Town of LaSalle: Howard/Bouffard Planning Area
Master Drainage Study – Study Update – May 2019
Existing Conditions Flood Extents and Development of Alternative Solutions

The development of alternative solutions is now well under way and the study is progressing towards a Public Information Centre in June 2019. At this time, the Town of LaSalle would like to provide an update to stakeholders.

The existing conditions flood extents mapping was distributed via a public notice and link to the Town's website in January 2019. The results were established using the Technical Guidelines for Flood Hazard Mapping, March 2017, prepared by Environmental Water Resources Group Ltd. and in coordination with the Essex Region Conservation Authority (ERCA) and Town of LaSalle. Since that time, it was identified that the illustration of the flood extents particularly along Disputed Road was beyond what the hydraulic grade line elevations along the East Branch Cahill Drain would dictate. The map has since been revised and can be viewed in greater detail by visiting the Town's website for this project: http://www.lasalle.ca/hbmds

Please note that the flood extents have only been illustrated within the study boundary. This does not mean that the flooding does not extend beyond the boundary.

It should also be noted that adherence to the Technical Guidelines represents a different process than has been undertaken in previous efforts to estimate the flood extents and so explains the any variation in the extents. The map provides guidance to the Town and ERCA with respect to the status of developable lands which fall in or out of the flood extents.

The development of alternative solutions is now well underway. A Technical Engagement Session was held with the Town and ERCA in late April to review the preliminary findings, discuss additional alternatives and opportunities, and to clarify technical parameters moving forward. The anticipated timeline to project completion is as follows:

- A Public Information Centre (PIC) will be held in June 2019. A notice for the PIC will be distributed in advance to confirm the time, date and location of the meeting.
- Feedback from the PIC will be considered and reviewed with the Town and ERCA in late June and direction moving forward will be confirmed.
- A draft study will be provided to the Town and ERCA in August 2019.
- Study completion is anticipated by September 1, 2019. At that time the study will be made available for public comment.

Once complete, the Master Drainage Study document will speak to the following:

- Development of the existing conditions flood extents
- Development and analysis of alternatives solutions and recommended solution
- Preliminary design, cost estimate, cost recovery, property requirements and implementation details
- Natural environment, natural heritage and archaeological considerations

For further information, to provide comments, or to be added to the mailing list, please contact:

Mark Hernandez, P.Eng.
Project Manager
Dillon Consulting Limited
3200 Deziel Drive, Suite 608, Windsor, ON N8W 5K8
Tel: 519.948.4243, ext. 3242
Email: HowardBouffard@dillon.ca

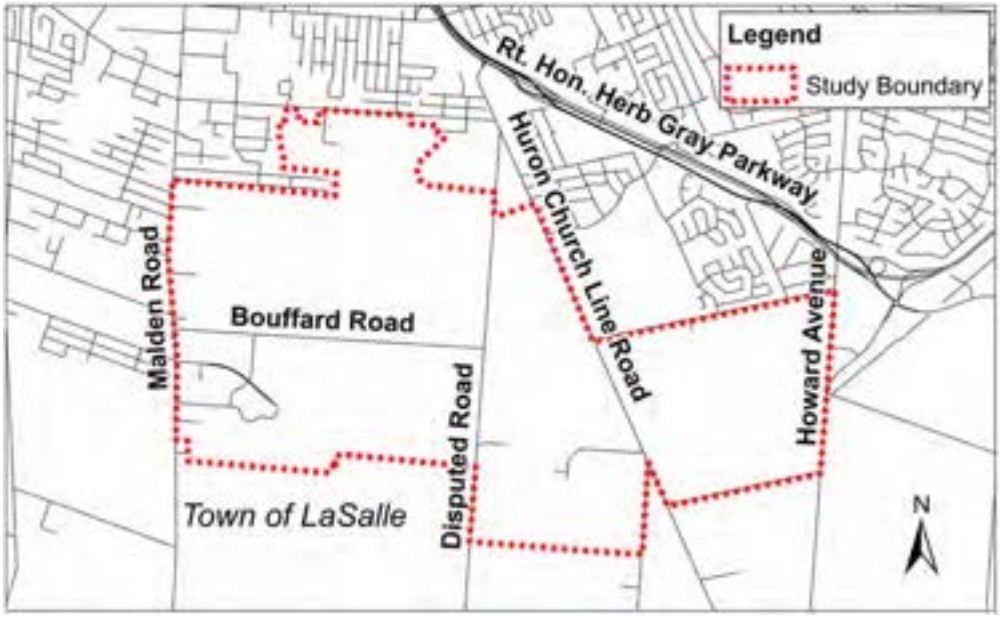
Peter Marra, P.Eng.
Director of Public Works
Town of LaSalle
5950 Malden Road, LaSalle, ON N9H 1S4
Tel: 519.969.7770, ext. 1475
Email: pmarra@lasalle.ca

Town of LaSalle: Howard/Bouffard Planning Area
Master Drainage Study
Notice of Public Information Centre

The Town of LaSalle has retained Dillon Consulting Limited to prepare a comprehensive solution to address stormwater overflow into the Howard and Bouffard Planning Area during major storm events. The study area is shown below. The study is being completed following the requirements of the Municipal Class Environmental Assessment process for a Master Plan. The purpose of the study is to:

- Build on the solutions developed through the Bouffard Howard Planning Districts Class Environmental Assessment Addendum (March 2017).
- Redefine the flood mapping for existing conditions.
- Establish anticipated build out conditions and develop an implementation strategy to mitigate flooding in the area.
- Estimate costs for identified solutions as well as cost recovery mechanisms.
- Establish property requirements to facilitate the improvements.

It is intended that the recommended solution along with suitable stormwater management measures for the developable lands will eliminate the flooding caused by the overflow within the planning area and will allow development to proceed.



The project team has evaluated alternative solutions to address the stormwater overflow and will be displaying a recommended solution for public input at a Public Information Centre as outlined below. Please join us to learn more about the project and provide your feedback.

Date: June 26, 2019
Time: 4:00 to 7:00 p.m.
Location: Atrium, LaSalle Civic Centre, 5950 Malden Rd, LaSalle, ON

If you have any questions about this project, please contact either of the individuals listed below.

