



File: 2158

Bridgeburg Secondary Plan Development Area

Phase 1 – Existing Servicing Conditions Report

October 2025

INTRODUCTION

Upper Canada Consultants (UCC) has been retained by the Bridgeburg Landowners Group Inc. to undertake and provide the Town of Fort Erie with a Phase One Functional Servicing Study for the Bridgeburg Secondary Plan Area. This Phase One Existing Servicing Conditions Report provides a comprehensive assessment of the existing servicing infrastructure, identifying constraints that will ultimately dictate the technical requirements for future development within the study area.

The Bridgeburg Secondary Plan is an identified neighbourhood in the Town of Fort Erie between Phipps Street, Thompson Road and the Niagara Parkway including the unopened municipal road allowances of Bowen Road, Crooks Street and Arcadia Street that traverse through the lands. A portion of the development lands contain Provincially Significant Wetlands as part of Frenchman's Creek Wetland Complex with further lands occupied by Significant Woodlot. The intention of this report is to rationalize servicing opportunities given these environmental constraints.

The developable lands as part of the Bridgeburg Secondary Plan Area consist of four separately owned parcels:

1. #87 & #85 Crooks Street (formerly the Rio Vista Golf Course) – These parcels have received Draft Plan Approval as part of the Fort Erie Hills Subdivision and are owned by CBJ Developments Inc.
2. #1075 & #1047 Niagara River Parkway – Situated just north of the Fort Erie Wastewater Treatment Plant, and owned by 2585908 Ontario Inc. (Gibbons).
3. Remaining lands north of the Bowen Road unopened road allowance – These lands lack a municipal address and are owned by two separate entities:
 - a. Hert Inc. - owns the westerly lands fronting Thompson Road.
 - b. FCBB Lands Inc. owns the easterly portion of the site.

It should be noted that the Fort Erie Hills property is a non-participating member of the Bridgeburg Landowners Group. A Property Ownership Plan (2158-PO) has been provided in Appendix A.

The objectives of this brief are as follows:

1. Identify the existing watermain infrastructure and its' capacity to provide sufficient domestic and fire protection supply for the development area;
2. Identify the local sanitary infrastructure along with its' constraints; and,
3. Outline the existing stormwater conditions of the development area as well as any constraints and requirements.

WATER SERVICING

The Bridgeburg Secondary Plan Area is located within the Fort Erie (Rosehill) water system serviced by the Rosehill Water Treatment Plant located at the south limit of Rosehill Road. The entire Secondary Plan Area is located within the singular 241 Water Pressure Zone of the Rosehill Water System and has been included within the calculations and conclusions made as part of the 2021 Regional Water and Wastewater Master Servicing Plan Update (2021 MSPU).

The 2021 MSPU has included the Fort Erie Hills development as well as the Hert Inc. owned lands north of the Acadia Street unopened road allowance as being developed prior to 2051. All other undeveloped lands as part of this Secondary Plan Area have been included in their calculations as ultimately being developed post 2051.

The 2021 MSPU utilizes a Residential Average Day Demand of 240 LPCD, as well as an Employment Average Day Demand of 270 LPED. However, through billing meter records between 2018-202, Fort Erie was calculated to have a Residential Average Day Demand of 173 LPCD, with an Employment Average Day Demand of 208 LPED. It was also concluded that a Maximum Daily Demand Peaking Factor of 1.55 should be used for the Rosehill Water Treatment Plant. Population estimations for the municipality are outlined in Table 1 below:

Table 1. Existing and Projected Fort Erie Populations		
Year	Residential	Employment
2021	33,865	10,241
2051	48,013	17,432
Post-2051	61,721	20,116

Through the watermain system analysis of the 2021 MSPU, a number of upgrades were recommended in order to accommodate growth to 2051. However, all upgrades listed were in order to provide sufficient service to future expected development within the Central Fort Erie Area as well as to decommission to the Stevensville Reservoir and Pumping Station. No significant infrastructure upgrades were deemed necessary in order to provide adequate water supply to the Bridgeburg Secondary Plan Area. Per Figure 3.D.4, all existing watermains within the Secondary Plan Area experience adequate peak hour static pressures between 410-620 kPa (60-90 psi).

According to the 2021 MSPU, the Rosehill Water Treatment Plant has sufficient capacity to support expected growth in Fort Erie to post 2051 conditions that includes the full development of the Bridgeburg Secondary Plan Area.



As outlined on the 'Existing Sanitary and Watermain Infrastructure Plan' (2158-SERV) in Appendix A, the following notable existing watermain are located in proximity to the Bridgeburg Secondary Plan development area:

- 400mm diameter CPP municipal watermain on Phipps Street from Thompson Road to Crooks Street;
- 200mm diameter PVC municipal watermain on Crooks Street & Bowen Road; and,
- 200mm diameter AC/PVC municipal watermain along the entire length of the Niagara River Parkway north of the development

All watermain listed would be suitable connections points for future development. Although actual design considerations will be clarified once the developmental constraints have been confirmed, the future watermain should be looped where possible to ensure best practices for watermain design are maintained.

No Regional Trunk watermain are located within or in close proximity to the Secondary Plan Area, and no future additional Regional watermain infrastructure is proposed or required through analysis as part of the 2021 Regional MSPU. As well, no watermain currently exists on Thompson Road or within the Arcadia Street and Crooks Street unopened road allowances.

Therefore, based on the locations of existing infrastructure and conclusions provided within the 2021 Regional Water MSPU, it is expected that the existing municipal watermain system will have adequate capacity to provide suitable domestic water supply and fire flow protection for development in the Bridgeburg Secondary Plan Area.

SANITARY SERVICING

The Anger Avenue Wastewater Treatment Plant (WWTP) is located within the Bridgeburg Secondary Plan Area providing sanitary sewage treatment for most of the Town of Fort Erie. The entire existing urban area as part of this Secondary Plan located south of the WWTP conveys sanitary flows via gravity sewer directly to the WWTP.

As stated previously, the 2021 Regional Master Servicing Plan Update (MSPU) included the Fort Erie Hills development as well as the Hert Inc. owned lands north of the Acadia Street unopened road allowance as being developed prior to 2051, with all other undeveloped lands as part of this Secondary Plan Area included in their calculations as ultimately being developed post 2051. Sanitary flows discharging to the Anger Avenue WWTP have been calculated to remain below the 80% capacity threshold through to 2051, however expected development flows post 2051 will exceed the 80% threshold at which point an upgrade study will be triggered. It should be noted that a large portion of the lands noted as pre-2051 development lands within the greater Anger Avenue WWTP Drainage Area (outside of the Bridgeburg Secondary Plan Area) do not have development applications at this time.

