	Please include a criterion that examines opportunities for restoration, enhancement, and	As indicated no alternatives are located in the NHS and are located within urban right-	Not addressed. Staff has noted this response. However, restoration opportunities should be	Opportunities for restoration, enhancement, and connectivity will be explored

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	connectivity in the Evaluation Criteria.	of-ways, as such this request is not considered applicable.	explored as part of the evaluation matrix along with its feasibility.	through the Central Street Environmental Assessment.
9.	Clearly identify the wetlands assessed in Section 8 (Wetland Assessment) on a figure.	The wetlands have been identified in the Wetland Assessment Appendix E.	Please explain why the east wetland is considered low risk, with more clarification on this in order to support this assessment within the wetland risk evaluation.	The east wetland is considered low risk resulting from the outcome of the Magnitude of Potential Hydrological Change exercise. Hydrological change for the wetland was considered low. No change in imperviousness or size, but the proposed alternative will change the magnitude of runoff draining to the wetland. The purpose of the storage tank is, to temporary detain water to maintain flow rates to the west channel and wetland. A table has been added identifying criteria. Criteria not considered at this time have been identified. This evaluation will be taken into consideration for future works and built on as needed.
10.	Based on the outcome of the Wetland Evaluation Risk Assessment, please provide the proposed monitoring and mitigation approach for both wetlands. Details associated with the requirements of	A monitoring and mitigation approach for both wetlands should be developed as part of the detailed design process and in consultation with TRCA. It is known that the	Noted. No further comment. Looking forward to the detail design submission.	No further comment.

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	the wetland identified as high risk (west wetland) should be provided and TRCA staff would be happy to be engaged in consultation. a. Please note that a mitigation plan to outline how water balance will be maintained to both wetlands should be considered at this stage to inform drainage alternatives and the preferred alternative.	Region of Durham will also be undertaking a Class EA for Central Street in the short-term, which will require re-assessment of the drainage along Central Street, stormwater tanks and outlets to the receiving systems, as such further wetland assessment should be conducted prior to detailed design of the preferred alternatives.		
11.	Please engage with MECP regarding SAR requirements associated with Redside Dace occupied and contributing habitat and other potential SAR present within the study area.	Based on the project start-up date in 2016, both the MNRF and MECP were contacted. SARs have been identified within the Wetland Assessment. Based on preferred alternatives being located within existing urban right-of-ways, it has been recommended that additional consultation with MECP be conducted as part of the detailed wetland assessment for detailed design.	Noted. No further comment. Looking forward to the detail design submission.	No further comment.
Stormwater Management:				

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12.	Please ensure that the TRCA stormwater management criteria for water quantity, water quality and water balance/erosion control is met as outlined below, and as address TRCA SWM Criteria (2012): a. *Water Quantity:* In the report and/or appendices, please provide a table and catchment drainage area figures for the minor system (12-hour AES 5-year design storm) and major system (12-hour AES 100-year design storm) to the respective watercourses to ensure that post-development peak flows are matched to existing conditions. Please also provide the please provide a reference to the figure and table locations as a response to the comment. b. *Water Quality:* please integrate opportunities within the Claremont Drainage EA for water quality improvements	The Class EA objective is to address flooding concerns within the Claremont community, and has not involved assessment of retrofit stormwater quality, quantity, erosion, water balance measures. TRCA has been aware of this Class EA as a flood mitigation assessment and has not requested a stormwater management retrofit assessment. Based on the stage the Study is in (Draft Final has been prepared and reviewed), this request is not considered to be possible.	Comment not addressed. Please note that since the roads will be dug up and the infrastructure will be re-designed and placed in the ground, opportunities for water quality, water quantity controls, and on-site retention should be explored as part of this stage to inform the design as part of the detailed design stage. These opportunities provide resiliency in the system, reduce downstream watercourse erosion and improve water quality.	As discussed, oil/grit separators would be considered during the detailed design stage as stormwater quality retrofits at each storm sewer outlet.

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	via, for example, oil and grit separators, and via a stormwater management treatment train approach that includes low impact development (LIDs) such as tree pits, rain gardens, bioretention cells to name a few. In particular please assess the feasibility of shallow surface LIDs where the groundwater table is high. TRCA will accept 0.6m separation from the seasonally high groundwater table if groundwater is a constraint. In addition, an OGS sized for 80% of TSS removal for 90% of the annual rainfall is credited 50% TSS removal for the draining catchment area. There may be opportunity within the open channels and ditches to include gravel infiltration gravel trenches along the bottom of the swale. In summary, an OGS in			

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	combination with 5mm on-site retention using LIDs is credited 80% TSS removal. Given that this is a retrofit situation, *at minimum* 50% of the catchment drainage area should be captured for 80% TSS removal. As such, please explore and provide water quality improvements, including but not limited to oil and grit separators and 5mm on-site retention via LIDs which not only address water quality but also water balance and erosion control. c. *Water Balance/Erosion Control* via Low Impact Development: It is noted that LIDs were screened out of the short-list of alternatives. However, LIDs provide not only water quality improvements, but also provide 5mm on-site retention above the initial abstraction from			