Mark Hernandez, P.Eng.
Project Manager
Dillon Consulting Limited
3200 Deziel Drive, Suite 608
Windsor, ON N8W 5K8
Tel: 519.948.4243, ext. 3242
Email: HowardBouffard@dillon.ca

Peter Marra, P.Eng.
Director of Public Works
Town of LaSalle
5950 Malden Road
LaSalle, ON N9H 1S4
Tel: 519.969.7770, ext. 1475
Email: PMarra@lasalle.ca

Howard/Bouffard Planning Area Master Drainage Study

Public Information Centre

Town of LaSalle
June 26, 2019

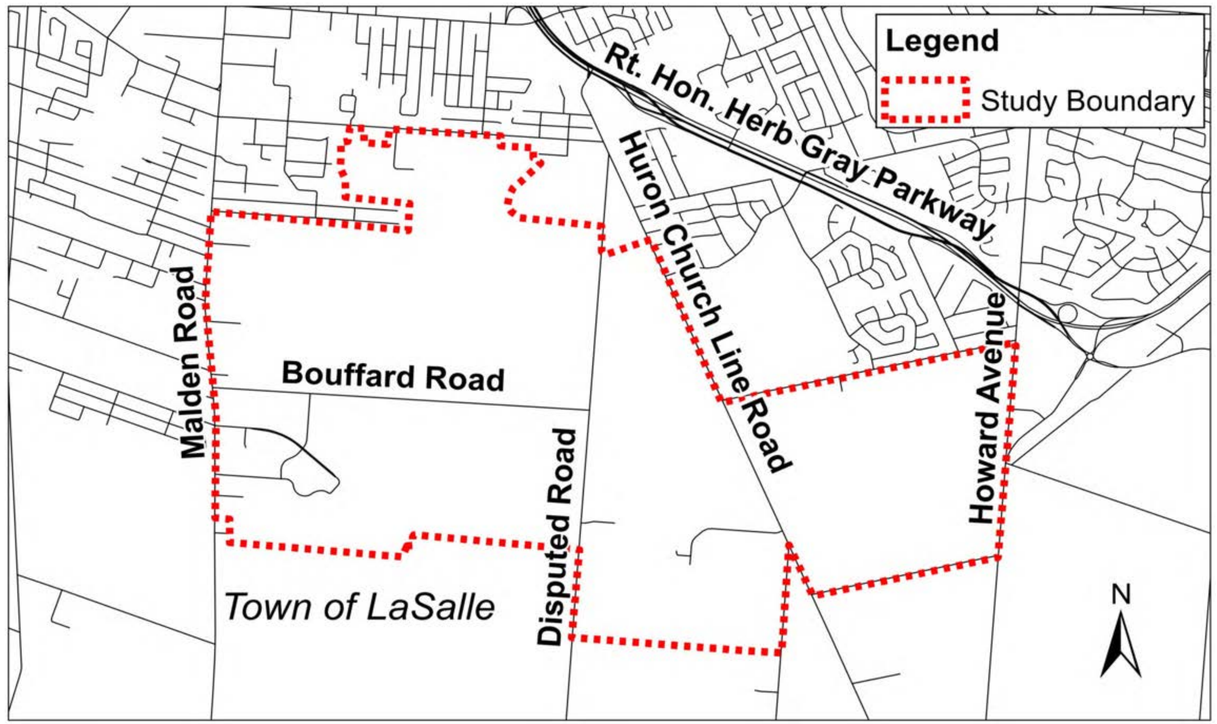
Background

- Study Area is primarily designated residential and is planned to be developed over several years

- Several studies have been completed to plan for new infrastructure in the area:
  - Bouffard and Howard Planning Districts Functional Design Study (2005) and Addendum (2017)
  - Environmental Study Report for Laurier Parkway between Malden Road and Howard Avenue (2009)
  - Detailed design and construction of Laurier Parkway (2010)
  - Design and construction of the expansion of the Vollmer Complex and related stormwater management facility (2010).

- Previous studies addressed stormwater management (SWM) for minor and major events however, spill-over from adjacent drainage areas was not considered

- The Town of LaSalle and Essex Region Conservation Authority are only able to issue approvals for development areas outside of the flood inundation area.



Class Environmental Assessment Process

PHASE 1: Problem/ Opportunity

- ü Identify problems/ opportunities to be addressed in the planning and design process
- ü Prepare a "Problem Statement"

PHASE 2: Alternative Solutions

- ü Develop alternative solutions to address problems/opportunities
- ü Overview of existing and future conditions
- ü Consult with review agencies and the public
- ü Complete an impact assessment of the preferred alternative
- ü Prepare report documenting the study process

PUBLIC INFORMATION CENTRE June 26, 2019

WE ARE HERE

PHASE 5: Implementation

- ü Design and construction phase
- ü Project must be designed and constructed as outlined in the study document

The Study is following the requirements of the *Municipal Class Environmental Assessment* (EA) (2015) for a Master Plan. The study is following Phases 1 and 2 of the process.

The study is a critical step for the Town and Essex Region Conservation Authority to allow development to proceed in the area. The objective is to prepare a comprehensive solution to address stormwater overflow into the Howard and Bouffard Planning Area during major storm events.

The Class EA process requires that:

- ü Relevant social, environmental and engineering factors are considered in the planning and design process
- ü Public and agency input is integrated into the decisions.

Study Purpose

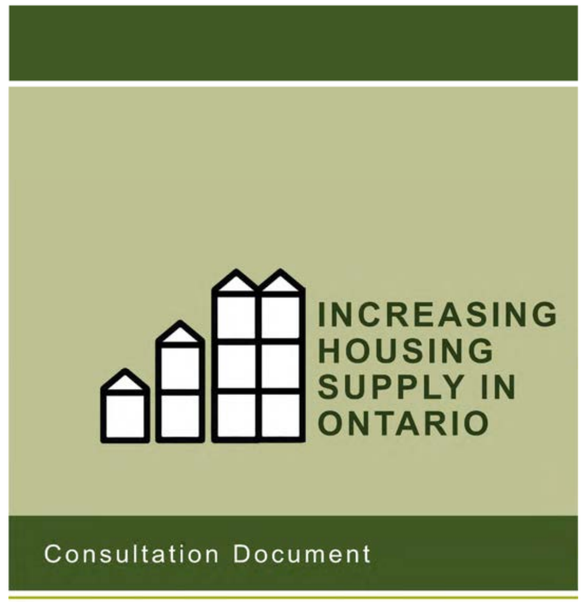
- Build on the solutions developed through the Bouffard Howard Planning Districts Class Environmental Assessment Addendum (March 2017)
- Define the flood mapping for existing conditions
- Establish build-out conditions and develop an implementation strategy to mitigate flooding in the area
- Estimate costs for identified solutions as well as cost recovery mechanisms
- Establish property requirements to facilitate the improvements.

Growth in LaSalle

- LaSalle currently has a limited supply of land ready for development

- Benefits for growth to the general public include:
  - Better municipal services. Increased tax base from development helps to pay for needed municipal services such as infrastructure and social services.
  - New amenities. Development in the Howard/Bouffard area will include amenities that serve the broader area, such as parks and community facilities.