In order to ensure the municipalities sanitary system is sufficient to 2051, a number of improvement recommendations were provided as part of the MSPU. The recommendations included upgrades to various Regional Sanitary Pumping Stations and Forcemains throughout Fort Erie, however none of the improvements were within the Secondary Plan Area or would affect future development within Bridgeburg.

The 2021 MSPU noted that although the existing system is able to accommodate existing peak wet weather flows without surcharging, surcharging does exist within the 1350mm diameter Regional Trunk Sewer from the WWTP to Niagara Boulevard under Peak 5-Year Storm Wet Weather Events. However, the report notes that it is expected that system wide Inflow and Infiltration Program would have a significant impact on the Wet Weather events experienced within the Regional Trunk Sanitary Sewers on Niagara Boulevard and fronting the WWTP.

The 2021 MSPU utilized the following design criteria to project wastewater flows, and establish the wastewater infrastructure program:

- Residential Flow Generation; 255Lcpd
- Employment Flow Generation: 310Lped
- Peaking Factor based on Harmon formula with values between 2 & 4
- Extraneous Flow Design Allowance:
 - o 0.4 L/s/ha for existing areas
 - o 0286 L/s/ha for new development.



As outlined in the 'Existing Sanitary and Watermain Infrastructure Plan' (2158-SERV) in Appendix A, there is currently no sanitary sewer located on the Niagara River Parkway between Anger Avenue to Thompson Road, or on Thompson Road within the Secondary Plan Area. Therefore, it is expected all existing residential dwellings in this area are currently serviced with private septic systems.

A 600mm diameter PVC Regional Forcemain is situated within the Secondary Plan Area, conveying sanitary flows north along Thompson Road from the Thompson Road Sanitary Pumping Station (SPS). The forcemain then transitions eastward within the North Bowen Road unopened road allowance, ultimately discharging into a 1050mm diameter Regional gravity trunk sewer located approximately 60m west of Crooks Street.

The 1050mm diameter Regional gravity trunk sewer conveys flows northward within the Crooks Street road allowance for approximately 320m before turning eastward toward the WWTP. At the east limit of the WWTP, the trunk sewer discharges into a 1350mm diameter Regional trunk sanitary sewer converging with sanitary flows from the 1350mm diameter Regional Trunk Sewer on Niagara Boulevard, which carries flows an additional 30m before reaching the Anger Avenue WWTP.

Per the Town of Fort Erie GIS database, an additional sanitary sewer is directed westerly within the Bowen Road allowance from Crooks Street and is believed to be an overflow to the Frenchman's Creek passing through the Secondary Plan Area.

As part of the Fort Erie Hills development on the east side of Frenchman's Creek, sanitary flows were suggested to discharge to the existing 300mm diameter sanitary sewer flowing northerly on Crooks Street. The development was suggested to discharge at the development entrance located at the intersection of Highland Avenue.

Upon analysis of the 1050mm diameter Regional Trunk Sanitary Sewer, it should be noted that the sewer was constructed at a relatively steep slope (0.40%) with a number of elevation jumps closer to the downstream limit at the WWTP. Manhole invert elevation information has been included on the attached 'Existing Sanitary and Watermain Infrastructure Plan' (2158-SERV) to outline the various elevations at different portions of the trunk sanitary sewer adjacent to the Secondary Plan Area. It is anticipated that the trunk sanitary sewer was been constructed at a high elevation that is insufficient to adequately service a substantial portion of the Secondary Plan Area.

Due to the presence of Frenchman's Creek and its associated Provincially Significant Wetlands (PSWs) within the Secondary Plan Area, portions of the developable lands will be situated west of the creek. Consequently, it will be necessary to construct sanitary infrastructure across Frenchman's Creek to establish an appropriate sanitary outlet for these lands.

Generally, the sanitary crossing can be completed with either a gravity operated sanitary sewer, or a pumping station and associated forcemain. Sanitary pumping stations and their associated infrastructure impose considerable long-term maintenance and operational costs for the operating municipality (i.e. the Region of Niagara). To minimize the need for pumping stations,



opportunities for providing gravity sewers should be explored and should be given priority when determining future development concepts for the secondary plan area. Therefore, a preliminary analysis has been undertaken to assess the feasibility of constructing a gravity sanitary sewer from the Wastewater Treatment Plant (WWTP) to service the west side of the creek.

The analysis has been completed under the scenario that a new connection would be created at the existing sanitary maintenance hole (EX SAN MH 412) fronting the WWTP, as this is the lowest possible connection elevation point in the system. Through servicing plans provided by the Region of Niagara, the invert of the 1350mm diameter sanitary sewer at EX MH 412 is 170.77m. Per UCC obtained topographical information at the Niagara River Parkway Bridge crossing Frenchman's Creek, the creek has a bottom elevation of 171.41m at the bridge location. This results in a vertical differential of 0.64m between the bottom of the creek and available sanitary manhole invert located approximately 500m away (direct linear distance).

This can be considered an insufficient vertical separation, potentially resulting in a future sanitary sewer being constructed within the existing watercourse. Therefore, further analysis would be required to assess whether a gravity sewer connection may be possible at upstream locations of the creek. If a gravity solution is determined to be unfeasible, alternative servicing strategies – such as the implementation of a Siphon or Sanitary Pumping Station – will need to be considered to provide an adequate sanitary outlet for these lands. The future sanitary servicing design will be clarified upon confirmation of developmental constraints.

Therefore, based on the conclusions outlined in the 2021 Regional Wastewater MSPU as well as engineering drawings provided by various agencies, it is expected that adequate sanitary infrastructure is available for the Bridgeburg Secondary Plan Area.



STORMWATER MANAGEMENT PLAN

The Bridgeburg Secondary Plan Area is approximately 197 hectares in size located at the northeast corner of the municipality of Fort Erie, immediately adjacent to the Niagara River. The vast majority of this area consists of undeveloped vacant land, with the exception of the existing Bridgeburg residential subdivision lands located to the southwest and further residential lots fronting the Niagara River Parkway along the north boundary.

