Delivered by Email

February 4, 2022

Mr. Chris Millar, MCIP, RPP, CNU-A
Senior Planner, Long Range Planning
Making Our Mark – Niagara Official Plan Team
Niagara Region, Planning & Development
1815 Sir Isaac Brock Way, PO Box 1042
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RE: 9265 Ort Rd, Niagara Falls
Eastern Portion of SABR 1370 (26.4 ha The Subject Lands)
Settlement Area Boundary Expansion

Dear Mr. Millar,

LANDx Developments Ltd. are planning consultants to Jason Wood of Would Construction Inc. regarding the potential for 9265 Ort Rd. and the adjacent vacant lands under the same ownership (the "Subject lands") in the City of Niagara Falls to be incorporated within the Settlement Area of Niagara Falls as part of the Urban Boundary Review being undertaken by the Region of Niagara. The subject lands involve 26.4 ha in total, the eastern half of SABR 1370.

The subject lands are only two of the properties south of the Welland River that provides the Region and the City of Niagara Falls with the opportunity to create a complete community as part of the comprehensive expansion of the existing Village of Chippawa. The concept of creating "complete communities" is a policy direction provided by the Provincial Growth Plan. The recognition of the complete community concept and its opportunity is key in choosing how the City of Niagara Falls develops.

Notwithstanding the opportunity for a major expansion of the Village of Chippawa it is our submission that the two subject properties are strategically located to enable its incorporation onto the Settlement Area Boundary.

The subject lands presently have 2.22 ha already designated Urban along the Ort Rd. frontage. 300m frontage and 63m deep (2.22 ha) is designated Urban and within the Urban Area Boundary as illustrated on Schedule A Future Land Use in the Official Plan of the City of Niagara Falls. Sanitary and Water Services are readily available 175m east of the subject lands on Lyons Parkway.

Its strategic location partially within the Urban Boundary and at the western terminus of Willick Rd., convenient to existing services enables its development with appropriate further detailed analysis to be integrated into the developments to the east. It is recommended that the Recommendations found in PDS 41-2021 for the City of Niagara Falls be reconsidered and that the two properties "the subject lands" be included within the Settlement Area Boundary.

Introduction

In May 2021, Niagara Region released draft criteria to determine appropriate locations for expansions to residential and employment lands. These included an evaluation of Provincial Policy, municipal sanitary servicing and water supply, transit and transportation, environmental protection and natural resources, agriculture and agri-food network, aggregate resources, and growth management. Appendix 3 of Report PDS 41-2021 described a revised Land Needs Assessment for Niagara Falls by 2051 identifying 310 ha for Community Area Expansion.

The subject lands are shown in Figure 1 located at the north-west corner of Ort Rd and Reixinger Rd and comprise a parcel of land that totals approximately 26.6 ha. Approximately 300 m of the frontage along Ort Rd, 63 m deep, comprising 2.22 ha of the property along Ort Rd. is already within the Urban Boundary. The balance of the lands are designated Environmental Protection Area and Environmental Conservation Area in the Niagara Falls Official Plan. The lands North and East of the subject lands are designated Urban and have been developed as residential subdivisions.

It is understanding that when taking a “birds eye view” that this property might be overlooked with respect to being included within the Niagara Falls Urban Boundary. However, the more refined analysis presented here illustrates that this land is appropriate to be integrated into the Settlement Area.

Colville Consulting Inc. has prepared a Natural Heritage Characterization & Constraints Analysis and RV Anderson Associates Limited has prepared both a Preliminary Servicing Strategy and a Preliminary Transportation Strategy Brief which are submitted for your review as part of this submission describing in more detail the serviceability and resultant development potential of this property.

Natural Heritage Characterization and Constraints Analysis

The Analysis prepared by Colville sets the stage for more detailed review that would continue when these lands are incorporated into the Urban Area. In summary, the study confirms that the southern portion of the properties is constrained for development by a Provincially Significant Wetland and somewhat constrained by Woodlands. It also identifies the shoreline of the Lyons Creek to be constrained from development. The specific boundaries of these features would be part of a more detailed review during the development approval process. The analysis identifies approximately 11.6 ha in the northern half of the property as developable, subject to the normal analysis that would occur through the development approval process. The portion of the property that is developable is immediately adjacent to the 300m already designated Urban along the Ort Rd. frontage

Preliminary Servicing Strategy

The subject lands have been part of the “servicing plans” for the City of Niagara Falls for some time as the lands to the east have been developing. The Strategy prepared by RVA illustrates that plans are already underway to extend both water and sewer services from the west limit of Lyons Parkway via an easement to the Ort Road ROW, and ultimately provide for a further extension of the infrastructure southwards along Ort Rd. to Willick Rd. There is capacity in both the sanitary sewers and water distribution system in these planned services to service the future

development of the subject lands. A Stormwater Management plan will be completed as part of the future development analysis

Preliminary Transportation Strategy Brief

The transportation network in presently place and planned in the future to service the existing and proposed developments to the east already provide adequate infrastructure to service the lands. The future planned improvements of the road network, Ort Rd. and Willick Rd. and beyond ensures that the future development of the subject lands will be appropriately accommodated. Plans are already in place for active transportation routes (i.e. cycling and pedestrian) trails within the wood lot on the east side of Ort Road that will ultimately connect Ort Road to Lyons Parkway, the new Chippawa East Subdivision (via recently constructed walkways) and to Willick Road.

Settlement Area Boundary Review (SABR) ID 1370 evaluates 39.6 ha, with the subject lands being the largest parcel in the SABR at 26.6 ha (24.4 ha inside the SABR, and 2.22 ha outside the SABR and in the Urban Boundary). A summary of the planning rationale for the inclusion of these lands into the Settlement Area Boundary is detailed below.

Figure 1: Subject Property Key Map

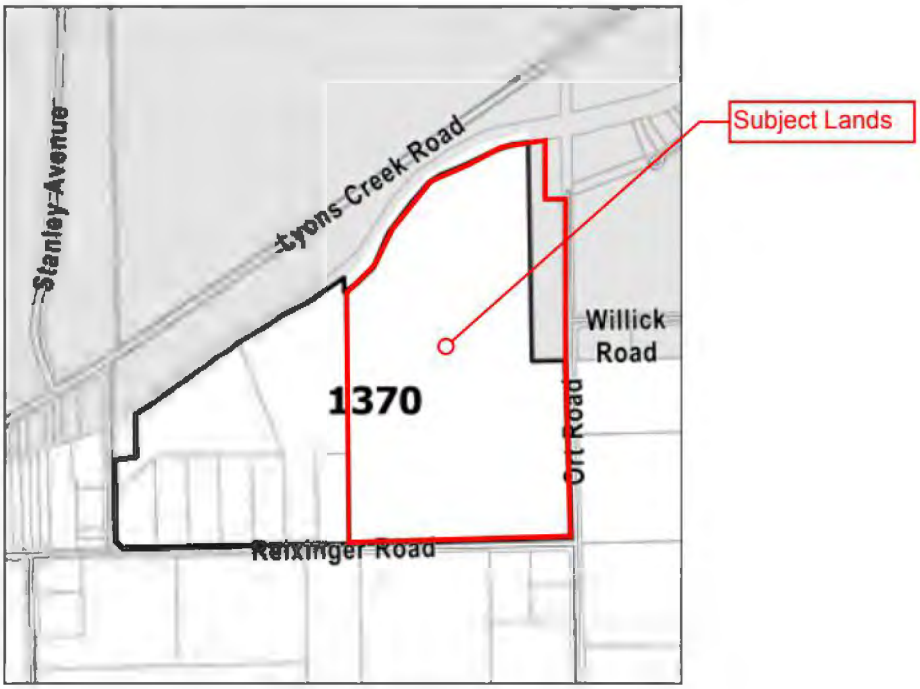


Figure 2: SABR 1370

Assessment Criteria

Sanitary Servicing

Criteria Item	Response	Commentary
What is the capacity to accommodate the parcel or collection of parcels at WWTP during the planning period?	Highly Feasible	Highly Feasiblle - Capacity for the subject lands can be easily accounted for in the design of the new South NF WWTP
Is sanitary servicing available or can it be made available to the lands?	Feasible	Highly Feasible - As lands suitable for development are within the north portion of the site (which are not encumbered by Environmental Protection areas as identified in the Colville report), sanitary sewers can be extended from Lyon's Pkwy and along Ort Road. The new extension can easily service the northern portion of the site without the need to develop a new drainage system to the south and west toward Stanley Ave/Chippawa Creek. Sanitary sewage from the subject lands would be conveyed to the South Side Low Lift SPS which is within the catchment of the future WWTP. CONF are continuing with wet weather reduction measure which

		would be recognized as part of the development requirements.
Will the extension of servicing have any impact on natural environment, including key hydrologic features and areas?	Low Impact	Low Imact - Sanitary sewers can be extended from Lyon's Pkwy along Ort Road to approximately Willick Road (ie: south of the current Urban Boundary to immediately capture the majority of developable lands on the subject property. No impacts to significant natural environments to extend the existing sewers as they are being conveyed across development lands at the west end of Lyons Parkway or within the existing Ort Road ROW to service the boundary of the subject lands. The subject site would not require the construction of infrastructure in a way that would impact lands identified as Environmental Protection Areas as per the Colville report
In relation to sanitary servicing, how feasibly can the parcel support additional urban development in its Watershed through mitigating measures?	Highly Feasible	Highly Feasible - Extension of sanitary sewers to the subject site via Lyon's Pkwy and Ort Rd via a sanitary sewer extension which is currently supported by staff and is in the process of being approved by CONF through a development application at the west end of Lyons Parkway. That sewer extension is a condition of the noted development application as it has been deemed necessary to accommodate development lands on Ort Road.

Municipal Water Supply

Does the existing system have capacity to accommodate the parcel or collection of parcels with municipal water supply during planning period?	Highly Feasible	Highly Feasible - Extension of waterman infrastructure to the subject site via Lyon's Pkwy and Ort Rd is feasible. Further looping/ interconnection with Willick Rd watermain is feasible and will provide redundancy in the system while also providing better flows to the existing mains along Lyons Parkway.
How easily can water supply connection be made?	Highly Feasible	Highly Feasible - Water supply connection and extension is feasible. Further hydrant flow testing and water

		network modelling is recommended to confirm infrastructure extensions can meet site demands in lieu of "additional floating storage" Watermain improvements in Ort Road and Willick road are currently noted for implementation in the 2019 DC Background study.
Will the extension of water servicing have any impact on natural environment, including key hydrologic features and areas?	Low Impact	Low Impact - Watermains can be extended from Lyon's Pkwy to Ort Road, then southerly to the Willick Road intersection, and even further south towards Reixinger Road. No impacts to significant natural environments areas they are existing ROW's. The subject site would not be developed within the onsite Environmental Protection Areas identified in the Colville report. Watermain improvements in Ort Road and Willick roads are currently noted for implementation in the 2019 DC Background study.
In relation to municipal water supply, how feasibly can the parcel or collection of parcels support additional urban development in its Watershed through mitigation or supplemental measures?	Highly Feasible	Highly Feasible _ Extension of watermains to the subject site via Lyon's Pkwy and Ort Rd (and interconnection with Willick Road) can facilitate the inclusion of adjacent lands via further extension. Looping/interconnection with the existing Willick Road watermain will increase viability for further extension towards Reixinger. Suggested watermain size is 250 mm to provide a continuous main size from Lyons Pkwy to Willick Road.

Transit and Transportation

How well can the parcel or collection of parcels access major transportation corridor such as Provincial Highway, Regional Road, rail or marine systems?	Highly Feasible	Highly Feasible - In addition to Lyons Creek Road and Stanley Avenue, the subject site has good access to Sodom Road through Willick Road. Both Lyons Creek Road and Sodom Road have direct access to the Q.E.W.
Can a local road network be incorporated for the parcel or collection of parcels, including consideration of environmental matters?	Highly Feasible	Highly Feasible - Opportunities exist to provide local road connections between the subject site and Ort Road and Willick Road. No connects will be

		provided with Lyon's Creek Parkway as this road will remains as a cul-de-sac.
What is the level of impact to existing road networks and level of service from the addition of the parcel or collection of parcels?	Low Impact	Low Impact - With addition of proposed capacity improvements recommended in the Niagara Region TMP, a cursory review of the major arterial roadway networks indicates that sufficient capacity will be provided to support development of the subject lands out to a 2032 horizon year with room for future traffic growth. RVA acknowledges that the signalization of Lyons Creek Road and Stanley Avenue has been identified in several other traffic studies for proposed developments in the immediate area. Improvements to this intersection would be addressed through larger studies completed for widening of the roadways.
What is the feasibility of extending transit services to the parcel or collection of parcels?	Modest Impact	Modest Impact - In addition to potential on-demand services, ride-hailing services have become increasingly popular in recent years with minimal operational costs. It is anticipated the residents of the subject lands will also use these services
What is the feasibility of extending active transportation facilities to the parcel or collection of parcels	Highly Feasible	Highly Feasible - Sodom Road is also identified as an existing cycling facility within the Niagara Region TMP which stretches from Willick Road to Somerville Road. The TMP also identifies infill connections linking this route to adjacent routes north towards Lyons Creek Road and south toward Netherby Road. Additional active transportation facilities including sidewalks are currently being implemented along Willick Road as part of ongoing development along the north side of this roadway. Connections could be provided between the subject lands and these existing connections. Opportunities also exist for active transportation connections with existing trails within the woodland area on the northeast corner of Ort Road and

		Willick Road and further east on Willick Road.