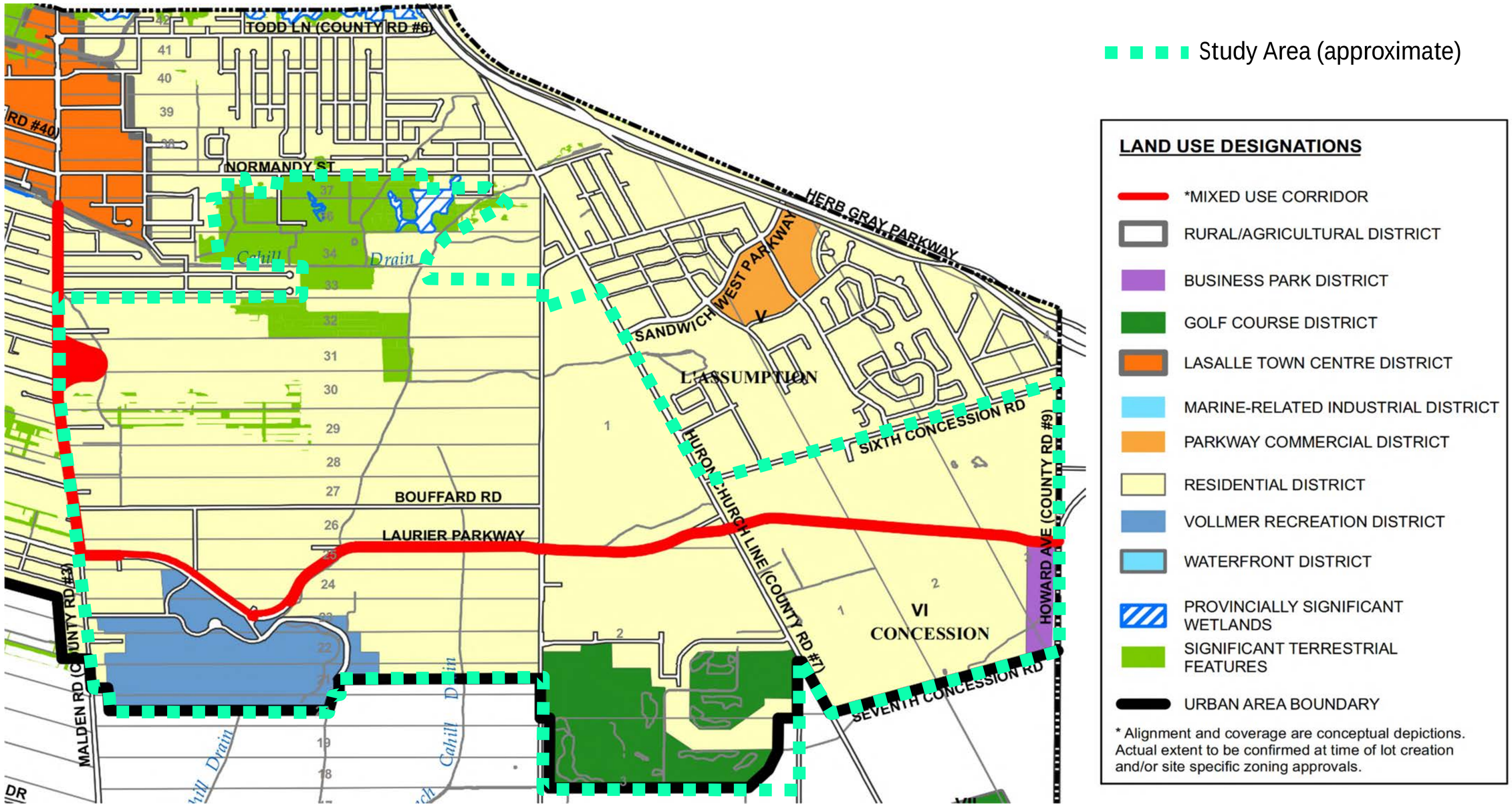
- Benefits to homebuyers include:
  - Increased availability. Ontario currently has an undersupply of housing relative to demand. Increased housing supply will help to offset this imbalance.
  - Improved affordability. Affordability is a major issue in Ontario's housing market. Increased housing supply can help to lower prices and address this issue.



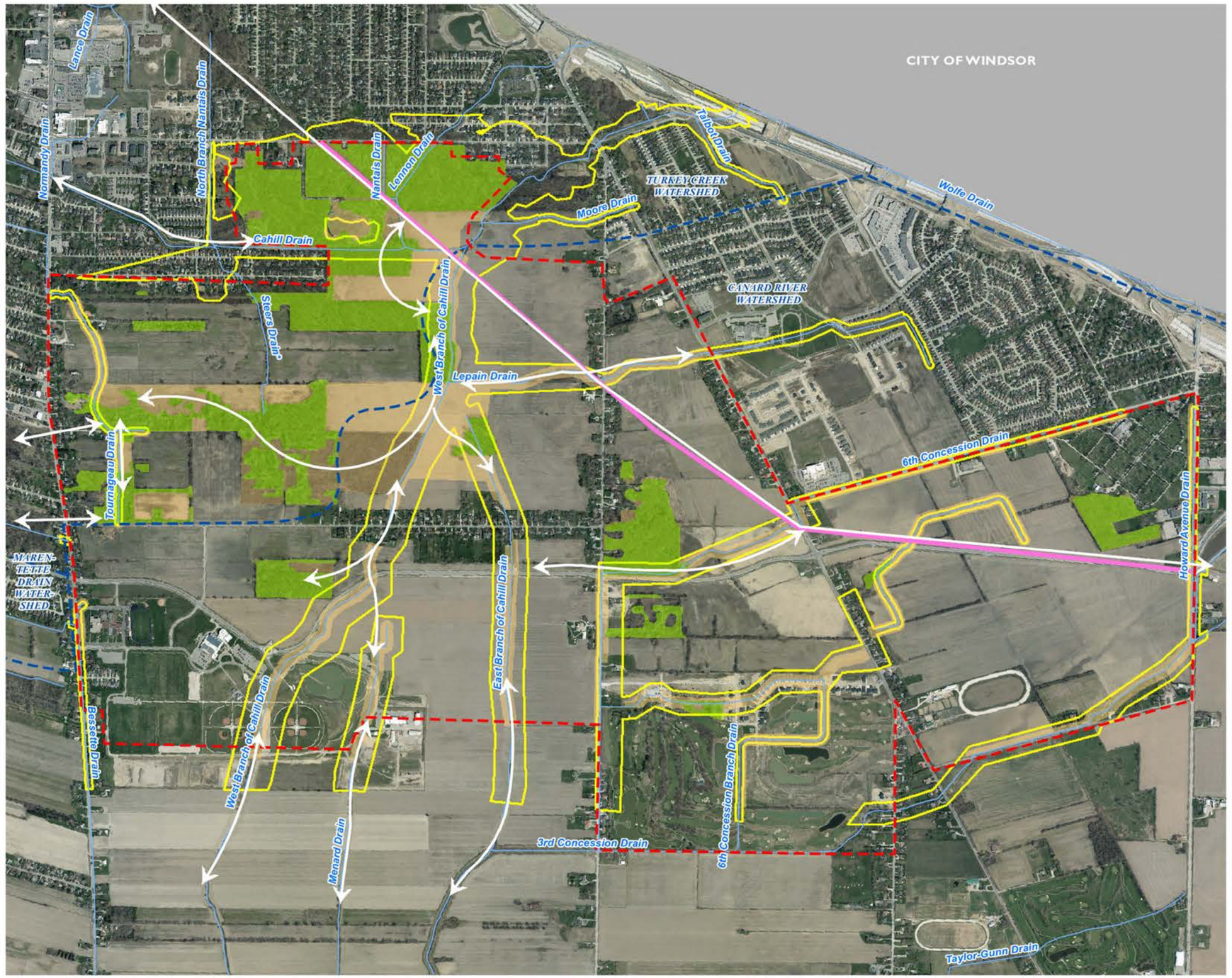
Benefits to home buyers based on *Consultation Document: Increased Housing Supply in Ontario* (Ministry of Municipal Affairs and Housing, 2018). To learn more, visit www.ontario.ca/housingsupply