Most notably, Frenchman's Creek meanders through the subject lands from its entry point to the Secondary Plan Area at Phipps Street approximately 330m east of Thompson Road, to ultimately discharge to the Niagara River between #1131 & #1075 Niagara River Parkway. Frenchman's Creek has a main channel length of approximately 11.5km and an overall drainage area of 1,640 hectares with the far upstream limit located at Bertie Street, just west of Teal Road. Lands adjacent to the creek throughout the Secondary Plan Area have been designated Provincially Significant Wetland as part of the Frenchman's Creek Wetland Complex.

All vacant lands within the Secondary Plan Area currently convey stormwater flows overland to the Frenchman's Creek winding through the site. Additionally, existing storm sewers within the south-east portion of the Secondary Plan Area on Crooks Street, Emerick Avenue, Brock Street, and Dodd's Way all ultimately discharge stormwater flows directly to Frenchman's Creek.

The Thompson Road Municipal Drain is also located within the Bridgeburg Secondary Plan Area and passes through the Hert Inc owned lands. The drain collects stormwater flows from lands on the western side of Thompson Road, crossing at the Arcadia Street road allowance, and ultimately discharges stormwater flows to Frenchman's Creek.

The lands at the southwest portion of the Secondary Plan Area near the intersection of Thompson Road and Phipps Street experience the highest ground elevation of approximately 187m within the Fort Erie Hills lands. The remaining lands slope generally in a northeast direction, with all localized topography sloping towards the Frenchman's Creek winding through the site. The low point of the development area is the northeast limits at the Frenchman's Creek outlet to the Niagara River at an elevation of approximately 172m.

An Overall Storm Drainage Area Plan (2158-STMDA) has been created and included in Appendix A outlining general contours of the Secondary Plan Area and relevant drainage areas. Three Drainage Area Boundaries have been delineated on this plan as follows:

- Thompson Road Municipal Drain drainage boundary (Drainage Area TDA) representing the watershed outlined on the K. Smart Associates Thompson Road Drain Watershed Plan (2005);
- Frenchman's Creek Drainage Boundary per the Fort Erie Creeks – Watershed Plan conducted by Philips Engineering (2008) for the NPCA (Drainage Area NDA); and,
- Revised Frenchman's Creek Drainage Boundary based on LIDAR data, the above noted reports, and known geographical conditions (Drainage Area BDA).



The Thompson Road Municipal Drain drainage boundary and the Frenchman's Creek Drainage Boundary were both utilized in conjunction with LIDAR data and known geographical conditions to determine the actual drainage boundary conveying stormwater flows through the Bridgeburg Secondary Plan Area. Drainage Area NBA has been adjusted along the south boundary of the Secondary Plan limits to the Same delineation of Drainage Area BDA in order to provide an area size comparison.

A number of differences were found between the NPCA Frenchman's Creek drainage boundary (Drainage Area NDA) compared to the ultimate Bridgeburg Secondary Plan Drainage Area (BDA) as follows:

- With verification through LIDAR Topographical Data, the northwest drainage boundary was confirmed to essentially follow the limit of the Thompson Municipal Drain boundary completed by Philip's Engineering.
- The 'BDA' boundary was extended easterly in proximity to the Anger Avenue Wastewater Treatment Plant in order to encompass all lands within the Secondary Plan Area.
- The north 'BDA' drainage boundary along Frenchman's Lane was placed at the centre of the dwellings in accordance with actual drainage conditions on these lands. All flows within the front yards of these dwellings are directed northerly to the Niagara River.

Ultimately, the adjustments and confirmation of Drainage Area BDA will result in a drainage area of 308.3 hectares directing stormwater flows to Frenchman's Creek as part of the Bridgeburg Secondary Plan. This is approximately 20 hectares less than the originally delineated Drainage Area NDA occupying an area of 328.2 hectares. Therefore, any conclusions on conditions within Frenchman's Creek provided in previously conducted models and report can be considered conservative, although still valid.

Additionally, no change will result to the drainage area (TDA) as part of the Thompson Road Municipal Drain. Therefore, the design conditions previously modelled and constructed can still be considered valid. It should be noted that this outlet will be required to be maintained through future development strategies within the Bridgeburg Secondary Plan Area.

Per the Frenchman's Creek Floodplain Mapping Study conducted by the Niagara Peninsula Conservation Authority (NPCA, 2004), the entire stretch of Frenchman's Creek within the Secondary Plan Area contains a regulated 100-Year Floodplain. The 100-Year Floodplain reaches elevations from 176.71m just downstream of the Phipps Street Culvert (Station 4062) at the south limit of the Secondary Plan Area to an elevation of 173.98m at the outlet to the Niagara River.

The majority of native soils within the study area have been characterized as imperfectly to poorly draining Compact Till (Silty Clay Loam) per the OMAFRA Soil Survey Complex Mapping. Additionally, various geotechnical studies in the area have indicated that bedrock elevations generally match the surface topography of the overall Secondary Plan Area, however remains at least 3m below existing grade in most cases. Further geotechnical testing is expected to confirm these conclusions as part of future Planning Act Applications.



Two smaller watercourses within the Anger WWTP lands convey flow directly to the Niagara River providing an outlet for stormwater in this area as well as the storm sewer system on Lindbergh Drive and portions of Bowen Drive and Highland Avenue. The storm sewer on Bowen Drive, east of Alwin Place conveys stormwater flows east to a separate stormwater outlet to the Niagara River. However, it should be noted that the major development presently expected to occur as part of the Secondary Plan Approvals will not occur in these areas.

Under standard Town of Fort Erie requirements, post-development flows are generally required to be controlled to pre-development levels for up to and including the 5-year design storm event. As the immediate outlet for stormwater flows in the Bridgeburg Secondary Plan Area will be Frenchman's Creek, the Region of Niagara generally requires post-development flows to be controlled to pre-development levels for the 2-year design storm event and provide erosion controls (i.e. releasing the 25mm storm over 24 hours) prior to discharge to the watercourse.

Frenchman's Creek is approximately 11.5km in length, with the final 4.05km located within the Bridgeburg Secondary Plan Area downstream of Phipps Street prior to discharge to the Niagara River. Based on the anticipated flow conditions, peak stormwater discharging from the expected outlet location of the Fort Erie Hills development to Frenchman's Creek are expected to reach the Niagara River approximately 1.27 hours after release, assuming a creek velocity of 0.75m/s. In comparison, peak stormwater flows originating from the upstream limit of Frenchman's Creek will take approximately 4.85 hours to reach the Fort Erie Hills outlet location.