Extending transit and transportation to the subject lands is highly feasible. The lands have good potential access to the intersection Lyons Creek Rd and Stanley Ave, both of which are Regional roads and to Sodom Road to the east. The SABR assessment review stated that upon review, no constraints have been identified in the context of creating a local road network. It further identified multiple opportunities to access major transportation networks and future built local road networks. While transit services are not currently planned for this area, the development of these lands is appropriate and highly accessible when considering current and future opportunities for transportation and transit connections.

Environmental Protection and Natural Resources

In terms of Provincial Natural Heritage System, how much the parcel or collection or parcels affected/impacted?	Low Impact	Low Impact - Subject site would primarily develop feasible areas in the north portion which are not identified as Environmental Protection Area (Wetland) in the Colville report. Site development area is approximately 11.6 ha of the total 26.4 ha area.
In considering the parcel or collection of parcels in the context of NHS constraints, as part of the broader NHS, what level of feasibility would be represented on the parcel or collection of parcels in gaining access to fragmented development parcels (without existing R.O.W. frontage)?	Highly Feasible	Highly Feasible - Subject site would have access from significant frontage along Ort Road and be a continuous community within the north portion of the property. No constraints related to access for the subject site
With respect to Watershed Planning and the overall health of the respective Watershed, what is the impact should the parcel or collection of parcels be added to the urban area and developed for urban use?	Low Impact	Low Impact - Subject site can provide its own on-site stormwater management for quality control/treatment and water balance measures in accordance with NPCA and MECP criteria. Discharge of stormwater runoff would be to the Lyons Creek, as consistent with the predevelopment site drainage. Storm Water Management for Ort Rd can also be implemented in conjunction with the subject lands to contain a single SW facility and discharge point to Lyons Creek to minimize impacts to any sensitive lands along the water edge. Lyons Creek provides significant habitat for a variety of species.

		However, development on the subject lands can easily be developed to reduce/eliminate negative impacts on the ecological and hydrological functions of Lyons Creek
What is the level of feasibility related to introducing mitigation measures to improve water quality?	Highly Feasible	Highly Feasible - It is highly feasible that the subject site can provide its own on-site stormwater management for quality control and treatment in accordance with NPCA and MECP criteria. The site development area is continuous within the north portion which is not constrained by natural features or Environmental Protection Areas. SWM for Ort Rd can also be implemented in conjunction with the subject lands to contain a single SWM facility and discharge point to Lyons Creek to minimize impacts to lands along the water edge and provide greater efficiency to water quality treatment of the overall area.
With available information concerning species at risk, what level of impact would be experienced if the parcel or collection of parcels were to be added to the urban area and developed for urban purpose?	Low Impact	Low Impact - Subject site would concentrate development primarily on feasible areas in the north portion which are not identified as Environmental Protection Area (Wetland) in the Colville report. Species at risk identified in the Colville report are only present in the southern portion of the site. Lyons Creek is known to provide habitat for a number of species at risk. Development on the parcel will not impact habitat in Lyons Creek or species at risk habitat.
What is the impact of including the parcel or collection of parcels on topography and the ability to minimize significant earthworks that could interfere with hydrogeological function?	Low Impact	Low Impact - The northern portion of the developable Subject Site slopes towards Lyon Creek. Proposed development will respect the existing topography and utilize the natural contours for associated stormwater conveyance. New sanitary sewers extended along Ort Rd would be

		approximately 4m deep to existing grade, therefore sewers can be installed at a suitable depth without the need for extensive earthmoving to provide suitable sewer cover.

This section identifies that according to the Colville Report, approximately 11.6 ha of the subject lands, subject to the normal detailed analysis at the development approval level, can be developed without any adverse environmental impact.

Introducing mitigation measures to improve water quality is highly feasible. Low impact development with mitigation measures will reduce the environmental impact resulting from development. The impact on topography and the ability to minimize earthworks that could interfere with hydrogeological function is minimal due to the modest slope on the site associated with the Lyons Creek Valleyland and proximity to the watercourse.

Even though a portion of the site is identified as Provincial Natural Heritage system, the Colville Consulting analysis to determined that a significant portion of the property is free of constraints. Moreover, the property does not contain any rare vegetation communities, no specialized wildlife habitats, and the northern portion of the property does not contain characteristics to be considered woodland. Please see full report for additional details.

Agriculture Agri-Food Network

As defined by the PPS, using the range provided, how best are the parcel or collection of parcels described?	No Impact	No Impact - Subject site is currently not used for agricultural purposes. As evidenced by site aerial photography in the Colville report, images from 2002 show no agricultural usage onsite
What is the level of impact on active livestock operations and MDS setbacks by including the parcel or collection of parcels in the Urban Area?	No Impact	No Impact - Subject site is currently not used for agricultural purposed. No impact to active livestock operations in the area
What is the impact to the broader Agri-Food Network if the parcel or collection of parcels were Urban Area?	No Impact	No Impact - Subject site is currently not used for agricultural purposes. No impact to the Agri-Food Network

This section identifies that the lands within the SABR are all designated as Prime Agricultural Lands. While there are some active field crop locations at the site, they only modestly contribute to the agri-food network as they only cover approximately half the site. Furthermore, the lands are outside MDS setbacks which would impact development as there are no livestock locations in proximity. As such, there are no anticipated adverse impacts resulting from the land use conversion from Prime Agricultural Land to Urban Land due to the minimal contributions these lands are currently making to the agri-food network.

Aggregate Resources

In terms of distance/separation of sensitive land use, and in the context of Ministry D6 Guidelines, what level of impact on existing or planned Aggregate (Stone and Sand & Gravel) operations can be expected if the parcel or collection or parcels were added to the existing Urban Area Boundary? (Within 300m being Critical and beyond 1000m being Negligible)	No Impact	Negligible impact as stated

Site 1370 is not within 500 m of a known deposit of mineral aggregate resource, nor is it within 1000 m of an existing or proposed mineral aggregate operation. Therefore, it is desirable for development from an aggregate resource standpoint.

Growth Management

Does including the parcel or collection of parcels meaningfully contribute to a complete community?	High Contribution	High Contribution - Subject site will be integrated with the pending low-density developments at the west limit of Lyons Parkway in addition to the completion of the Chippawa west subdivision. Active transportation opportunities will add to the connectivity of the subject lands to the existing and proposed residential communities in addition to the Chippawa West subdivision to the east. The subject site represents the continuation of urbanization of the remaining lands north of Willick Road and south of Lyons Creek. Criteria Response for the specific subject site should be considered as Higher Contribution.
Does inclusion of the parcel or collection of parcels represent a favourable way to achieve the outcome of the Region-identified land needs?	High Favourability	High Favourability - Similar to the above response, the subject site in isolation represents a feasibly developable low-density residential parcel. It readily integrates with the lands to the east. Criteria Response for the specific subject site should be considered a High Contribution
What are the planning impacts on neighboring or nearby lands by including the	Low Impact	Low Impact - The subject site lands and northern portion developable area can be regarded in isolation from other (southern

parcel or collection of parcels in the urban area?		and westerly) parcel in SABR 1370. The subject lands will be integrated into the developed community to the east and will be serviced without relying on adjacent sites to the west.

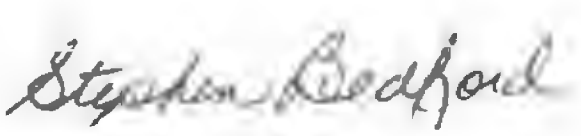
Conclusion
The subject lands, the eastern portion of SABR 1370 has been evaluated several times in the past for its incorporation into the City of Niagara Falls Urban Boundary. It is a natural addition to the urban boundary at the eastern terminus of Willick Ave which connects this property to the urban development to the east. The wetland boundary to the south and west, as well as the watercourse along the western property boundary creates a more natural conclusion to the urban boundary in this area than Ort Rd.

Pedestrian connections to the east as part of a planned walkway system is already available. Its 300m of frontage along Ort Rd is already included within the Urban Boundary and plans are in place at the City of Niagara Falls to provide water and sanitary sewer services to the property. The planned transportation network to service all the development north of Willick Rd. and east of the subject property will be adequate to service this property.

There has been concern that environmental constraints will inhibit the development of these lands. The present environmental analysis and future analysis during the development process will protect the environmentally constrained portions of the property and provide for the appropriate and sensitive development of the unconstrained balance of the lands. The developable portion (11.6 ha) of this property is immediately adjacent to and accessible to the urban designated and future serviced lands along Ort Rd.

It is recommended that the subject lands, the eastern portion of SABR 1370 be incorporated into the City of Niagara Falls Settlement Area Boundary.

Yours truly,



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NATURAL HERITAGE CHARACTERIZATION & CONSTRAINTS ANALYSIS
9265 ORT ROAD AND ADJACENT LANDS,
CITY OF NIAGARA FALLS

Prepared for:

Mr. Jason Wood

Prepared by:

Colville Consulting Inc.

C19027
January 2022

COLVILLE CONSULTING INC.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

1.0 INTRODUCTION

Colville Consulting Inc. was retained by Mr. Jason Wood to prepare a natural heritage characterization and constraints analysis for the lands located at 9265 Ort Road and Part Lot 1, BF on Chippawa Creek, City of Niagara Falls, henceforth referred to as the Subject Property. This report is intended to summarize the results of field inventories conducted on the Subject Property and characterize natural heritage features currently on and adjacent to the property. A development plan for the property has not been prepared, and therefore this report is intended to identify any natural heritage features that should be considered during the planning of future development on the property. This report will also serve to assess current designations on the property, as well as recommend any required modifications to designations.

1.1 Subject Lands

The Subject Property is approximately 26.75ha (66.10 acres) in size and generally rectangular in shape, except on the northern portion that fronts onto Lyons Creek. The Subject Property is located at and directly southwest of 9265 Ort Road, in the City of Niagara Falls (see Figure 1). Surrounding land use consists of Lyons Creek to the north, residential uses to the east, including the ongoing construction of a residential subdivision, vacant lands to the south and a small agricultural field to the west. Historical air photos indicate that the northern portion of the property was used as farmland and an apple orchard for decades (up until at least 1969), with the southern portion of the property treed. Most of the Subject Property has not been assigned a municipal address and the only buildings or structures present are a house and workshop fronting onto 9265 Ort Road

Based on our review of background mapping, it is our understanding that the majority of the Subject Lands have been designated as Significant Woodland by the Niagara Region and the City of Niagara Falls, with the southern portion of the lands also containing a portion of the Lyons Creek Provincially Significant Wetland Complex (PSW). Although not mapped, it is also possible that a portion of these lands may contain Significant Wildlife Habitat. The woodland on and adjacent to the Subject Lands has been designated as an Environmental Conservation Area (ECA) in the Niagara Region and City of Niagara Falls Official Plans. The PSW has been designated as Environmental Protection Area (EPA), as well as an area regulated by the Niagara Peninsula Conservation Authority (NPCA). The extent of mapped natural heritage features is illustrated in Figure 2.

1.2 Description of Proposed Development

A development plan for the Subject Property has yet to be prepared, and therefore the intent of this project is to delineate the extent of potential natural heritage features on the property, in order to assist with guiding future development on the property. It is also the intent of this project to verify the extent of any lands which should be designated as ECA or EPA.