Existing Conditions – Land Use

Town of LaSalle Official Plan Schedule "B" – Land Use Plan



Existing Conditions – Natural Heritage



HOWARD BOUFFARD PLANNING AREA
Master Drainage Study

ESSEX REGION NATURAL HERITAGE SYSTEM STRATEGY (ERNHSS) NATURAL HERITAGE FEATURES
FIGURE #1

- Bouffard and Howard Planning District
- Watercourse/Drain (MNRF)
- Forest (Essex Region Natural Heritage System Strategy - Essex Region Conservation Authority)
- Other Terrestrial Natural Feature (Essex Region Natural Heritage System Strategy - Essex Region Conservation Authority)
- Restoration Opportunities (Essex Region Conservation Authority)
- Proposed Natural Area Linkages
- Hydro Corridor Alignment
- Watershed (Essex Region Conservation Authority)
- Regulation Limit (Essex Region Conservation Authority)

0 200 400 m

SCALE 1:17,500

MAP DRAWING INFORMATION: MNRF, ESSEX REGION CONSERVATION AUTHORITY TOWN OF LASALLE (2015 IMAGERY)

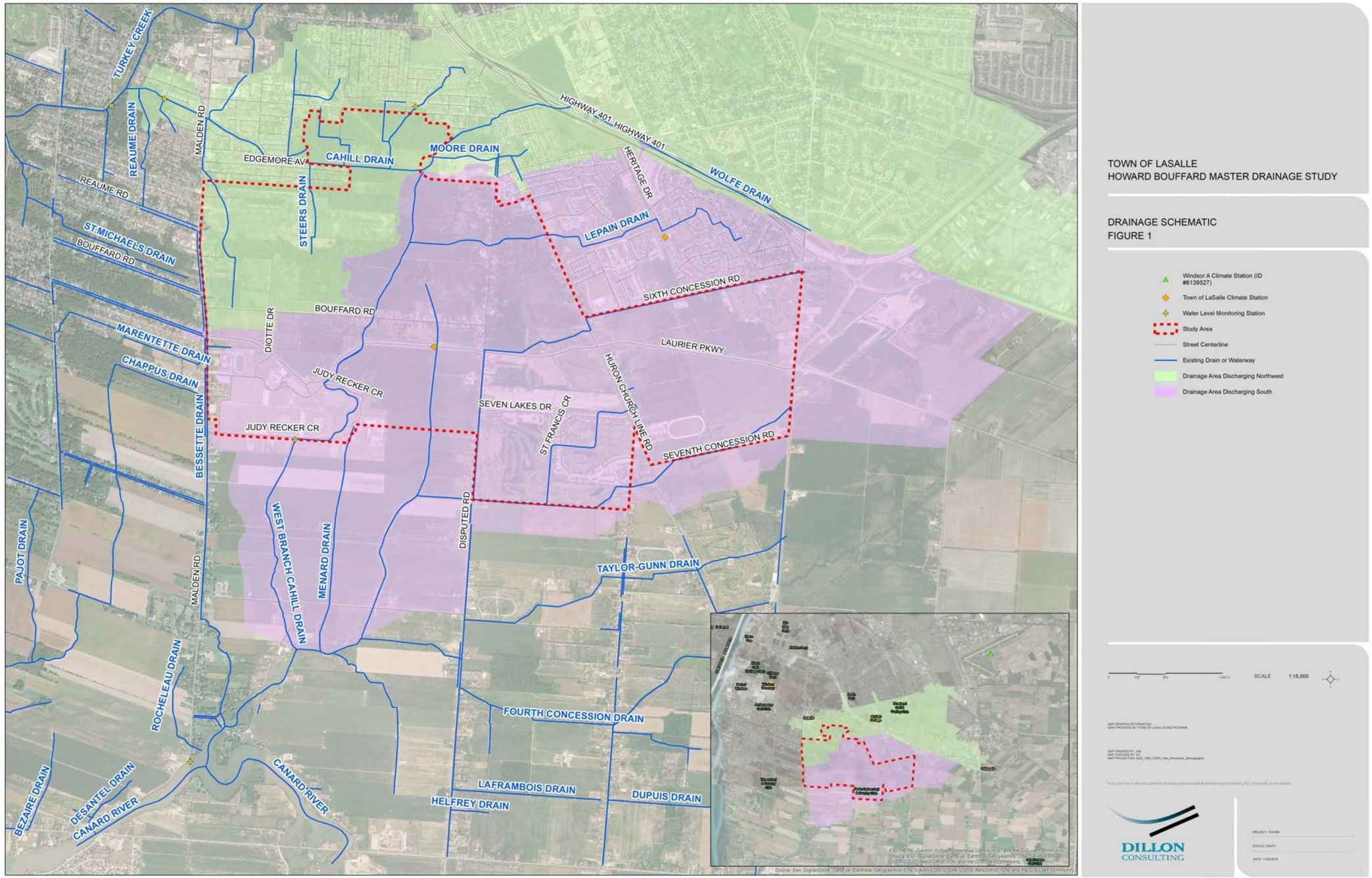
MAP CREATED BY: SFG
MAP CHECKED BY: MDP
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION:
Q:\cad\GIS\17571\Mapping

DILLON CONSULTING

PROJECT: 188169
DATE: 10/01/2017

Existing Conditions – Municipal Drains and Drainage Areas



TOWN OF LASALLE
HOWARD BOUFFARD MASTER DRAINAGE STUDY

DRAINAGE SCHEMATIC
FIGURE 1

- Windsor A Climate Station (ID #6139527)
- Town of LaSalle Climate Station
- Water Level Monitoring Station
- Study Area
- Street Centerline
- Existing Drain or Waterway
- Drainage Area Discharging Northwest
- Drainage Area Discharging South