As a result, by the time upstream peak stormwater flows arrive at this outlet point, the stormwater flows from Fort Erie Hills would have already passed through the system and discharged to the Niagara River. Additionally, implementing peak stormwater flow (quantity) controls may result in a delay of stormwater discharge to Frenchman's Creek from proposed development and could result in an 'alignment of peaks' concluding in an unintentional increase to peak stormwater flows experienced in the watercourse.

As the development strategy and design constraint for the Secondary Plan Area are not finalized at this time, capacity within Frenchman's Creek for unrestricted peak stormwater flows from post-development conditions cannot be confirmed. However, it is expected that opportunity exists to allow post-development stormwater flows to discharge from the Bridgeburg Secondary Plan Area to Frenchman's Creek without the requirement for peak stormwater flow restrictions.

Historically, the downstream 1.9km of Frenchman's Creek was noted as 'Permanent', with the remaining upstream creek lands noted as 'Permanent or Intermittent' by NPCA mapping that utilized aerial imagery for confirmation. However, per Figure 3 of the Phase 1 Hydrogeology Study (Terra-Dynamics Inc, 2025), the entire section of Frenchman's Creek to Phipps Street has now been classified as 'Permanent' through additional studies completed by GEI. Therefore, it is expected that the permanent water levels within Frenchman's Creek will provide sufficient energy dissipation for high frequency (25mm) storm events and erosion controls will not be required for stormwater flows discharging to the creek under post-development conditions.



Frenchman's Creek has been identified by the Ministry of Natural Resources watercourse evaluation as a **Type 1 (Critical)** fish habitat. Based on this habitat, the corresponding MECP level of protection for stormwater management quality practices on all new development in the area will be Enhanced, requiring a minimum of 80% TSS removal. It is expected that quality controls will be provided by a combination of Oil/Grit Separators and Stormwater Management Wet Pond Facilities throughout the Bridgeburg Secondary Plan area prior to discharge to Frenchman's Creek.

As part of future development in the Secondary Plan Area, internal storm sewer systems will be required to be designed to accommodate stormwater flows up to and including the 5 year design storm event. Roadway systems will be designed to convey major overland flows to ultimately discharge to Frenchman's Creek.

Due to the natural meandering alignment of Frenchman's Creek throughout the Secondary Plan Area, multiple stormwater outlets are anticipated. As part of the approved Fort Erie Hills development, two (2) stormwater outlets have been suggested to discharge to Frenchman's Creek. Where feasible, stormwater outlets should be integrated within roadway culvert crossings at Frenchman's Creek to reduce negative impacts to the natural watercourse. Where stormwater outlets will be required directly to Frenchman's Creek via headwall structure, it will be necessary to construct the outlet within the Designated Wetland Buffer in order to achieve a suitable hydraulic design.

The location of any necessary Stormwater Management Facilities will be confirmed as part of future phases of the Functional Servicing Study for the Bridgeburg Secondary Plan Area with further calculations provided at the development application stage.



CONCLUSIONS AND RECOMMENDATIONS

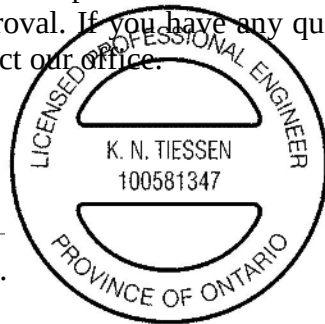
Therefore, based on the above comments and conclusions provided for the Bridgeburg Secondary Plan Area, the following summarizes the existing conditions as well as the associated recommendations for Phase 2 of this study:

1. The existing municipal watermain system will have sufficient capacity to provide both domestic water supply and fire protection for development throughout the Secondary Plan Area.
2. Sanitary flows will ultimately discharge directly to the 1350mm diameter Regional Trunk sanitary sewer fronting the Fort Erie Wastewater Treatment Plant. The WWTP will have sufficient capacity for the development area. It is recommended to utilize a gravity sanitary sewer to provide service to the future development lands located on the west side of Frenchman's Creek.
3. Stormwater quantity controls will not be required for the Bridgeburg Secondary Plan Area prior to discharge to Frenchman's Creek due to the proximity to the Niagara River. However, Erosion Controls will still be required prior to discharge to the creek.
4. Stormwater quality controls will be required to Enhanced Protection (80% TSS removal) levels for all stormwater flows discharging directly to Frenchman's Creek.

Based on the above and the accompanying servicing plans, there exists adequate municipal servicing for this development. We trust the above comments and enclosed calculations are satisfactory for approval. If you have any questions or require additional information, please do not hesitate to contact our office.

Yours very truly,

Kurt Tiessen, P.Eng.
October 15th, 2025
Encl.