Figure 1

Location of Subject Property

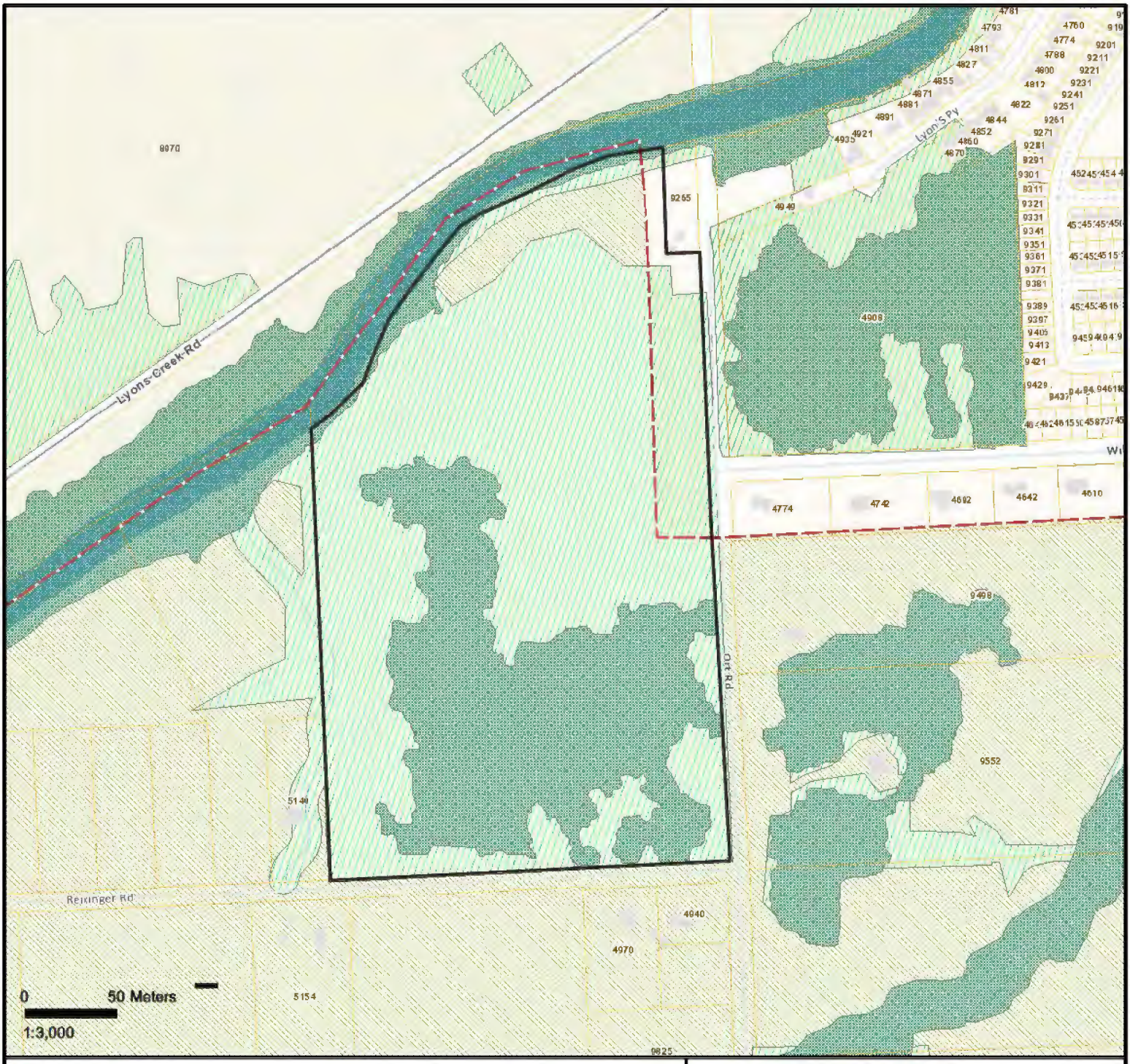
Environmental Impact Study
9265 Ort Road & Adjacent Lands

Prepared for: **Mr. Jason Wood**

Prepared by: COLVILLE CONSULTING INC.

January 2022

FILE: C19027



Legend

- Property Boundaries
- Area Within Urban Boundary
- Environmental Conservation Area (Woodland)
- Environmental Protection Area (Wetland)
- Good General Agriculture Designation

Note: Any blank, white space within the Urban Boundary area that does not have a specified designation, is designated Residential.

Figure 2
Mapped Natural Heritage Features and Designations on and adjacent to the Subject Lands

Environmental Impact Study
9265 Ort Road & Adjacent Lands

Prepared for: **Mr. Jason Wood**

Prepared by: COLVILLE CONSULTING INC.

Date: January 2022

File: C19027

2.0 STUDY APPROACH

2.1 Background Review

Prior to the commencement of primary field inventories, a review of background material available for the Subject Lands and surrounding area was conducted. Some of the background information reviewed included:

- City of Niagara Falls Official Plan (amended in 2019);
- Niagara Region Core Natural Heritage Map (ROM 2008);
- Ontario Ministry of Natural Resources and Forestry (MNRF) Species at Risk List for the City of Niagara Falls (MNRF 2018);
- Background data available from the Niagara Peninsula Conservation Authority (NPCA) and MNRF
- Niagara Natural Areas Inventory (NPCA 2010); and
- Air photos of the property from 1934 to 2020 via Google Earth Pro and Brock University Air Photo Library

2.2 Field Inventories and Methodology

In order to identify potential natural heritage constraints on and adjacent to the Subject Property, the following inventories and assessments were completed:

1) A two-season inventory of the vegetation within the Subject Property;
2) Description of vegetation communities on the Subject Lands using the Ecological Land Classification System for Southern Ontario (ELC);
3) Breeding bird surveys on and adjacent to Subject Lands;
4) An assessment of any potential bat roosting habitat on the Subject Property;
5) Active hand searches for reptiles and amphibians in suitable habitat areas on the Subject Lands;
6) Species at Risk Screening; and
7) Assessment of Significant Wildlife Habitat.

The methods employed for each of the above components are provided in the appropriate sections below.

3.0 STUDY FINDINGS

3.1 Botanical Inventories and Vegetation Mapping

Botanical inventories of the Subject Lands were conducted on the on July 28 and October 19, 2019. Vegetation communities (ELC units – following Lee et al. 1998) were mapped and described, and a vascular plant checklist was compiled. Species status was assessed for Ontario (Oldham and Brinker 2009) and the Niagara Region (Oldham 2010). Vegetation communities are described below and illustrated on Figure 3. A vascular plant checklist is provided in Appendix B. Photos of the property are provided in Appendix C.

3.1.1 Botanical Inventories

A total of 158 plant species were documented on and adjacent to the property during botanical inventories. One of these species (American Water Willow) is considered Threatened. Three large floating beds of American Water Willow are located along the shoreline of Lyons Creek on the Subject Property. The locations are noted on Figure 3.

Two provincially rare species were observed during the field visits. They are Green Arrow-arum (S2) and Smartweed Dodder (S1). Both species were abundant along the open water edge of the Shallow Marsh associated with Lyons Creek.

Five locally rare plant species were also observed in the Shallow Marsh and Mixed Shallow Aquatic vegetation communities associated with Lyons Creek. They are Marsh Bellflower, Marsh Cinquefoil, Pickerel-weed, Swamp Loosestrife, and Swamp Dock. All were occasional to abundant in these wetland areas.

Three locally uncommon species were noted in the Shallow Marsh and Floating-leaved Aquatic Community. They are Bristly Sedge, Fragrant White Water-lily and Water Smartweed.

3.1.2 Vegetation Communities

A number of provincially significant vegetation communities occur along the shoreline of Lyons Creek, along with the federally and provincially Threatened American Water Willow. This significant coastal wetland habitat meets the steep bank of the Lyons Creek floodplain. From here, the steep floodplain slope and adjacent tableland support upland successional thickets and woodlands, which are regenerating on an old apple orchard and agricultural lands. The southernmost portion of the Subject Lands supports mature forested swamp, which extends to the south property line at Rexinger Road. As well, a linear forested swamp occurs along a depression on the tableland inland from the top of bank along the Lyons Creek. These communities are described in more detail below and the extents illustrated in Figure 3.

Hawthorn Deciduous Shrub Thicket Type (THDM2-11)/Fresh - Moist Deciduous Woodland Ecosite (WODM5)

Located along the slopes of the Lyons Creek floodplain and on the tableland is a complex of Hawthorn Deciduous Shrub Thicket Type and Fresh - Moist Deciduous Woodland Ecosite. Canopy coverage in this community is variable, ranging from 5 – 40% canopy cover. The canopy of this community contains scattered Green Ash, White Elm, Red Maple and Pin Oak, with the sub-canopy layer consisting primarily of Hawthorns (Dotted and Downy), Buckthorns (Common and Glossy Buckthorn), Green Ash and White Elm. This community also contains a number of declining/dead apple trees, which are remnant from the previous apple orchard that occurred on a portion of the property until at least 1969.

The dense shrub layer is dominated by Buckthorn and Grey Dogwood, with Ash saplings and occasionally Hawthorn, Honeysuckle and trailing vines of Riverbank Grape. The ground layer forms greater than 60% cover and is dominated by Rough Goldenrod, Panicled Aster, Poison Ivy, Wild Strawberry, Graceful Sedge and mosses, with wetter patches of Jumpseed, Fowl Mana Grass and White Avens. Open areas support Tall Goldenrod and more shaded upland areas support an abundance of Enchanter's Nightshade and Common Cinqfoil.

Fresh - Moist Oak - Maple - Hickory Deciduous Forest Type (FOD9)

Located on the peripheries of the Red Maple Deciduous Swamp is a community described as Fresh - Moist Oak - Maple - Hickory Deciduous Forest Type. Tree species forming the canopy of this community include Red Maple, Sugar Maple, Shagbark Hickory, Green Ash and White Elm. The sub-canopy supports an abundance of Red Maple, Sugar Maple, Green Ash and White Elm. The shrub layer is dominated by Grey Dogwood and Buckthorn shrubs. Jumpseed, Fowl Mana Grass and White Avens occur in the ground layer.

Red Maple Mineral Deciduous Swamp (SWD3-1) with complexes of Broad-leaved Sedge Mineral Shallow Marsh Type (MAS2-4) and Pin Oak Mineral Deciduous Swamp Type (SWD1-3)

Located on the southern portion of the property is a mature forested swamp dominated by Red Maple, with Swamp Maple, Pin Oak, Swamp White Oak and Green Ash as common associates in the canopy. The sub-canopy supports an abundance of Green Ash, White Elm, Pin Oak and Red Maple. The shrub layer is dominated by Green Ash and White Elm saplings, with Grey Dogwood and Buckthorn shrubs.

Green Ash and Buckthorn seedlings are abundant in the ground layer, along with Rough Goldenrod, Panicled Aster, Jumpseed, White Avens, Fowl Mana Grass, Spotted Touch-me-not, Poison Ivy, Thicket Creeper and Enchanter's Nightshade.

Throughout this mature forested swamp are numerous slough ponds, that most often support Broad-leaved Sedge Mineral Shallow Marsh (MAS2-4) and stands of Pin Oak Mineral Deciduous Swamp Type (SWD1-3). These small, repeating vegetation communities were not mappable and instead included as complexes.

A smaller stand of Red Maple Mineral Swamp occurs in a shallow depression inland from the top of bank along Lyons Creek. Red Maple and Eastern Cottonwood trees form a closed canopy, with more that 60% cover. A number of Pin Oaks and White Willow trees were also noted. Red Maple, Green Ash and White Elm form the open sub-canopy layer. In the open shrub or regeneration layer, Green Ash saplings and Buckthorn occurs. Surrounding vernally flooded areas are and abundance of Rough Goldenrod, Panicled Aster, Sedge species, White Avens, Fowl Mana Grass, Jumpseed and Poison Ivy forming the ground layer.