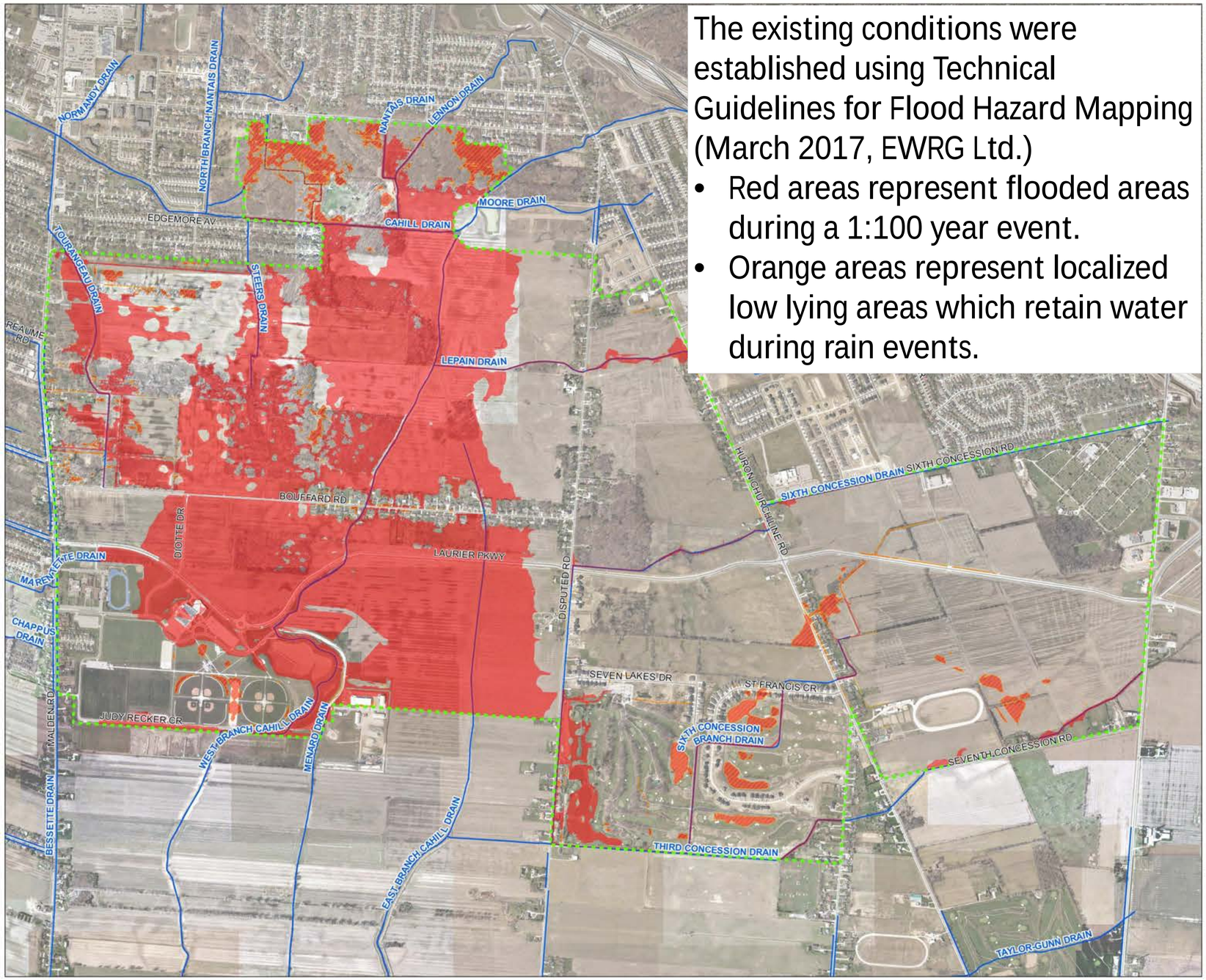
SCALE 1:15,000

DILLON CONSULTING

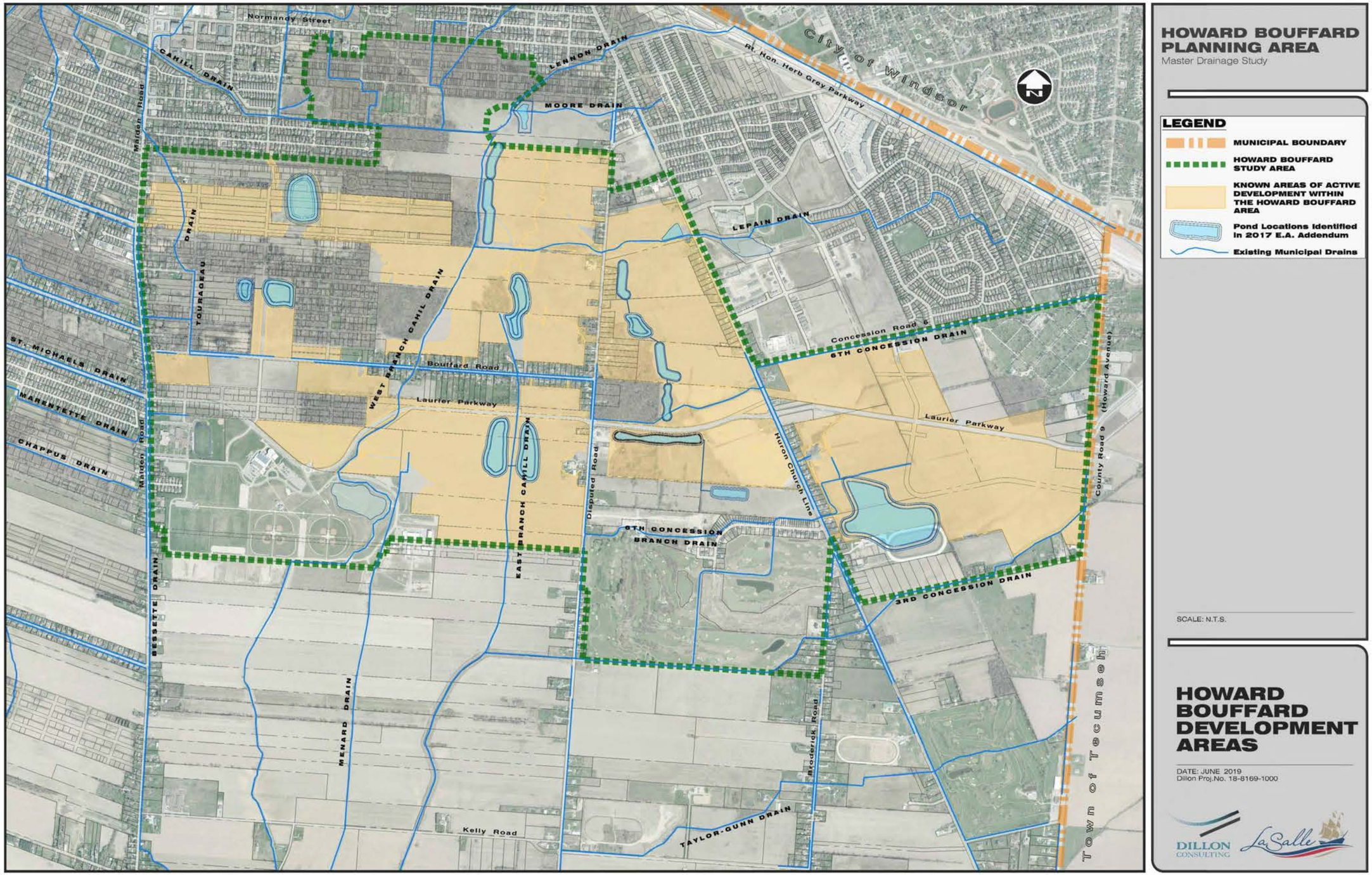
Existing Conditions - Flood Extents

The existing conditions were established using Technical Guidelines for Flood