**UPPER CANADA
CONSULTANTS**
ENGINEERS / PLANNERS

APPENDICES



**UPPER CANADA
CONSULTANTS**
ENGINEERS / PLANNERS

APPENDIX A

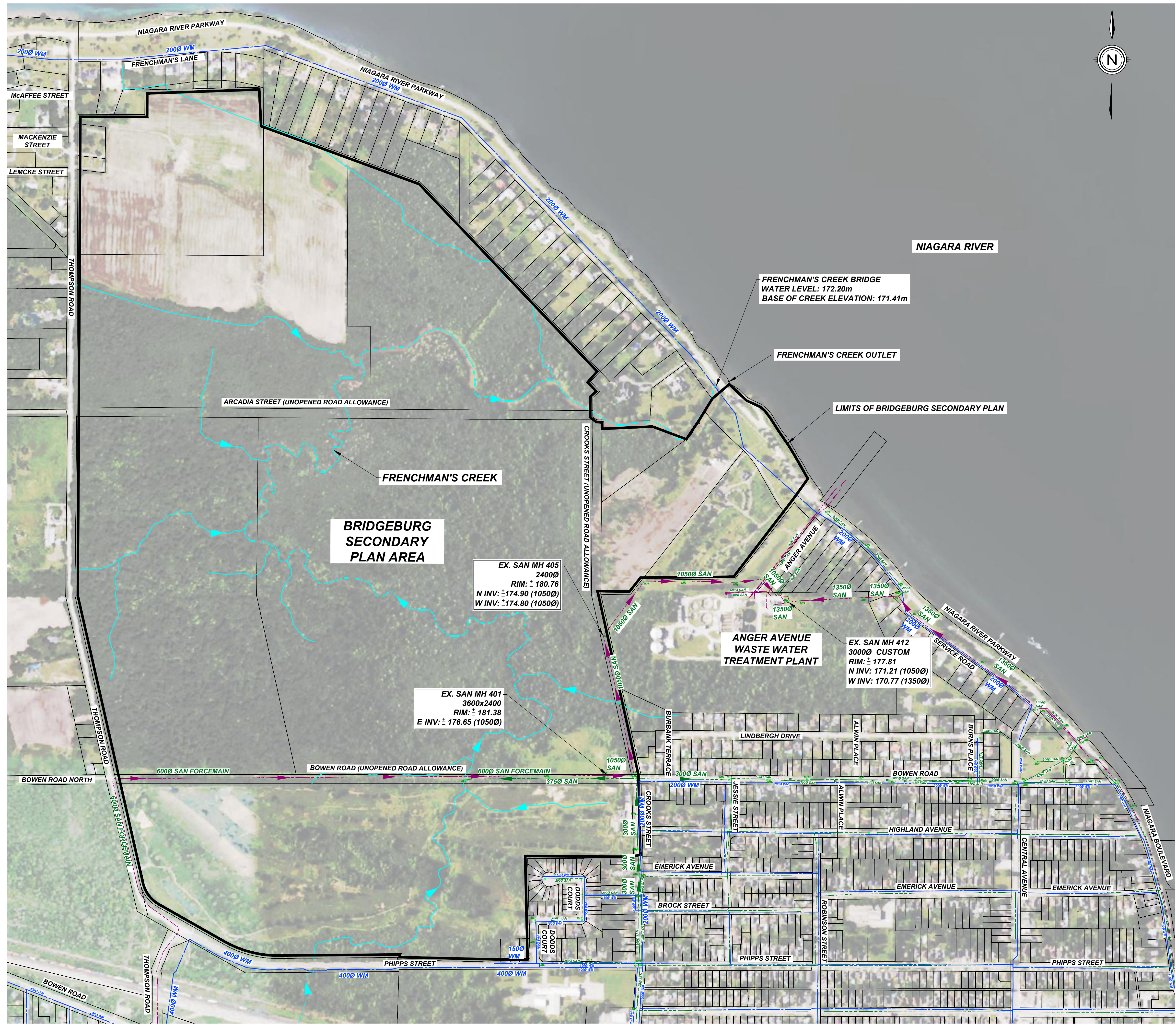
Property Ownership Plan
Existing Sanitary and Watermain Infrastructure Plan - 2158-SERV
Bridgeburg Secondary Plan Overall Storm Drainage Area Plan (2158-STMDA)
Thompson Road Drain Watershed Plan – K. Smart Associated Limited (Nov, 2005)
Fort Erie Creek Watershed Plan – Watershed Boundary – Philips Engineering (Mar, 2006)



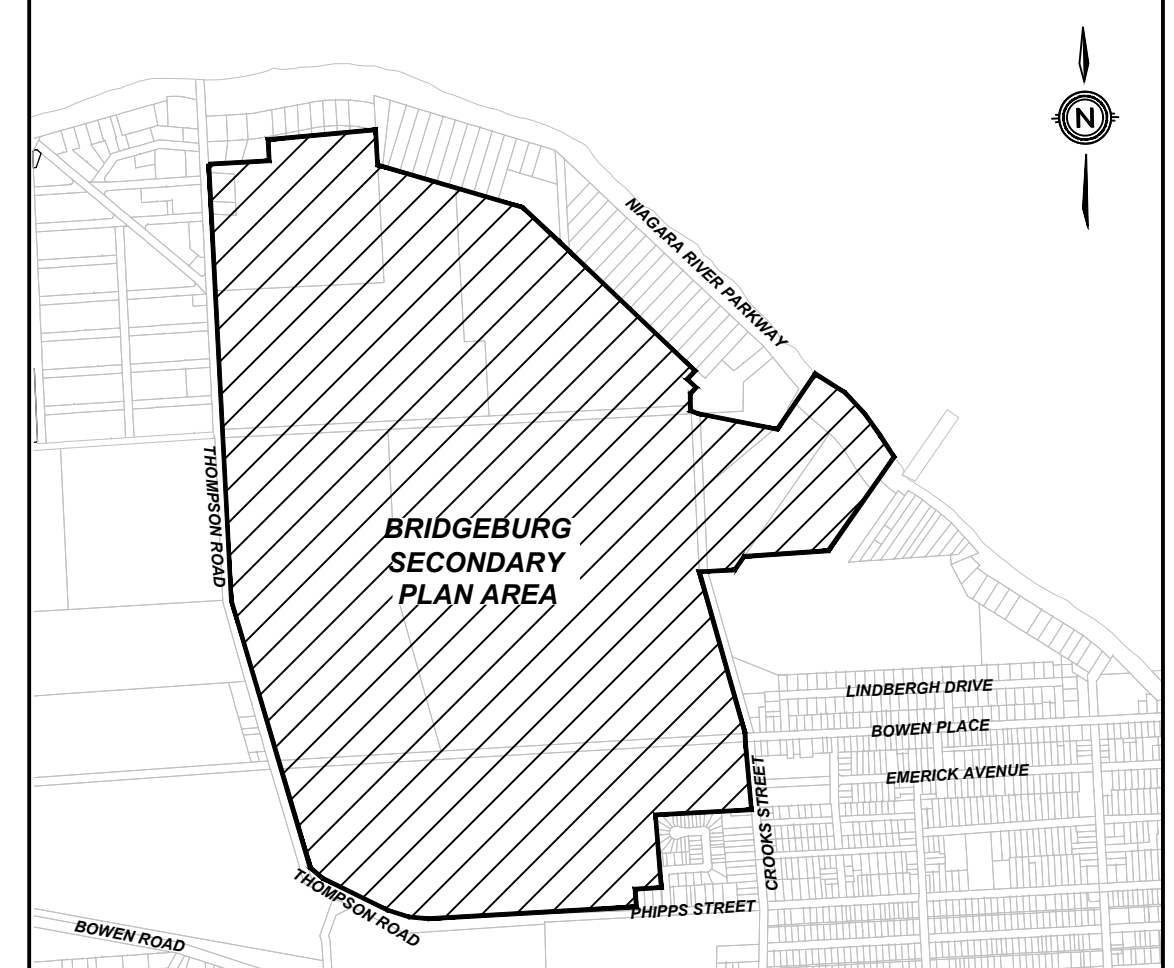
**UPPER CANADA
CONSULTANTS**
ENGINEERS / PLANNERS

BRIDGEBURG NORTH SECONDARY PLAN
TOWN OF FORT ERIE
PROPERTY OWNERSHIP

DATE	2023-10-20
SCALE	1:7500 m
REF No.	-
DWG No.	2158-PO



NOTE:
ALL SERVING INFORMATION TAKEN FROM TOWN OF FORT ERIE GIS DATABASE



KEY PLAN
N.T.S.