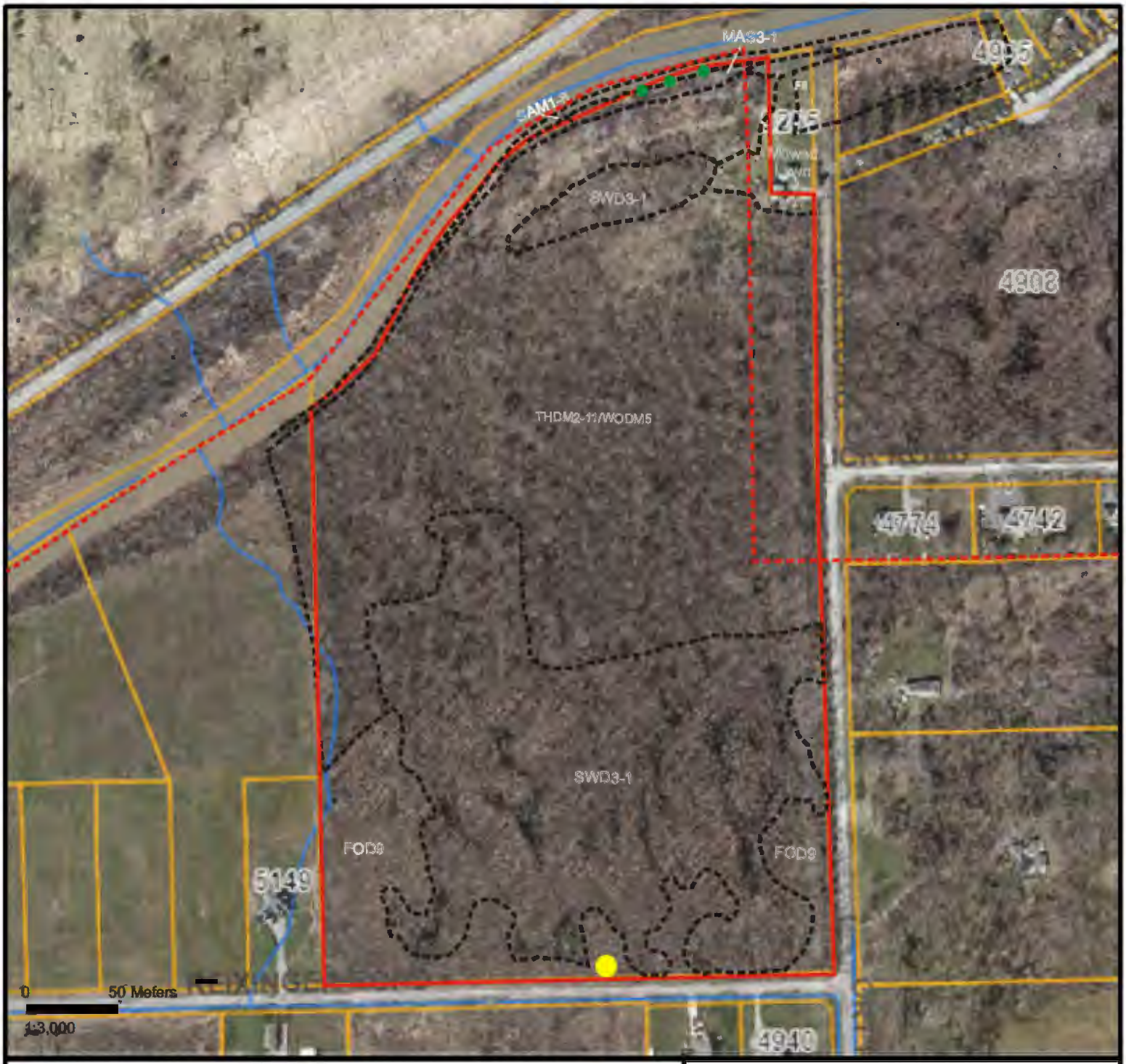
Water Lily - Bullhead Lily Mixed Shallow Aquatic Type (SAM1-8)

Just north of the Subject Lands, occurring in the open water channel of Lyons Creek, is the Water Lily - Bullhead Lily Mixed Shallow Aquatic Type (SAM1-8). Here, a mix of submerged aquatic plants and floating leaves of the White Water Lily meet a band of the provincially rare emergent plant, Green Arrow Arum - which can be found at the interface of the open water line and the adjacent Shallow Marsh community.

Cattail Organic Shallow Marsh (MAS3-1) with a complex of Water Willow Organic Shallow Marsh Type (MAS3-12)

Occurring from the water line of Lyons Creek, inland to the base of the steep floodplain valley slope, is a narrow band of Cattail Organic Shallow Marsh. Here, Narrow-leaved Cattail co-dominates with Canada Blue-joint. In the lower layer is an abundance of Spotted Touch-me-not and occasionally, taller forbs of Purple Loosestrife.

Along the open water edge of this community, at the waterline, are patches or beds of Water Willow (Swamp Loosestrife), mixed with Iris, Green Arrow-arum and some floating leaves of White Water Lily. This provincially uncommon vegetation type was too narrow and patchy to map, so it is included here as a complex and classifies as a Water Willow Organic Shallow Marsh Type (MAS3-12). Of note, also along the open water line, are three large beds of the federally and provincially threatened American Water Willow. It was growing with Canada Blue-joint, Water Willow (Swamp Loosestrife), Marsh Cinqfoil and Swamp Rose.



Legend

	Property Boundaries
	Urban Boundary
FOD9	Fresh - Moist Oak - Maple - Hickory Deciduous Forest Type
THDM2-11	Hawthorn Deciduous Shrub Thicket Type
MAS3-1	Cattail Organic Shallow Marsh
SAM1-8	Water Lily - Bullhead Lily Mixed Shallow Aquatic Type
SWD3-1	Red Maple Mineral Deciduous Swamp
WODM5	Fresh - Moist Deciduous Woodland
	Locations of American Water Willow
	Watercourses
	Location of Amphibian Survey Station

Figure 3
Vegetation Communities on the Subject Properties

Environmental Impact Study
9265 Ort Road & Adjacent Lands

Prepared for: **Mr. Jason Wood**

Prepared by: COLVILLE CONSULTING INC.

January 2022

File: C19027

3.2 Wildlife and Wildlife Habitat

3.2.1 Breeding Bird Survey

Breeding bird surveys were conducted on June 17 and July 8, 2019 to inventory breeding birds on and adjacent to the Subject Lands. Surveys were completed at least 15 days apart, under suitable weather conditions with little to no wind or precipitation. Surveys of the Subject Lands were completed between dawn and no later than 10:00am. All birds seen or heard calling were recorded and the highest breeding evidence per species was determined in accordance with the criteria of the Atlas of the Breeding Birds of Ontario (Cadman et al. 2007).

A total of 37 species of birds were observed or heard on or above the Subject Property. According to Ontario conservation status ranks (S-rank) designations, with the exception of 1 non-native species, all other recorded species are considered to be "secure" (S5 - common, widespread and abundant) or "apparently secure" (S4 - uncommon but not rare) in the province of Ontario. The recorded species are also considered to be very common to common permanent or summer residents in the Niagara Region with the exception of the uncommon summer resident Blue-winged Warbler, Cuckoo species, Eastern Towhee, Sharp-shinned Hawk, Swamp Sparrow, Wood Thrush, uncommon permanent resident Carolina Wren, Red-bellied Woodpecker and rare permanent resident Tufted Titmouse (Niagara Natural Areas Inventory, 2010).

Eastern Wood-pewee was heard calling on the first site visit in the woodland and thicket communities on the Subject Property and on the second site visit from the Red Maple swamp. This species is designated as Special Concern in Ontario and is also designated as Special Concern in Canada.

Wood Thrush was heard calling on the first site visit in the thicket and woodland community and from the Red Maple Swamp on the second site visit. Wood Thrush is designated as Special Concern provincially and federally.

Table 1. Results of Breeding Bird Surveys.

Species	S Rank	Niagara Status*	Subject Property	Adjacent Lands	Highest Breeding Evidence**	Breeding Code***
American Crow	S5B	C R	X		PO	H
American Goldfinch	S5B	C R	X	X	PO	S
American Robin	S5B	VC R	X	X	PR	A
Baltimore Oriole	S4B	C R	X	X	PO	S
Black-capped Chickadee	S5	C P	X		PO	S
Blue Jay	S5	VC P	X		PO	H
Blue-winged Warbler (seen)	S4B	U R	X		PR	A
Brown-headed Cowbird	S4B	VC R	X		PO	S
Carolina Wren	S4	U P	X		PO	S
Cedar Waxwing	S5B	C R	X		PO	H
Common Grackle	S5B	VC R	X	X	PO	H
Common Yellowthroat	S5B	C R	X		PR	A
Cuckoo species (heard)	S4B/S5B	U R	X		PO	S
Downy Woodpecker	S5	C P	X		PO	S
Eastern Kingbird	S4B	C R	X		PO	H
Eastern Towhee	S4B	U R	X		PR	N
Eastern Wood-pewee	S4B	C R	X	X	PO	S
European Starling	SNA	VC P	X		PO	H
Gray Catbird	S4B	C R	X	X	PR	A
Great Crested Flycatcher	S4B	C R	X		PO	S
Mallard	S5	C R	X	X	PO	H
Mourning Dove	S5	VC R	X		PO	H
Northern Cardinal	S5	C P	X		PO	S
Northern Flicker	S4B	C R	X		PO	S
Ovenbird	S4B	DD	X	X	PO	S
Red-bellied Woodpecker	S4	U P	X		PO	S
Red-eyed Vireo	S5B	C R	X		PO	S
Red-winged Blackbird	S4	VC R	X		PR	A
Ring-billed Gull	S5B,S4N	VC R	X		OBS	X
Rose-breasted Grosbeak	S4B	C R	X		PR	A
Sharp-shinned Hawk	S5	U R	X	X	PO	H
Song Sparrow	S5B	VC R	X		PO	S
Swamp Sparrow	S5B	U R	X		PO	S
Tufted Titmouse	S4	R P	X	X	PO	S
Warbling Vireo	S5B	C R	X		PR	A
Wood Thrush	S4B	U R	X	X	PO	S
Yellow Warbler	S5B	C R	X		PR	A

* VC – very common; C – common; U – uncommon; UR – Uncommon to rare; O – Occasional; P – permanent resident; R – summer resident; S - Straggler (Niagara Natural Areas Inventory, 2010).

** OBS – observed, no evidence of breeding; PO – possible breeding; PR – probable breeding; CO - confirmed breeding

*** X – observed in its breeding season, no evidence of breeding

H – species observed in its breeding season in suitable nesting habitat

S – singing male present in its breeding season in suitable nesting habitat

P – pair observed in their breeding season in suitable nesting habitat

A – agitated behavior or anxiety calls of an adult
T – permanent territory presumed through registration of territorial song or presence of adult bird in breeding habitat on at least 2 days, one week or more apart at the same place
FS – adult carrying fecal sac; FY – recently fledged young
CF – adult carrying food for young
NY – nest with young

3.2.2 Assessment of Potential Bat Roosting Habitat

During the summer, the Little Brown Myotis, Northern Myotis, Eastern Small-footed Myotis and Tri-coloured Bats are found in a variety of forested habitats, as well as abandoned buildings, barns and attics. In forested habitats, cavities in trees, loose bark, foliage and other cover objects are used for roosting. These species forage in a variety of habitats where flying insects and spiders are present, often in association with wetlands, ponds and streams. Overwintering typically occurs in caves.

An assessment of potential bat roosting habitat was conducted on May 15, 2019 using methods described in MNRF (2017). The site visits were intended to inventory any potential roosting habitat on the property. From our observations, potential roost trees were present within the older woodland and wetland community on the south end of the property. Potential roosting habitat is available is scattered cavity trees, as well as under the bark of dead Ash trees and Shagbark Hickory trees. Loose bark were noted on several dead small diameter Ash trees in the thicket and woodland community on the property, however these trees do not appear to provide any significant roosting opportunities for bats.

3.2.4 Amphibian Call Surveys

Amphibian call surveys were conducted on April 8, May 16, and June 18, 2019. One survey location was established to assess amphibian use of the wetland on the southern portion of the property (see Figure 3). The station was surveyed for a period of three minutes, between one half-hour after sunset, and midnight. All species of calling amphibians were recorded along with a calling code (0 – no calling; 1-calls not overlapping, can be discretely counted; 2 – calls overlapping, but numbers of individuals can still be estimated; 3 – full chorus, numbers of individuals cannot be estimated), along with an estimate of the number of individual amphibians where possible.

The amphibian survey conducted on April 8, 2019 commenced at approximately 21:30. Air temperature during the April 8, 2020 survey was 6°C, with overcast sky and light winds. The May 16, 2019 visit began at approximately 23:40, while the air temperature was 11°C, winds were light and the sky was clear. The final amphibian survey was completed on June 19, 2019, beginning at approximately 23:15. The air temperature was 18°C with clear sky and little wind during the survey.

Table 2. Results of amphibian call surveys.

		Western Chorus Frog	Grey Treefrog
Station 1	April 8, 2019	2-7	-
	May 16, 2019	-	1-4
	June 19, 2019	-	-

*Numbers in cells represent (calling code – estimated numbers).

3.2.4 Wildlife Observations

Incidental wildlife observations including tracks and sign (i.e. scat, hair, etc.) were recorded during each visit to the Subject Lands, which occurred on May 15, June 6, June 17, July 8, July 28, October 19 and November 4, 2019 and October 5 and December 21, 2021. Incidental wildlife observations (including signs) include: Bullfrog, Eastern Cottontail, Green Frog, Grey Squirrel, Midland Painted Turtle, Racoon, White-tailed Deer and Coyote.