Hazard Mapping (March 2017, EWRG Ltd.)

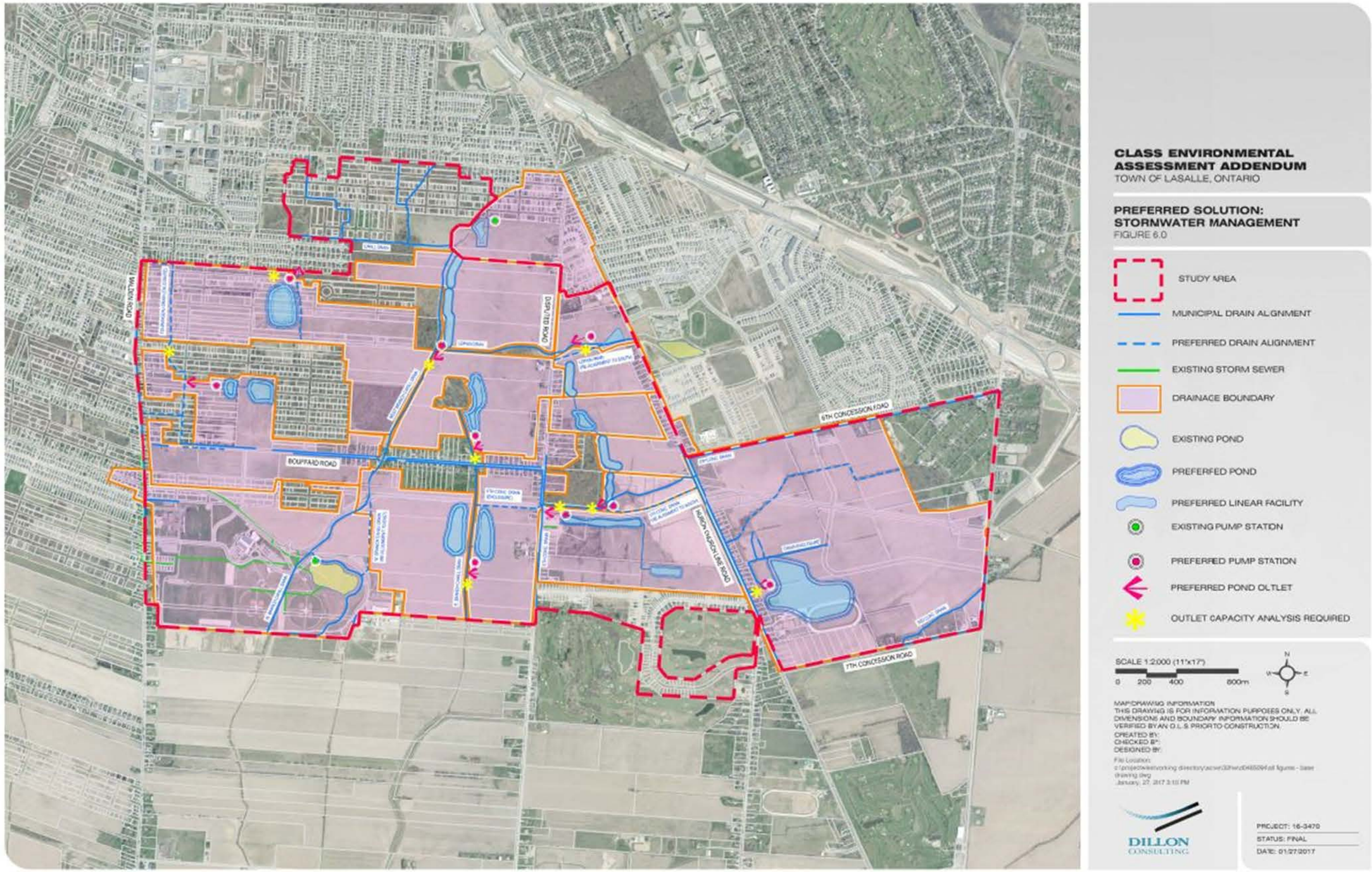
- Red areas represent flooded areas during a 1:100 year event.
- Orange areas represent localized low lying areas which retain water during rain events.