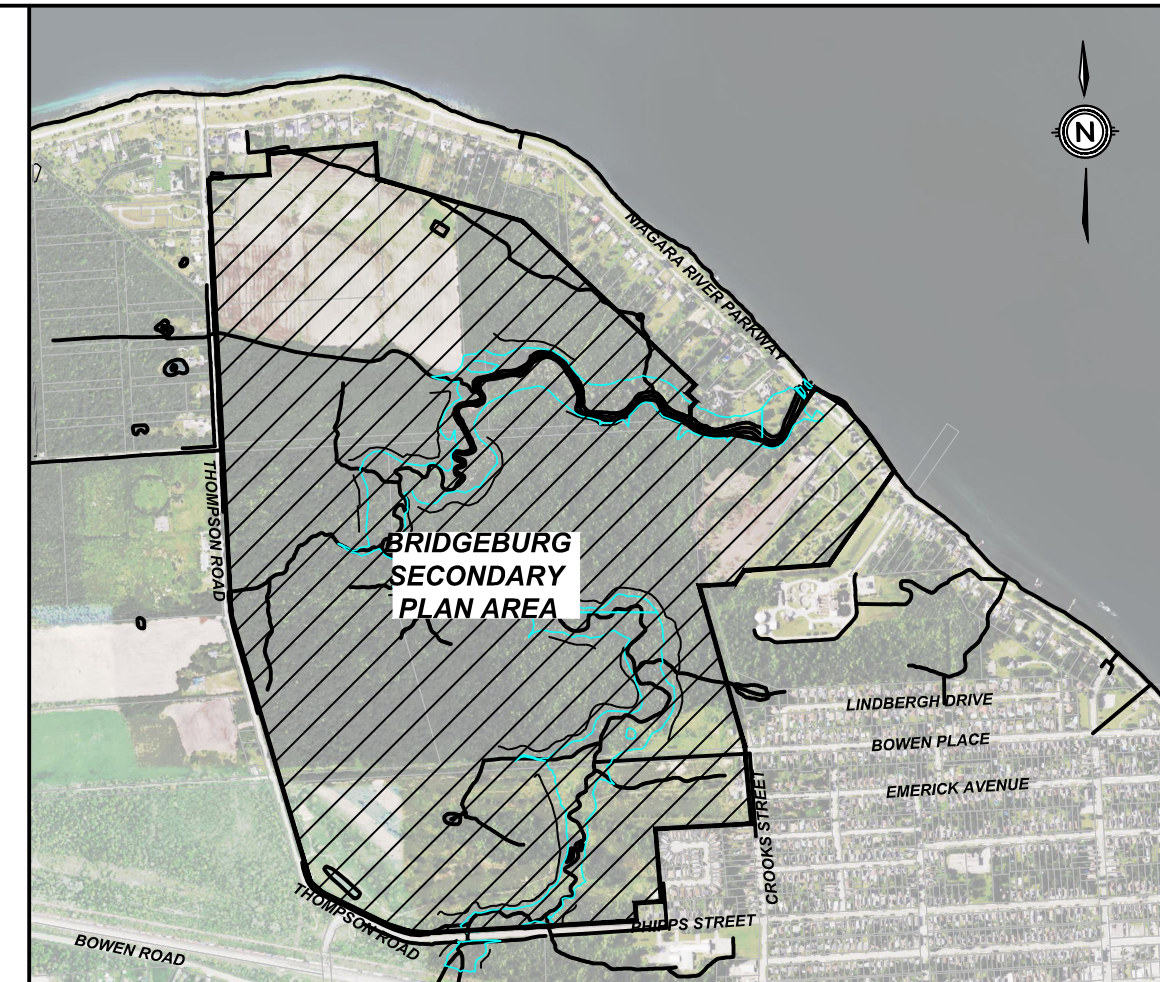
LEGEND

- EXISTING MUNICIPAL SEWER
- EXISTING REGIONAL SEWER
- EXISTING MUNICIPAL WATERMAIN
- EXISTING SANITARY MAINTENANCE STRUCTURE



30 Hanover Drive Unit 3
St. Catharines, Ontario
L2W 1A3
Phone: (905) 888-9400
Fax: (905) 888-5274

DRAWING TITLE EXISTING SANITARY AND WATERMAIN INFRASTRUCTURE PLAN	DRAFTING	ND
	DATE	APRIL 25, 2025
	PRINTED	APRIL 25, 2025.
	SCALE	1:4000
	DWG No.	2158-SERV



KEY PLAN
N.T.S.