Incidental insect observations including signs were recorded during both breeding bird survey visits. Observations include: Ants (Formicidae), Butterfly (Lepidoptera), Cricket (Gryllidae), Deer Fly (Chrysops), Dragonfly (Odonata), Emerald Ash Borer (*Agrilus planipennis*), Grasshopper (Acrididae), Mosquito (Culicidae), Moth (Lepidoptera), American Dog Tick (*Dermacentor variabilis*) and Spittlebug (Cercopidae).

3.3 Fish Habitat

As illustrated and described above, the Subject Property is bound by Lyons Creek to the north. Lyons Creek is a tributary to the Welland River, which is managed as Type 1 Fish Habitat and is providing habitat for a variety of warmwater fish species. Available habitat and the fish community in Lyons Creek is well documented, and therefore we did not conduct any primary assessments of this area.

Background mapping available from the NPCA also indicates that a small tributary to Lyons Creek is partially located on the west side of the property. This watercourse functions as an ephemeral drainage, conveying water from the Subject Property to Lyons Creek. The portion of this watercourse on the property measures approximately 150m in length, with the watercourse length approximately 300m in overall length. The watercourse channel is generally poorly defined on the property, and varies in width from 0.6-1.1m. Due to the limited hydroperiod, this watercourse is providing a simple contribution function to fish habitat in Lyons Creek.

4.0 ASSESSMENT OF SIGNIFICANT NATURAL HERITAGE FEATURES

4.1 Species at Risk

4.1.1 Significant Habitat of Endangered and Threatened Species

No Endangered species were documented on the property during our surveys and Threatened species were limited to American Water Willow located within Lyons Creek. The American Water-willow grows along the shores and in the waters of streams, rivers, lakes, ditches, with a large portion of the Ontario population occurring within Lyons Creek. Shoreline disturbance associated with hydro-related water level fluctuations appears to limit competition for this species in Lyons Creek.

As part of our assessment of this property we completed a search of information available from the Natural Heritage Information Center (NHIC). Data available indicates that Endangered Species know to occur in the vicinity of the property include Round Hickorynut and Eastern Pondmussel. Potential habitat for these species would be limited to Lyons Creek, adjacent to the property.

Threatened species known to occur in the vicinity of the property are limited to Eastern Meadowlark. No habitat for this species is present on the property.

In addition to the NHIC data search, a Species at Risk Screening completed for the property (see Appendix D) indicates that suitable roosting habitat for SAR bats are located on the property, within the older woodland on the property. The Species at Risk Screening also indicates that suitable habitat for Blanding's Turtles is located in Lyons Creek.

4.1.2 Other Potential Species of Conservation Concern

Two Species of Special Concern (Eastern Wood-pewee and Wood Thrush) were documented during our survey work. Both species were heard calling during the first and second breeding bird surveys from the Subject Property. The approximate documented locations of these species are illustrated in Figure 3.

In addition to the above, Special Concern species know to occur in the vicinity of the property include Grass Pickerel and Snapping Turtle. Potential habitat for both these species is present in Lyons Creek.

The Species at Risk Screening completed for this property indicates that potential breeding habitat for Redheaded Woodpecker is present on the southern portion of the property, although this species was not documented on the property during surveys. This screening also indicates that Lyons Creek is likely providing habitat for Snapping Turtles.

4.2 Significant Wildlife Habitat

An assessment of Significant Wildlife Habitat is included in Appendix E.

4.2.1 Seasonal Concentration Areas of Animals

The Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E identifies 14 types of seasonal concentrations of animals that may be considered significant wildlife habitat. These include, but are not limited to:

- Waterfowl Stopover and Staging Areas (Aquatic and Terrestrial);
- Shorebird Migratory Stopover Area;
- Raptor Wintering Area;
- Bat Hibernacula;
- Bat Maternity Colonies;
- Turtle Wintering Areas;
- Reptile Hibernaculum;
- Colonially -Nesting Bird Breeding Habitat (Bank and Cliff);
- Colonially -Nesting Bird Breeding Habitat (Tree/Shrubs);
- Colonially -Nesting Bird Breeding Habitat (Ground);
- Migratory Butterfly Stopover Areas;
- Landbird Migratory Stopover Areas; and
- Deer Winter Congregation Areas.

Seasonal concentration areas are typically designated as significant wildlife habitat if an area supports a species at risk or a large population may be lost if the habitat is destroyed.

Habitat present within the FOD9 and the south SWD3-1 communities are assumed to be providing potential roosting habitat for bats. Since the south SWD3-1 community is afforded protection as a PSW, acoustic monitoring was not completed as part of this project to verify the presence of maternal colonies.

4.2.2 Rare Vegetation Communities

Rare vegetation communities often contain rare species, which depend on such habitats for their survival and cannot readily move to or find alternative habitats. Those areas that qualify as rare habitats are assigned a SRank of S1, S2 or S3 by the Natural Heritage Information Center.

The Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E identifies 7 specialized habitats that may be considered significant wildlife habitat. They are:

- Cliffs and Talus Slopes;
- Sand Barren;
- Alvar;
- Old Growth Forest;
- Savannah;
- Tallgrass Prairie; and
- Other Rare Vegetation Communities.

No rare vegetation communities are present on or adjacent to the Subject Property.

4.2.3 Specialized Habitats of Wildlife considered SWH

Some wildlife species require large areas of suitable habitat for their long-term survival and many wildlife species require substantial areas of suitable habitat for successful breeding. Their populations are at risk of decline when habitat becomes fragmented or reduced in size.

Specialized habitats for wildlife include:

- Waterfowl Nesting Area;
- Bald Eagle and Osprey Nesting, Foraging and Perching Habitat;
- Woodland Raptor Nesting Habitat;
- Turtle Nesting Areas;
- Seeps and Springs;
- Amphibian Breeding Habitat (Woodland);
- Amphibian Breeding Habitat (Wetlands); and
- Woodland Area-Sensitive Bird Breeding Habitat.

Our assessments indicate that no specialized habitats for wildlife are present on the Subject Property.

4.2.4 Habitats of Species of Conservation Concern considered SWH

Habitats of Species of Conservation Concern include wildlife species that are listed as Special Concern or rare, that are declining, or are featured species. Habitats of Species of Conservation Concern do not include habitats of Endangered or Threatened species as identified by the Endangered Species Act.

The following habitats are considered candidate SWH:

- Marsh Breeding Bird Habitat;
- Open Country Bird Breeding Habitat;
- Shrub/Early Successional Bird Breeding Habitat;
- Terrestrial Crayfish; and
- Special Concern and Rare Wildlife Species.

As described above, an Eastern Wood-pewee and Wood Thrush were heard calling from the property during both breeding bird surveys. The approximate locations of these individuals are illustrated in Figure 3. Since these species establish and defend breeding territories, and these species were documented in the same vicinity both visits, it is assumed these observations represent breeding pairs which are utilizing portions of the property.

4.2.5 Migration Corridors

The SWHTG defines animal movement corridors as elongated, naturally vegetated parts of the landscape used by animals to move from one habitat to another. To qualify as significant wildlife habitat, these corridors should be a critical link between habitats that are regularly used by wildlife.

From our review of background mapping, it is likely that the portion of the property associated with Lyons Creek could be forming part of a migration corridor associated with Lyons Creek. Since the thicket and woodland communities on this property south of Lyons Creek do not appear to be functionally connected to natural areas south of the property, the majority of this property does not form part of a migration corridor.

4.3 Provincially Significant Wetlands

As illustrated in Figure 2, a portion of the Lyons Creek Provincially Significant Wetland Complex has been identified on the southern portion of the Subject Property, as well as in association with Lyons Creek. The wetland on the southern portion of the property generally coincides with the SWD3-1 community on the property. The preliminarily refined extent of the wetland follows the SWD3-1 community and is illustrated in Figure 4.

Our assessment of the property also indicates that a narrow band of wetland vegetation occurs adjacent to Lyons Creek. The wetland associated with Lyons Creek has been refined to follow the extent of the Cattail Organic Shallow Marsh and Water Willow Organic Shallow Marsh.

4.4 Significant Woodlands

Based on our assessment, vegetation over the northern portion of the property consists primarily of a complex of thicket and woodland. Canopy cover in the majority of this community is not sufficient to be considered woodland.

Our assessment indicates that the southern portion of the property consists primarily of forest and treed wetland communities. As a result, this portion of the property does meet the criteria to be considered woodland. The refined extent of the woodland is illustrated in Figure 4.

As indicated in Policy 7.B.1.5 of the Niagara Region Official Plan, to be identified as significant, a woodland must meet one or more of the following criteria:

a) Contains threatened or endangered species or species of concern;
b) In size, is equal to or greater than:
    a. 2 hectares, if located within or overlapping Urban Area Boundaries;
    b. 4 hectares, if located outside Urban Areas and north of the Niagara Escarpment;
    c. 10 hectares, if located outside Urban Areas and south of the Escarpment;
c) Contains interior woodland habitat at least 100 metres in from the woodland boundaries;
d) Contains older growth forest and be 2 hectares or greater in area;
e) Overlap or contain one or more of the other significant natural heritage features listed in Policies 7.B.1.3 or 7.B.1.4 (i.e. an evaluated wetland); or
f) Abut or be crossed by a watercourse or water body and be 2 or more hectares in area.

Based on our assessment, the FOD9 and south SWD3-1 community on this property satisfies the Species of Concern, size, older growth, other features and proximity to watercourse criteria listed above. See Table 3 below. The refined extent of the Significant Woodland on and adjacent to the property is illustrated in Figure 4.

Legend

- Property Boundaries
- Urban Boundary
- Watercourses
- Refined Extent of PSW
- Refined Extent of Significant Woodlands

Figure 4
Refined Extent of Natural Heritage Features on the Subject Property

Environmental Impact Study
9265 Ort Road & Adjacent Lands

Prepared for: **Mr. Jason Wood**

Prepared by: COLVILLE CONSULTING INC.

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Table 3: Assessment of Significant Woodland Criteria.

Criteria	Representation in Woodland	Conclusion
Endangered or Threatened species or Species of Concern	Eastern Wood-pewee and Wood Thrush present in the thicket and woodland on southern portion of the property.	Criteria satisfied
Size	Woodland on and adjacent to property approximately 11ha in size.	Criteria satisfied
Interior Habitat	No functional interior habitat present on the property. Only a small portion of the woodland on the property is more than 100m from a woodland edge.	Criteria not satisfied
Older Growth	Woodland on the southern portion of the property not previously cleared for agriculture. Older woodland present.	Criteria satisfied
Other Natural Heritage Features	Deciduous forest also designated as PSW and likely providing Significant Wildlife Habitat (bat roosting habitat and habitat for Eastern Wood-pewee and Wood Thrush).	Criteria satisfied
Watercourses or Waterbodies	A small intermitted watercourse is located on the west side of the woodland.	Criteria satisfied

5.0 ENVIRONMENTAL POLICY

The intent of this assessment is to verify and refine the extent of natural heritage features on the property. As illustrated in Figure 2, portions of the property have been designated as PSW and Significant Woodland in the Niagara Region and City of Niagara Falls Official Plans, as well as lands regulated by the NPCA. The following is summary of polices applicable to natural heritage features on the property.

5.1 Niagara Region Official Plan

Regional Policy Plan Amendment 187 was approved by the Ontario Municipal Board on April 16, 2008, and is an update to Section 7 (Enviroumental Policy) of the Regional Niagara Policy Plan (2007). This amendment generally conforms to Section 2.1 of the PPS.

Among other important environmental considerations, the policies address the Region's natural vegetation and wildlife, water resources, landforms, geology and soils, and core natural heritage features such as woodlands, wetlands and fish habitat. Those natural areas considered to be of provincial importance, as identified in the PPS, are identified in the Region's Core Natural Heritage System. The following components are identified in the Region's Core Natural Heritage System:

a) Core Natural Areas which are classified as Environmental Protection Areas (EPA) and Environmental Conservation Areas (ECA);

b) Potential Natural Heritage Corridors connecting the Core Natural Areas;

c) Greenbelt Natural Heritage and Water Resources System; and

d) Fish Habitat (this includes key hydrologic features).

The Niagara Region Official Plan indicates that Environmental Protection Areas (EPA) include provincially significant wetlands, provincially significant Life Science ANSI's and significant habitat of endangered and threatened species.

Environmental Conservation Areas (ECA) include: significant woodlands; significant wildlife habitat; significant habitat of species of concern; regionally significant Life Science ANSIs; other evaluated wetlands; significant valleylands; savannahs and tallgrass prairies; alvars; and publicly owned conservation lands.

As per Policy 7.B.1.10, development and site alteration are generally not permitted within Environmental Protection Areas. Further, Policy 7.B.1.11 states that development and site alteration may be permitted in Environmental Conservation Areas and on adjacent lands to Environmental Protection and Environmental Conservation Areas, if it has been demonstrated that there will be no significant long term negative impacts on the Core Natural Heritage System component or adjacent lands and the proposed development or site alteration is not prohibited by other Policies of the OP.