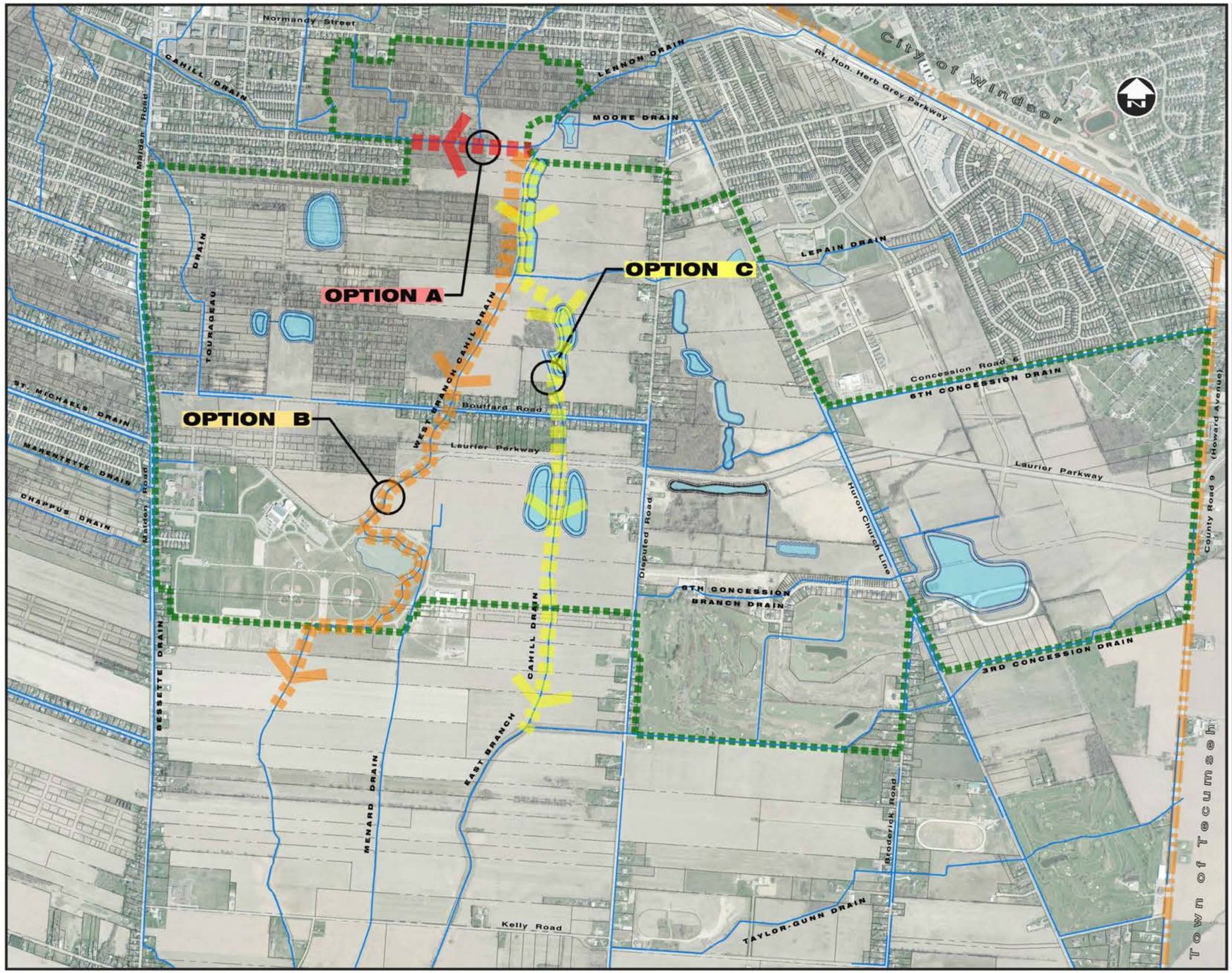
Development Potential



Stormwater Solution – 2017 EA Addendum



High Level / Preliminary Alternative Stormwater Management Options Considered



HOWARD BOUFFARD PLANNING AREA

Master Drainage Study

LEGEND

- MUNICIPAL BOUNDARY
- HOWARD BOUFFARD STUDY AREA
- OPTION A
  - UTILIZE CAHILL DRAIN
- OPTION B
  - UTILIZE WEST BRANCH CAHILL DRAIN
- OPTION C
  - UTILIZE EAST BRANCH CAHILL DRAIN (PREFERRED OPTION)
- Pond Locations Identified in 2017 E.A. Addendum
- Existing Municipal Drains

High Level / Preliminary Alternative Stormwater Management Options Considered

- OPTION A - Raise banks of Cahill Drain to prevent spill and direct flow westerly.

  Pros: Least costly solution

  Cons: Homes along Cahill and Turkey Creek susceptible to flooding.

- OPTION B - Utilize the West Branch Cahill Drain.

  Pros: Utilize existing flow path

  Cons: Long, circuitous route. Brings flow by Vollmer Centre. Cost.

- OPTION C* - Redirect West Branch Cahill and utilize the East Branch Drain.

  Pros: Direct route to Canard River. Direct flow away from Vollmer Centre.

  Opportunity for improvements to Sixth Concession Drain. Balance flows between drains.

  Cons: Cost.

- OPTION D - Do Nothing

  This option is not recommended as it would not allow for development to proceed. The Town of LaSalle has invested heavily in planning and other infrastructure to date. Addressing the flood inundation is the remaining hurdle to unlocking development in the area.

* **Preferred Solution moved forward for further analysis.**

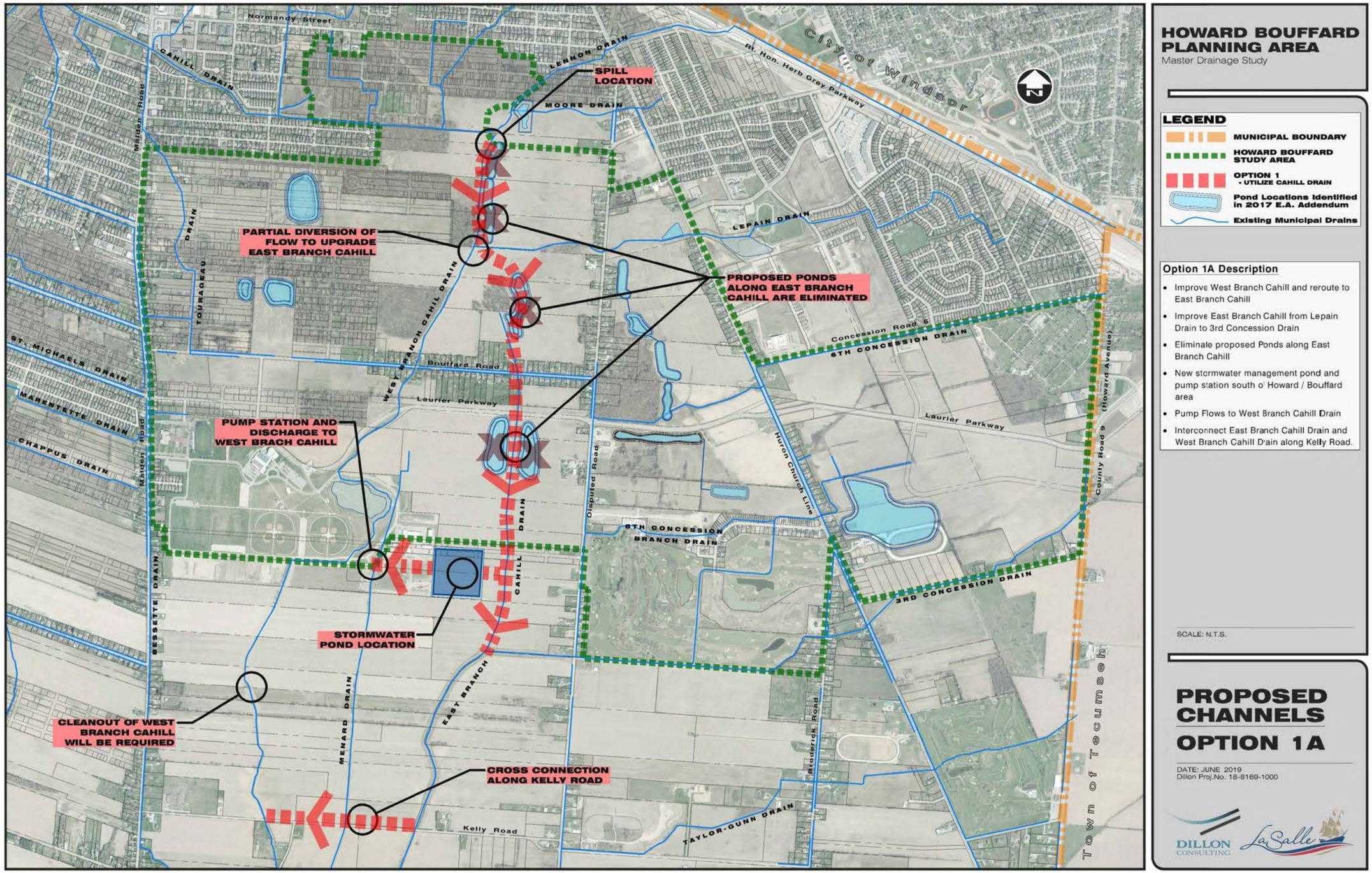
- Options B and C require regional SWM facility with pump station.