LEGEND

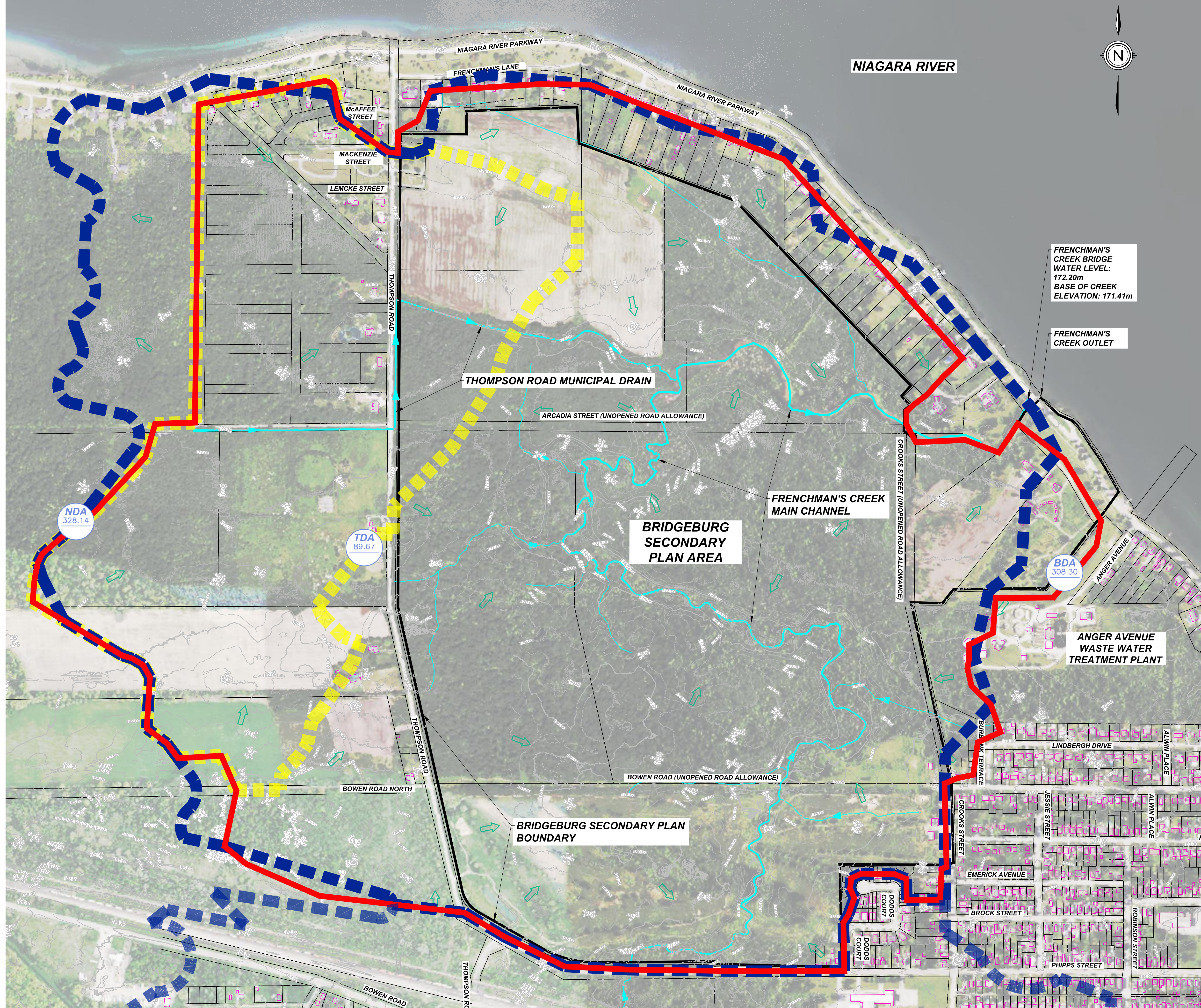
Drainage Area Number
Drainage Area in Hectares
Run-off Coefficient

BDA - Bridgeburg Secondary Plan
Drainage Area Boundary

NDA - NPCA Frenchman's Creek
Drainage Boundary

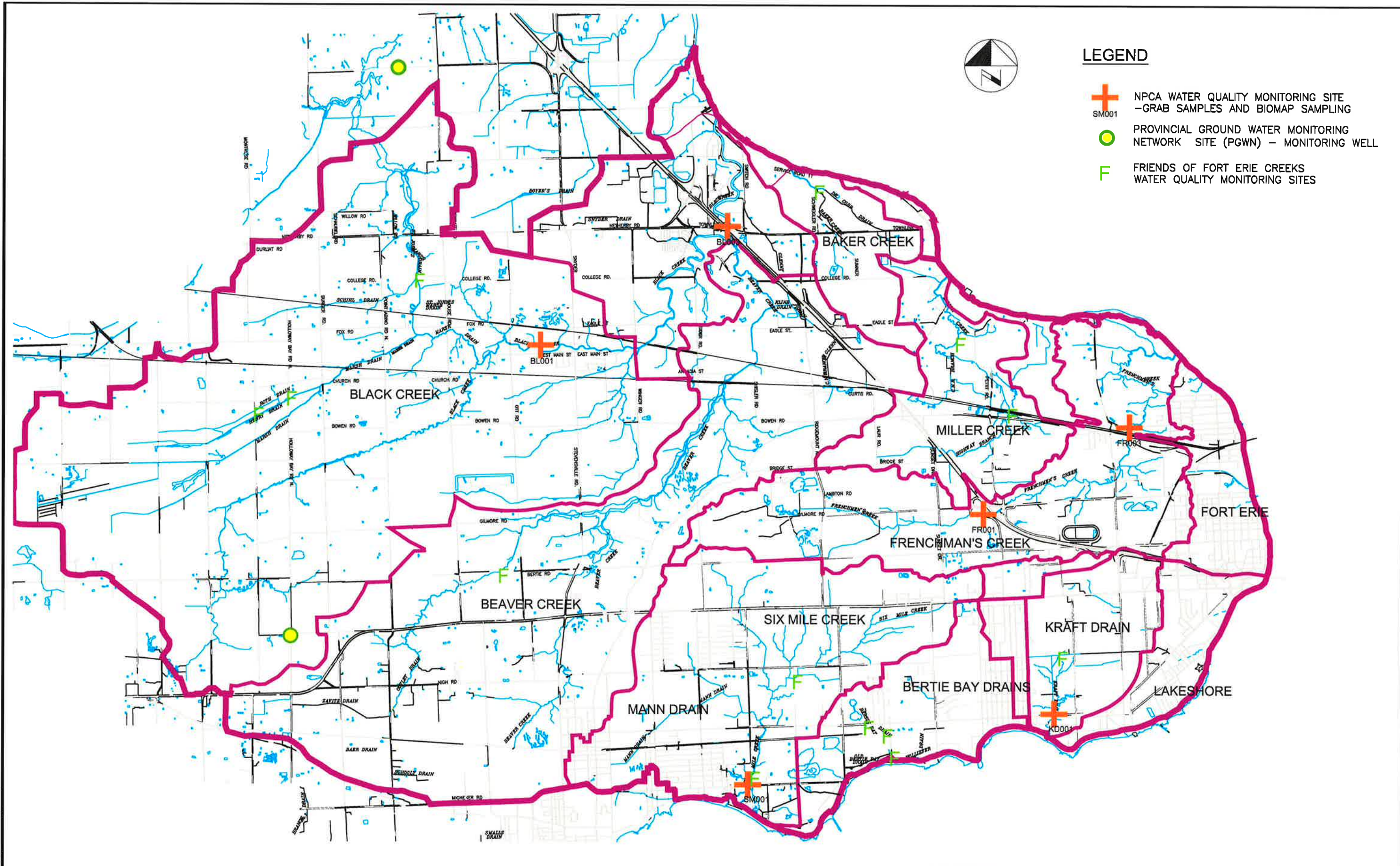
TDA - Thompson Municipal Drain
Boundary

Overland Flow Route



30 Hannover Drive Unit 3
St. Catharines, Ontario
L2W 1A3
Phone: (905) 888-9400
Fax: (905) 888-5274

DRAWING TITLE	DRAFTING	ND
BRIDGEBURG SECONDARY PLAN OVERALL STORM DRAINAGE AREAS	DATE	OCTOBER 3, 2025.
	PRINTED	OCTOBER 3, 2025.
	SCALE	1:4000
	DWG No.	2158-STMDA