5.2 City of Niagara Falls Official Plan

The City of Niagara Falls Plan has been drafted to complement the Regional Official Plan and contains policies specific to the management of natural heritage systems. It is the intent of the Official Plan to designate lands that contribute to the natural environment of the City, either due to their ecological significance, the areas being significant due to the natural heritage features present and/or having inherent physical hazards. The purpose of identifying these lands is not only to acknowledge the need to maintain and protect these areas, but also to control development in and around these areas due to their susceptibility.

Schedule A-1 of the City of Niagara Falls Official Plan illustrates that portions of the property have been designated Environmental Protection Area and Environmental Conservation Area.

Similar to the Niagara Region Official Plan, Section 11.2.13 of the City of Niagara Falls Official Plan indicates that Environmental Protection Areas (EPA) include Provincially Significant Wetlands, NPCA regulated wetlands greater than 2ha in size, Provincially Significant Life ANSIs, significant habitat of threatened and endangered species, floodways and erosion hazard areas and environmentally sensitive areas.

Section 11.2.14 of the City of Niagara Falls Official Plan indicates that development or site alteration shall not be permitted in the EPA designation, except in limited circumstances where it has been approved by the NPCA or other appropriate authority.

Section 11.2.22 of the City of Niagara Falls Official Plan indicates that Environmental Conservation Areas (ECA) include significant woodlands, significant valley lands, significant wildlife habitat, fish habitat, significant Life and Earth Science ANSIs, sensitive ground water areas, and locally significant wetlands or NPCA wetlands less than 2ha in size.

Section 11.2.23 of the Official Plan indicates that permitted uses within an ECA designation may include uses such as forest, fish and wildlife management, conservation and flood or erosion projects, or small scale, passive recreational uses and accessory uses.

5.3 Niagara Peninsula Conservation Authority

The Niagara Peninsula Conservation Authority (NPCA) is responsible for the administration of Ontario Regulation 155/06, which provides the NPCA jurisdiction to regulate development activities within and adjacent to flood and erosion hazards, valleys, watercourses and wetlands. The guiding principal of this

regulation is to ensure any development works proposed within regulated areas will have no adverse impact on flooding, erosion, pollution, dynamic beaches and the conservation of land.

In order to administer Ontario Regulation 155/06, the Niagara Peninsula Conservation Authority (NPCA) has created a document titled Policies for the Administration of Ontario Regulation 155/06 and the Planning Act (NPCA 2018). The purpose of the document is to provide guidance for development applications that are located in and adjacent to natural heritage features and hazard lands.

Regulated features on the Subject Property are limited to Lyons Creek and the associated adjacent lands, the PSW on the southern portion of the property, as well as the ephemeral watercourse on the west side of the property.

NPCA policies related to the management of wetlands are included in Section 8.0 of the NPCA Policy Document (NPCA 2018), with specific policies related to development in areas of interference contained in Section 8.2.3.

NPCA policies related to the management of watercourses are included in Section 9.0 of the NPCA Policy Document (NPCA 2018). Policies related to watercourse buffer composition are included in Section 9.2.5, with section 9.2.5.1 going on to state that where development and site alteration is proposed adjacent to a watercourse, the NPCA shall require the establishment of a 10 metre natural buffer for watercourses containing intermittent flow, warmwater systems or general/impacts aquatic or riparian habitat, or Type 2 Important Fish Habitat or Type 3 Marginal Fish Habitat.

6.0 CONSTRAINTS ANALYSIS

Natural heritage features identified on the property include Significant Woodland, portions of the Lyons Creek Provincially Significant Wetland complex and Significant Wildlife Habitat. To assist with understanding the extent of natural heritage features and potential constraints on the property, natural heritage constraints to development on and adjacent to the property have been assigned a High, Medium or Low constraint designation. These constraint designations have also been prepared in the context of applicable natural heritage policies described above. Descriptions of each are provided below.

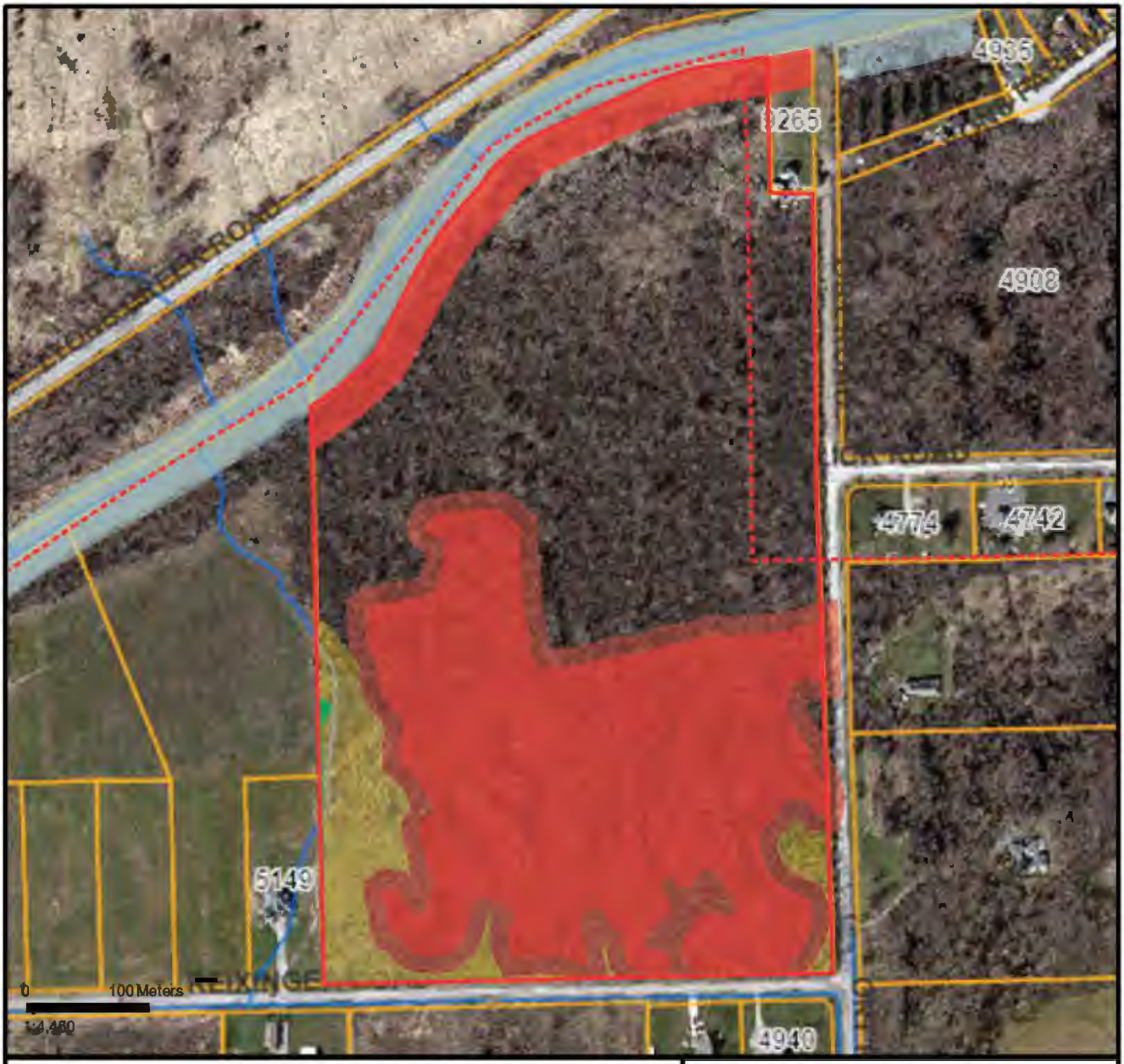
6.1 Areas of High Constraint

As discussed above, portion of the Lyons Creek Provincially Significant Wetland Complex are located in association with Lyons Creek, as well as on the southern portion of the property. For the purposes of this assessment, the PSW associated with Lyons Creek, as well as a 30m buffer, has been designated as an Area of High Constraint (see Figure 5). The PSW on the southern portion of the property, as well as a 15m buffer adjacent to the PSW, has also been designated as an Area of High Constraint. It is recommended that all development be maintained outside of this area.

In order to protect the critical fish habitat functions associated with Lyons Creek, a 30m buffer adjacent to Lyons Creek is also considered to be an area of High Constraint. The 30m buffer associated with the PSW adjacent to Lyons Creek forms the greater of the constraints, and therefore the 30m buffer from Lyons Creek is not depicted on figures.

6.2 Areas of Medium Constraint

For the purposes of this assessment, the ed extent of the Significant Woodland, as well as lands between 15m and 30m from the PSW have been designated as an Area of Medium Constraint. It is



Legend

- Subject Property Boundary
- Area of High Constraint
- Area of Medium Constraint
- Area of Low Constraint

Figure 5
Refined Extent of Natural Heritage Constraints on the Subject Property

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File: C19027

recommended that the majority of development occur outside of this area, with the exception of lower impact activities.

6.3 Areas of Low Constraint

For the purposed of this assessment, the lands within 15m of the Significant Woodland and 15m from the watercourse have been designated as an Area of Low Constraint. It is recommended that future development in this area be limited to lower impact activities where possible.

The remainder of the property is considered to be free of development constraints.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Colville Consulting Inc. was retained by Mr. Jason Wood to prepare a natural heritage characterization and constraints analysis for the lands located at 9265 Ort Road and Part Lot 1, BF on Chippawa Creek, City of Niagara Falls. Based on our assessment of the property, vegetation on the northern portion of the property consists primarily of thicket communities, with forest and treed swamp occurring on the southern portion of the property. The primary natural heritage constraints identified through this process are related to Lyons Creek and the adjacent lands associated with Lyons Creek, as well as the PSW on the southern portion of the property. Further refinement and study of features identified on the property could be conducted in accordance with future development plans for the property. Any significant habitat associated with species at risk is located within Lyons Creek. It is recommended that the constraints analysis included in this report be used to help guide future development planning for the property.

Respectfully submitted by:

Nash Colville B.A., EG, CERPIT, CISEC-IT
Colville Consulting Inc.

Ian Barrett, M.Sc.
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Appendix A

Historical Air Photo of Subject Lands

Historical Site Photo: 1934

Historical Site Photo: 1965

Historical Site Photo: 2002

Historical Site Photo: 2018

Appendix B

List of botanical species

Plant List for the Ort Road property northwest of Reixinger Road and Ort Road, Niagara Falls, ON. Conducted on July 28 & October 19, 2019 by A. Garofalo