SCALE: N.T.S.

HIGH LEVEL OPTIONS CONSIDERED

DATE: JUNE 2019
Dillon Proj.No. 18-8169-1000

Alternative 1A
Eliminate Ponds Along East Branch Cahill



HOWARD BOUFFARD PLANNING AREA
Master Drainage Study

LEGEND

- MUNICIPAL BOUNDARY
- HOWARD BOUFFARD STUDY AREA
- OPTION 1
  - UTILIZE CAHILL DRAIN
- Pond Locations Identified in 2017 E.A. Addendum
- Existing Municipal Drains

Option 1A Description

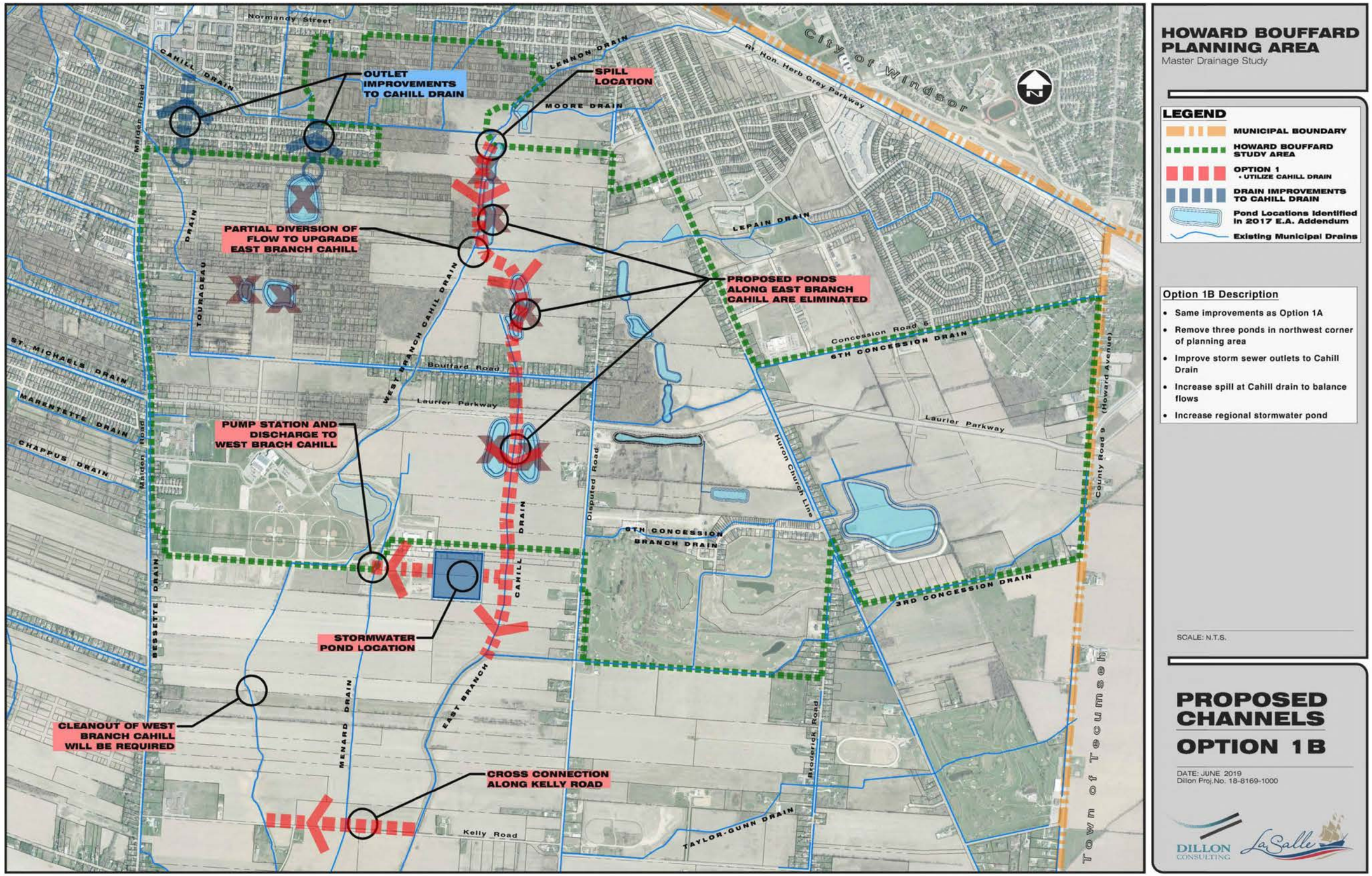
- Improve West Branch Cahill and reroute to East Branch Cahill
- Improve East Branch Cahill from Lepain Drain to 3rd Concession Drain
- Eliminate proposed Ponds along East Branch Cahill
- New stormwater management pond and pump station south of Howard / Bouffard area
- Pump Flows to West Branch Cahill Drain
- Interconnect East Branch Cahill Drain and West Branch Cahill Drain along Kelly Road.

SCALE: N.T.S.

PROPOSED CHANNELS
OPTION 1A

DATE: JUNE 2019
Dillon Proj.No. 18-8169-1000

Alternative 1B
1A Plus Eliminate Ponds to Cahill Drain



HOWARD BOUFFARD PLANNING AREA
Master Drainage Study

LEGEND

- MUNICIPAL BOUNDARY
- HOWARD BOUFFARD STUDY AREA
- OPTION 1
  - UTILIZE CAHILL DRAIN
- DRAIN IMPROVEMENTS TO CAHILL DRAIN
- Pond Locations Identified in 2017 E.A. Addendum
- Existing Municipal Drains

Option 1B Description

- Same improvements as Option 1A
- Remove three ponds in northwest corner of planning area
- Improve storm sewer outlets to Cahill Drain
- Increase spill at Cahill drain to balance flows
- Increase regional stormwater pond

SCALE: N.T.S.

PROPOSED CHANNELS
OPTION 1B

DATE: JUNE 2019
Dillon Proj.No. 18-8169-1000

DILLON CONSULTING