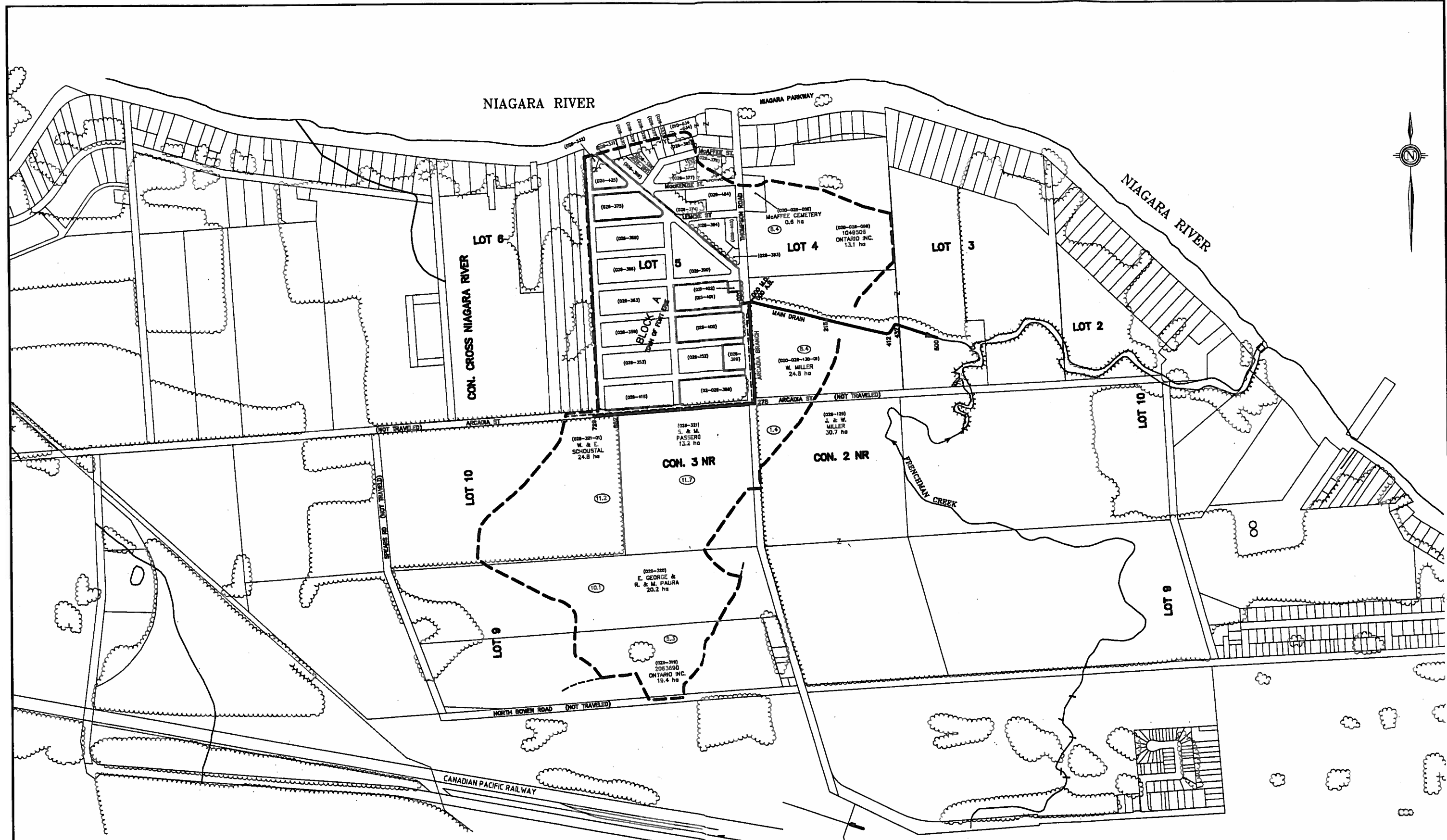
G:\Work\105116\water\map\FINAL 2008\Fig 20.dwg

FORT ERIE CREEKS
WATERSHED PLAN
NIAGARA PENINSULA
CONSERVATION AUTHORITY

NPCA WATER QUALITY
MONITORING SITES



Scale	NTS
Consultant File No.	105116
Figure No.	20



THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND, WHERE SHOWN, THE ACCURACY IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

PLAN LEGEND
 - - - - - MAJOR WATERSHED
 - - - - - INTERMEDIATE WATERSHED
 - - - - - PROPOSED WORK
 - - - - - ACCESS

- Z - DENOTES PROPERTY OWNERSHIP ON BOTH SIDES OF LOT LINE
 (2.8) - APPROXIMATE HECTARES IN WATERSHED
 5.2 ha. - HECTARES OWNED
 (026-363) - ASSESSMENT ROLL NUMBER

DESIGNED BY: J.W.K.
 CHECKED BY: J.W.K.
 DRAWN BY: A.S.O.
 CHECKED BY: J.W.K.



SCALE
 0 100 200
 ORIGINAL SCALE
 PLAN 1:10,000

THOMPSON ROAD DRAIN	
REGION OF NIAGARA	TOWN OF FORT EIRE
WATERSHED PLAN	
NOV. 23, 2005	
REVISED:	
JOB NUMBER: 04-068	
DRAWING	
1 OF 4	

K. SMART ASSOCIATES LIMITED
 CONSULTING ENGINEERS AND PLANNERS
 KITCHENER ENGLEHART SUDBURY RAINY RIVER