ScientificName	Common Names	CC	CW	GRank	COSEWIC	COSSARO	SRank	Lrare	THDM2-11 /WODM5	SWD3-1	MAS3-1/MAS3-12/SAM1-8
Acalypha virginica var. rhomboidea	Three-seeded Mercury	0	3	G5			S5		x	x	
Acer negundo	Manitoba Maple	0	-2	G5			S5			x	
Acer platanoides	Norway Maple	0	5	G?			SE5			x	
Acer rubrum	Red Maple	4	0	G5			S5		x	x	
Acer saccharum ssp. saccharum	Sugar Maple	4	3	G5			S5			x	
Acer X freemanii	Freeman's Maple			G?			S5		x	x	
Achillea millefolium ssp. lanulosa	Woolly Yarrow	0	3	G5			S5		x	x	
Agrimonia gryposepala	Tall Agrimony	2	2	G5			S5		x	x	
Agrostis stolonifera	Creeping Bent Grass	0	-3	G5			S5		x	x	
Alisma plantago-aquatica	Common Water-plantain	3	-5	G5			S5		x	x	
Alliaria petiolata	Garlic Mustard	0	0	G?			SE5			x	
Allium sp	Onion Species								x		
Ambrosia artemisiifolia	Common Ragweed	0	3	G5			S5		x		
Arisaema triphyllum ssp. triphyllum	Jack-in-the-pulpit	5	-2	G5			S5		x	x	
Asclepias incarnata ssp. incarnata	Swamp Milkweed	6	-5	G5			S5				x
Asclepias syriaca	Common Milkweed	0	5	G5			S5		x		
Aster lanceolatus ssp. lanceolatus	Panicled Aster	3	-3	G5			S5		x	x	
Aster novae-angliae	New England Aster	2	-3	G5			S5		x		
Aster pilosus var. pilosus	Hairy Aster	4	2	G5			S5		x		
Athyrium filix-femina var. angustum	Northern Lady Fern	4	0	G5			S5			x	
Bidens frondosa	Devil's Beggar-ticks	3	-3	G5			S5		x	x	x
Butomus umbellatus	Flowering-rush	0	-5	G5			SE5				x
Calamagrostis canadensis	Canada Blue-joint	4	-5	G5			S5				x
Calystegia sepium ssp. angulata	Hedge Bindweed	2	0	G5			S5		x		x
Campanula aparinoides	Marsh Bellflower	7	-5	G5			S5	R			x
Carex bebbii	Bebb's Sedge	3	-5	G5			S5		x	x	
Carex blanda	Common Wood Sedge	3	0	G5?			S5			x	
Carex bromoides	Bromelike Sedge	7	-4	G5			S5			x	
Carex comosa	Bristly Sedge	5	-5	G5			S5	U			x
Carex gracillima	Graceful Sedge	4	3	G5			S5		x	x	
Carex lacustris	Lakebank Sedge	5	-5	G5			S5			x	x
Carex lupulina	Common Hop Sedge	6	-5	G5			S5		x		
Carex radiata	Radiate Sedge	4	5	G4			S5		x	x	
Carex vulpinoidea	Fox Sedge	3	-5	G5			S5		x		
Carex spp	Sedge Species								x	x	x
Carya ovata	Shagbark Hickory	6	3	G5			S5			x	
Centaurea jacea	Brown Knapweed	0	5	G?			SE5		x		
Chrysanthemum leucanthemum	Ox-eye Daisy	0	5	G?			SE5		x		
Cichorium intybus	Chicory	0	5	G?			SE5		x		
Cinna arundinacea	Stout Woodreed	7	-3	G5			S4			x	
Circaea lutetiana ssp. canadensis	Canada Enchanter's Nightshade	3	3	G5			S5		x	x	
Conyza canadensis	Horseweed	0	1	G5			S5		x		
Cornus amomum ssp. obliqua	Silky Dogwood	5	-4	G5			S5		x	x	x
Cornus foemina ssp. racemosa	Grey Dogwood	2	-2	G5			S5		x	x	
Coronilla varia	Trailing Crown-vetch	0	5	G?			SE5		x		
Crataegus mollis	Downy Hawthorn	4	-2	G5			S5		x	x	
Crataegus punctata	Dotted Hawthorn	4	5	G5			S5		x	x	
Cuscuta polygonorum	Smartweed Dodder			G?			S1	R			x
Dactylis glomerata	Orchard Grass	0	3	G?			SE5		x		

ScientificName	Common Names	CC	CW	GRank	COSEWIC	COSSARO	SRank	Lrare	THDM2-11 /WODM5	SWD3-1	MAS3-1/MAS3-12/SAM1-8
Daucus carota	Wild Carrot	0	5	G?			SE5		x		
Decodon verticillatus	Swamp Loosestrife	7	-5	G5			S5	R			x
Dichanthelium sp	Panic Grass Species									x	
Dipsacus fullonum ssp. sylvestris	Common Teasel	0	5	G?			SE5		x		
Dryopteris carthusiana	Spinulose Wood Fern	5	-2	G5			S5			x	
Elymus repens	Quack Grass	0	3	G5			SE5		x		
Epilobium cf. parviflorum	Small-flowered Willow-herb	0	3	G?			SE4		x	x	
Erigeron annuus	Daisy Fleabane	0	1	G5			S5		x		
Euthamia graminifolia	Grass-leaved Goldenrod	2	-2	G5			S5		x		
Festuca sp	Fescue Species								x		
Fragaria virginiana ssp. virginiana	Common Strawberry	2	1	G5			S5		x	x	
Fraxinus pennsylvanica	Red Ash	3	-3	G5			S5		x	x	
Geum canadense	White Avens	3	0	G5			S5		x	x	
Glechoma hederacea	Ground Ivy	0	3	G?			SE5		x		
Glyceria septentrionalis	Eastern Manna Grass	8	-5	G5			S4			x	
Glyceria striata	Fowl Manna Grass	3	-5	G5			S5		x	x	
Hypericum perforatum	Common St. John's-wort	0	5	G?			SE5		x		
Impatiens capensis	Spotted Touch-me-not	4	-3	G5			S5			x	x
Iris versicolor	Northern Blue-flag	5	-5	G5			S5			x	x
Juglans nigra	Black Walnut	5	3	G5			S4		x		
Juncus effusus ssp. solutus	Soft Rush	4	-5	G5			S5		x		
Juncus tenuis	Path Rush	0	0	G5			S5		x		
Justicia americana	Water Willow	9	-5	G5	THR	THR	S2	R			x
Lapsana communis	Nipplewort	0	5	G?			SE5		x		
Leersia oryzoides	Rice Cut Grass	3	-5	G5			S5		x		x
Leersia virginica	White Grass	6	-3	G5			S4			x	
Ligustrum vulgare	Common Privet	0	1	G?			SE5		x		
Lonicera morrowii	Morrow's Honeysuckle	0	5	G?			SE3		x	x	
Lonicera X bella	Showy Fly Honeysuckle	0	5	G?			SE2		x	x	
Lycopus uniflorus	Northern Water-horehound	5	-5	G5			S5				x
Lysimachia nummularia	Moneywort	0	-4	G?			SE5			x	
Lythrum salicaria	Purple Loosestrife	0	-5	G5			SE5		x		x
Malus pumila	Common Apple	0	5	G5			SE5		x	x	
Medicago lupulina	Black Medick	0	1	G?			SE5		x		
Melilotus alba	White Sweet-clover	0	3	G5			SE5		x		
Moss spp	Moss Species								x	x	
Myosotis laxa	Small Forget-me-not	6	-5	G5			S5		x		
Nymphaea odorata ssp. odorata	Fragrant White Water-lily	5	-5	G5			SU	U			x
Oenothera biennis	Common Evening-primrose	0	3	G5			S5		x		
Onoclea sensibilis	Sensitive Fern	4	-3	G5			S5			x	x
Parthenocissus inserta	Thicket Creeper	3	3	G5			S5		x	x	
Peltandra virginica ssp. virginica	Green Arrow-arum	9	-5	G5			S2	R			x
Phalaris arundinacea	Reed Canary Grass	0	-4	G5			S5		x		
Phleum pratense	Timothy	0	3	G?			SE5		x		
Phragmites australis	Common Reed	0	-4	G5			S5		x		
Picea glauca	White Spruce	6	3	G5			S5		x		
Picea pungens	Blue Spruce						SE?		x		
Plantago lanceolata	Ribgrass	0	0	G5			SE5		x		
Plantago major	Common Plantain	0	-1	G5			SE5		x		

ScientificName	Common Names	CC	CW	GRank	COSEWIC	COSSARO	SRank	Lrare	THDM2-11 /WODM5	SWD3-1	MAS3-1/MAS3-12/SAM1-8
Plantago rugelii	Pale Plantain	1	0	G5			S5		x		
Poa pratensis ssp. pratensis	Kentucky Blue Grass	0	1	G?			S5		x		
Polygonum amphibium	Water Smartweed	5	-5	G5			S5	U			x
Polygonum cuspidatum	Japanese Knotweed	0	3	G?			SE4		x		
Polygonum virginianum	Jumpseed	6	0	G5			S4		x	x	
Pontederia cordata	Pickerel-weed	7	-5	G5			S5	R			x
Populus deltoides ssp. deltoides	Eastern Cottonwood	4	-1	G5			S5			x	
Populus grandidentata	Largetooth Aspen	5	3	G5			S5		x		
Populus tremuloides	Trembling Aspen	2	0	G5			S5		x		
Potentilla palustris	Marsh Cinquefoil	7	-5	G5			S5	R			x
Potentilla recta	Rough-fruited Cinquefoil	0	5	G?			SE5		x		
Potentilla simplex	Common Cinquefoil	3	4	G5			S5		x	x	
Prunella vulgaris ssp. lanceolata	Heal-all	5	5	G5			S5		x	x	
Prunus serotina	Black Cherry	3	3	G5			S5		x	x	
Prunus virginiana ssp. virginiana	Choke Cherry	2	1	G5			S5			x	
Pyrus communis	Common Pear	0	5	G5			SE4		x		
Quercus bicolor	Swamp White Oak	8	-4	G5			S4		x	x	
Quercus palustris	Pin Oak	9	-3	G5			S4		x	x	
Ranunculus acris	Tall Buttercup	0	-2	G5			SE5			x	
Ranunculus sp	Buttercup Species									x	
Rhamnus cathartica	Common Buckthorn	0	3	G?			SE5		x	x	
Rhamnus frangula	Glossy Buckthorn	0	-1	G?			SE5		x	x	
Rhus radicans ssp. negundo	Climbing Poison-ivy	5	-1	G5			S5		x	x	
Rhus typhina	Staghorn Sumac	1	5	G5			S5		x		
Rosa multiflora	Multiflora Rose	0	3	G?			SE4		x	x	
Rosa palustris	Swamp Rose	7	-5	G5			S5				x
Rubus allegheniensis	Common Blackberry	2	2	G5			S5		x	x	
Rubus idaeus ssp. melanolasius	Wild Red Raspberry	0	-2	G5			S5		x	x	
Rubus occidentalis	Black Raspberry	2	5	G5			S5		x	x	
Rudbeckia hirta	Black-eyed Susan	0	3	G5			S5		x		
Rumex cf. verticillatus	Swamp Dock	7	-5	G5			S4	R			x
Rumex crispus	Curly Dock	0	-1	G?			SE5		x		
Salix alba	White Willow	0	-3	G5			SE4			x	
Salix cinerea	Ashy Willow	0	5	G5			SE2		x	x	
Sambucus canadensis	Common Elderberry	5	-2	G5			S5			x	
Scirpus atrovirens	Black Bulrush	3	-5	G5?			S5		x	x	
Scirpus cyperinus	Wool Grass	4	-5	G5			S5			x	
Scutellaria lateriflora	Blue Skullcap	5	-5	G5			S5				x
Setaria pumila	Yellow Foxtail	0	0	G?			SE5		x		
Sium suave	Water-parsnip	4	-5	G5			S5		x	x	
Solanum dulcamara	Bittersweet Nightshade	0	0	G?			SE5		x	x	
Solidago altissima var. altissima	Tall Goldenrod	1	3	G?			S5		x	x	
Solidago juncea	Early Goldenrod	3	5	G5			S5		x		
Solidago nemoralis ssp. nemoralis	Gray Goldenrod	2	5	G5			S5		x		
Solidago rugosa ssp. rugosa	Rough Goldenrod	4	-1	G5			S5		x	x	
Sonchus sp	Sow-thistle Species								x		
Spiraea alba	Narrow-leaved Meadowsweet	3	-4	G5			S5		x	x	
Taraxacum officinale	Common Dandelion	0	3	G5			SE5		x	x	
Trifolium pratense	Red Clover	0	2	G?			SE5		x		
Trifolium repens	White Clover	0	2	G?			SE5		x		

ScientificName	Common Names	CC	CW	GRank	COSEWIC	COSSARO	SRank	Lrare	THDM2-11 /WODM5	SWD3-1	MAS3-1/MAS3-12/SAM1-8
Tussilago farfara	Coltsfoot	0	3	G?			SE5		x		
Typha angustifolia	Narrow-leaved Cattail	3	-5	G5			S5		x		
Ulmus americana	White Elm	3	-2	G5?			S5		x	x	
Verbascum thapsus	Common Mullein	0	5	G?			SE5		x		
Verbena hastata	Blue Vervain	4	-4	G5			S5		x	x	
Veronica officinalis	Common Speedwell	0	5	G5			SE5		x	x	
Viburnum lentago	Nannyberry	4	-1	G5			S5		x	x	
Viburnum opulus	European Highbush Cranberry	0	0	G5			SE4		x		x
Viburnum recognitum	Southern Arrow-wood	7	-2	G5			S4		x	x	
Vitis riparia	Riverbank Grape	0	-2	G5			S5		x	x	

Legend

CC- Coefficient of Conservatism. Scores for each species range from 0 (low conservatism) to 10 (high conservatism).
A conservatism value of 0 indicates species is widespread. A value of 8, 9 or 10 indicates that a species is a habitat specialist.
CW - Coefficient of Wetness
5 - Almost always occur in upland areas
4, 3, 2 - Usually occur in upland areas
1, 0, -1 - Found equally in upland and wetland areas
-2, -3, -4 Usually occur in wetlands
-5 Almost always occur in wetlands

Grank - Global Rank G1 — Critically Imperiled, G2 — Imperiled, G3 — Vulnerable, G4 — Apparently Secure, G5 — Secure
COSEWIC - Committee on the Status of Endangered Wildlife in Canada
COSSARO - Committee on the Status of Species at Risk in Ontario