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	all impervious surfaces, which equates to approximately 50% of the annual rainfall. So if 900mm of rain falls on the ground each year, 5mm on-site retention will ensure that 450mm of that rain is either infiltrated and/or evapo-transpired. LIDs via 5mm on-site retention is the only source of volumetric control of runoff, and as such, reduce the erosion of downstream watercourses. As such, given that this is a retrofit situation, please explore opportunities to provide, at minimum 5mm on-site retention via LIDs for *at minimum* 50% of the catchment drainage area. Please also provide the groundwater contours map with the potential LID locations, and contribution drainage area, and conceptual footprints based on estimated infiltration			

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	rates with a 2.5 safety factor. Please note that once the feasibility of low impact development is determined, at detailed design (and not at this stage), additional calculations are required (in-situ infiltration tests for site specific surface and sub-surface LIDs such as infiltration and/or bioretention measures, seasonally high groundwater table, and a safety factor of 2.5 as per Appendix C.2 of the TRCA SWM Criteria (2012; link here: https://trca.ca/app/uploads/2016/04/SWM-Criteria-2012.pdf).			
13.	It appears that the calibration/validation for the PCSWMM hydrologic/hydraulic model uses a time period of April 27, 2017 to June 26, 2017. However, it is not understood whether this is a wet-year, dry-year or average year and why these rainfall events were selected. Please look into	The model calibration/ validation as considered by the City of Pickering is satisfactory and additional information related to a dry year/ wet year is not considered to add to this assessment.	Comment response satisfactory. No further comment.	No further comment.

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	calibration and validation using rainfall data for a wet-year and compare the results to this. This comment is deferred to the City of Pickering.			
14.	It appears that the storm events for the 5-year and 100-year design storms do not take into account climate change rainfall factors that may increase rainfall intensity and reduce rainfall duration. Given that the objective of this project is to reduce flooding, the risk due to climate change on rainfall distribution should be taken into account to the degree feasible within the proposed design solutions. This comment is deferred to the City of Pickering.	The City of Pickering understands, TRCA's concern as such as part of the detailed design process, climate change will be considered.	Comment deferred to detailed design.	No further comment.
15.	Please provide a condition assessment for all existing outfalls that the proposed works will drain to, to ensure that the outfalls are in good condition and will not impact the proposed works.	There are two outfalls as indicated in the Class EA receiving drainage from preferred alternatives. The outfalls will be reviewed as part of the detailed design process.	Comment deferred to detailed design.	No further comment.
16.	Please include a criterion that investigate on-site LIDs and infiltration opportunities to mitigate impacts from stormwater management.	Please see response to comment 12.	Please see response to comment no.12.	As discussed, oil/grit separators would be considered during the detailed design stage.

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17.	Please provide a list of any new outfalls and/or proposed outfall remediations in a summary table in the report and/or appendices with a corresponding figure. Please reference the location of this table as a response to this comment. Please note that at the detailed design stage and during site-specific design, erosion protection for all such outfalls should be designed by a professional fluvial geomorphologist, outside the 100-year erosion hazard limit if feasible and at an oblique angle to the watercourse as per Appendix E.2 of the TRCA SWM Criteria (2012; link above – item#12).	There are two outfalls as indicated in the Class EA receiving drainage from preferred alternatives. No new outfalls are proposed and no outfall remediations are proposed.	Comment deferred to detailed design.	No further comment.
18.	Further to item # 10, as per the wetland water balance risk evaluation, it appears that the west wetland is high risk and the east wetland is low risk. As such, please provide the following: a. For the west wetland that is designated as high risk, please complete a feature based water balance to		Not addressed. Please note that no response was provided for this comment. Further to addressing this comment, as per comment no. 9, please explain why the east wetland is considered low risk, with more clarification on this in order to support this assessment	The east wetland is considered low risk resulting from the outcome of the Magnitude of Potential Hydrological Change exercise. Hydrological change for the wetland was considered low. No change in imperviousness or size, but the proposed alternative will change the magnitude of

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	ensure that the proposed works match the existing baseline conditions hydroperiod for the wetland. In order to understand the stormwater management mitigation measures required for the west wetland, please provide a comparison of existing baseline conditions and post-development conditions hydroperiods as per the TRCA Wetland Water Balance Modelling Guidance Document (August 2020; link here: https://sustainabletechnologies.ca/app/uploads/2021/10/TRCA-Wetland-Modelling-Guidance-Document-August_2020-Final_.pdf) If the post-development hydroperiods does not fall within the 95% confidence intervals, then additional mitigation measures to met the hydroperiod of		within the wetland risk evaluation.	runoff draining to the wetland. The purpose of the storage tank is, to temporary detain water to maintain flow rates to the west channel and wetland. A table has been added identifying criteria. Criteria not considered at this time have been identified. This evaluation will be taken into consideration for future works and built on as needed.

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	the wetlands are required. Please provide the feature based water balance and modelling for review and comment in the next submission. Please note that at detailed design, additional requirements such as a post-development monitoring plan, and sluice gates if applicable to control stormwater runoff volume will also be required. b. It is noted that in the report the east wetland is designated as low risk. However, the wetland risk evaluation document does not appear to be part of the appendices. As such, it cannot be confirmed whether the east wetland is low risk or not. Please provide the wetland risk evaluation document in the appendices of the			

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	report for review and comment.			