Srank - Subnational Rank
S1 — Critically Imperiled - Critically imperiled in the province because of extreme rarity, (often 5 or fewer occurrences)
S2 — Imperiled - Imperiled in the province because of rarity due to very restricted range, very few popula ions (often 20 or fewer)
S3 — Vulnerable - Vulnerable in the province due to a restricted range, relatively few populations (often 80 or fewer)
S4 — Apparently Secure - Uncommon but not rare
S5 — Secure - Common, widespread, and abundant in the province
SE — Exotic
Lrank - Local Rank
R - Rare, U - Uncommon

Appendix C

Site Photos

Photo of Subject Lands from Ort Road

Photo of Vegetative Community THDM2-11 in the Subject Lands

Photo of Subject Lands from Ort Road

Photo of Vegetative Community THDM2-11 in the Subject Lands

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Photo of Vegetative Community THDM2-11 in the Subject Lands

Photo of Vegetative Community THDM2-11 in the Subject Lands

Photo of Vegetative Community THDM2-11/WODM5 in the Subject Lands

Photo of Vegetative Community THDM2-11/WODM5 in the Subject Lands

Appendix D

Species at Risk Screening

Niagara Falls - 2018

Species At Risk Designations
ENDANGERED
THREATENED
SPECIAL CONCERN
EXTIRPATED

AMPHIBIANS		ESA Protection	Key Habitats Used By Species	Subject Property
Allegheny Mountain Dusky Salamander (*Desmognathus ochrophaeus*)	**Known to Occur**	*Species Protection and* ***Habitat Regulation***	generally found near forested brooks, mountain cascades, springs, or seeps. It uses this habitat to forage, as well as for overwintering and brooding. It nests in springs and seeps. Shelter is provided in wet cavities along stream edges or seeps, or under stones, leaf litter, or logs.	Species not present in vicinity of Subject Property.
Northern Dusky Salamander (*Desmognathus fuscus*)	**Known to Occur**	*Species Protection and* ***Habitat Regulation***	Generally prefer rocky woodland streams, seepages, and springs where water is running or trickling	Species not present in vicinity of Subject Property.

BIRDS		ESA Protection	Key Habitats Used By Species	Timing Of Life History Events
Acadian Flycatcher (*Empidonax virescens*)	**Known to Occur**	*Species and General Habitat Protection*	Generally requires large areas of mature, undisturbed forest; avoids the forest edge; often found in well wooded swamps and ravines	Suitable habitat not present on Subject Property. Species not detected during breeding bird surveys.
Bald Eagle (*Haliaeetus leucocephalus*)	**Known to Occur**	*N/A*	Prefers deciduous and mixed-deciduous forest; and habitat close to water bodies such as lakes and rivers; They roost in super canopy trees such as Pine	Suitable habitat not present on Subject Property. Species not detected during breeding bird surveys.
Bank Swallow (*Riparia riparia*)	**Known to Occur**	*Species and General Habitat Protection*	It nests in a wide variety of naturally and anthropogenically created vertical banks, which often erode and change over time including aggregate pits and the shores of large lakes and rivers.	Suitable habitat not present on Subject Property. Species not detected during breeding bird surveys.
Barn Swallow (*Hirundo rustica*)	**Known to Occur**	*Species and General Habitat Protection*	Prefers farmland; lake/river shorelines; wooded clearings; urban populated areas; rocky cliffs; and wetlands. They nest inside or outside buildings; under bridges and in road culverts; on rock faces and in caves etc.	Suitable nesting structures not present on Subject Property. Species not detected during breeding bird surveys.
Bobolink (*Dolichonyx oryzivorus*)	**Known to Occur**	*Species and General Habitat Protection*	Generally prefers open grasslands and hay fields. In migration and in winter uses freshwater marshes and grasslands	Suitable habitat not present on Subject Property. Species not detected during breeding bird surveys.
Chimney Swift (*Chaetura pelagica*)	**Known to Occur**	*Species and General Habitat Protection*	Historically found in deciduous and coniferous, usually wet forest types, all with a welldeveloped, dense shrub layer; now most are found in urban areas in large uncapped chimneys	Suitable habitat not present on Subject Property. Species not detected during breeding bird surveys.
Common Nighthawk (*Chordeiles minor*)	**Known to Occur**	*N/A*	Generally prefer open, vegetation-free habitats, including dunes, beaches, recently harvested forests, burnt-over areas, logged areas, rocky outcrops, rocky barrens, grasslands, pastures, peat bogs, marshes, lakeshores, and river banks. This species also inhabits mixed and coniferous forests. Can also be found in urban areas (nest on flat roof-tops)	Suitable habitat not present on Subject Property. Species not detected during breeding bird surveys.
Eastern Meadowlark (*Sturnella Magna*)	**Known to Occur**	*Species and General Habitat Protection*	Generally prefers grassy pastures, meadows and hay fields. Nests are always on the ground and usually hidden in or under grass clumps.	Suitable habitat not present on Subject Property. Species not detected during breeding bird surveys.
Eastern Whip-poor-will *(Caprimlugus vociferus)*	**Known to Occur**	*Species and General Habitat Protection*	Generally prefer semi-open deciduous forests or patchy forests with clearings; areas with little ground cover are also preferred; In winter they occupy primarily mixed woods near open areas.	Suitable habitat not present on Subject Property. Species not detected during breeding bird surveys.
Eastern Wood-Pewee (*Contopus virens*)	**Known to Occur**	*N/A*	Associated with deciduous and mixed forests. Within mature and intermediate age stands it prefers areas with little understory vegetation as well as forest clearings and edges.	Suitable habitat present on Subject Property. Species detected during breeding bird surveys.
Golden-winged Warbler (Vermivora chrysoptera)	**Known to Occur**	*N/A*	Generally prefer areas of early successional vegetation, found primarily on field edges, hydro or utility right-of-ways, or recently logged areas.	Suitable habitat not present on Subject Property. Species not detected during breeding bird surveys.
Henslow's Sparrow *(Ammodramus henslowii)*	**Historically Known to Occur**	*Species and General Habitat Protection*	Generally found in old fields, pastures and wet meadows. They prefer areas with dense, tall grasses, and thatch, or decaying plant material	Suitable habitat not present on Subject Property. Species not detected during breeding bird surveys.
Northern Bobwhite (*Colinus virginianus*)	**Historically Known to Occur**	*Species and General Habitat Protection*	Generally inhabits a variety of edge and grassland type - habitats including nonintensively farmed agricultural lands.	Suitable habitat not present on Subject Property. Species not detected during breeding bird surveys.
Peregrine Falcon *(Falco peregrinus)*	**Known to Occur**	*N/A*	Generally nest on tall, steep cliff ledges adjacent to large waterbodies; some birds adapt to urban environments and nest on ledges of tall buildings, even in densely populated downtown areas.	Suitable habitat not present on Subject Property. Species not detected during breeding bird surveys.
Red-Headed Woodpecker *(Melanerpes erythrocephalus)*	**Known to Occur**	*N/A*	Generally prefer open oak and beech forests, grasslands, forest edges, orchards, pastures, riparian forests, roadsides, urban parks, golf courses, cemeteries, as well as along beaver ponds and brooks	Suitable habitat present on Subject Property. Species not detected during breeding bird surveys.
Wood Thrush (*Hylocichla mustelina*)	**Known to Occur**	*N/A*	Nests mainly in second-growth and mature deciduous and mixed forests, with saplings and well-developed understory layers. Prefers large forest mosaics, but may also nest in small forest fragments.	Suitable habitat present on Subject Property. Species detected during breeding bird surveys.
Yellow-breasted Chat *(Icteria virens)*	**Known to Occur**	*Species and General Habitat Protection*	Generally prefer dense thickets around wood edges, riparian areas, and in overgrown clearings	Suitable habitat not present on Subject Property. Species not detected during breeding bird surveys.

FISH			Key Habitats Used By Species	Timing Of Life History Events
American Eel *(Anguilla rostrata)*	**Known to Occur**	*Species and General Habitat Protection*	All fresh water, estuaries and coastal marine waters that are accessible to the Atlantic Ocean; 12-mile creek watershed and Lake Ontario	Potenital habitat present in Lyon's Creek.
Grass Pickerel *(Esox americanus vermiculatus)*	**Known to Occur**	*N/A*	Generally occur in wetlands with warm, shallow water and an abundance of aquatic plants; occur in the St. Lawrence River, Lake Ontario, Lake Erie, and Lake Huron	Potenital habitat present in Lyon's Creek.

Lake Chubsucker (*Erimyzon sucetta*)	**Known to Occur**	*Species and General Habitat Protection*	Generally prefer marshes, wetlands and lakes with clear, still waters and abundant aquatic plants	Species not present in vicinity of Subject Property.
Lake Sturgeon (*Acipenser fulvescens*)	**Known to Occur**	*Species and General Habitat Protection*	Generally inhabits the bottoms of shallow areas of large freshwater lakes and rivers	Species not present in vicinity of Subject Property.

INSECTS		ESA Protection	**Key Habitats Used By Species**	**Timing Of Life History Events**
Monarch Butterfly (*Danaus plexippus*)	**Known to Occur**	*N/A*	Exist primarily wherever milkweed and wildflowers exist; abandoned farmland, along roadsides, and other open spaces	Suitable habitat on subject property, but not observed during surveys.
Rusty-patched Bumble Bee (*Bombusaffinis*)	**Formerly Occurred and May Still Occur**	*Species and General Habitat Protection June 27, 2014*	Generally inhabits a range of diverse habitats including mixed farmland, sand dunes, marshes, urban and wooded areas. It usually nests underground in abandoned rodent burrows	Suitable habitat not present on Subject Property.
West Virginia White (*Pieris virginiensis*)	**Known to Occur**	*N/A*	Generally prefer moist, deciduous woodlands. The larvae feed only on the leaves of the two-leaved toothwort (Cardamine diphylla), which is a small, spring-blooming plant of the forest floor.	Suitable habitat not present on Subject Property.

MAMMALS		ESA Protection	**Key Habitats Used By Species**	**Timing Of Life History Events**
Grey Fox (*Urocyon cineroargenteus*)	**Suspected to Occur**	*Species and General Habitat Protection*	Generally prefers deciduous forests, marshes, swampy areas, and urban areas	Suitable habitat not present on Subject Property.
Eastern Small-footed Myotis (*Myotis leibii*)	**Suspected to Occur**	*Species and General Habitat Protection*	Overwintering habitat: Caves and mines that remain above 0 degrees Celsius; Maternal Roosts: primarily under loose rocks on exposed rock outcrops, crevices and cliffs, and occasionally in buildings, under bridges and highway overpasses and under tree bark.	Potential roosting habtiat present in FOD9 and SWD community.
Little Brown Myotis (*Myotis lucifugus*)	**Suspected to Occur**	*Species and General Habitat Protection*	Overwintering habitat: Caves and mines that remain above 0; Maternal Roosts: Often associated with buildings (attics, barns etc.). Occasionally found in trees (25-44 cm dbh).	Potential roosting habtiat present in FOD9 and SWD community.
Northern Myotis (*Myotis septentrionalis*)	**Suspected to Occur**	*Species and General Habitat Protection*	Overwintering habitat: Caves and mines that remain above 0 degrees Celsius; Maternal Roosts: Often asssociated with cavities of large diameter trees (25-44 cm dbh). Occasionally found in structures (attics, barns etc.)	Potential roosting habtiat present in FOD9 and SWD community.
Tri-colored Bat (*Perimyotis subflavus*)	**Suspected to Occur**	*Species and General Habitat Protection*	Overwintering habitat: Caves and mines that remain above 0 degrees Celsius; Maternal Roosts: Can be in trees or dead clusters of leaves or arboreal lichens on trees. May also use barns or similar structures.	Potential roosting habtiat present in FOD9 and SWD community.

PLANTS		ESA Protection	**Key Habitats Used By Species**	**Timing Of Life History Events**
American Chestnut (*Castanea dentata*)	**Known to Occur**	*Species and General Habitat Protection*	Found in deciduous forest communities; this tree prefers arid forests with acid and sandy soils.	Suitable habitat not present on Subject Property. Not observed during botanical inventories.
American Ginseng (*Panax quinquefolius*)	**Known to Occur**	*Species and General Habitat Protection*	Grows in rich, moist, undisturbed and relatively mature deciduous woods in areas of neutral soil (such as over limestone or marble bedrock).	Suitable habitat not present on Subject Property. Not observed during botanical inventories.
American Water-willow (*Justicia americana*)	**Known to Occur**	*Species and General Habitat Protection*	Generally grows along shorelines and sometimes in nearby wetlands, as well as along streams where the bottom is composed of gravel, sand or organic matter	Suitable habtiat presetn in Lyons Creek. Species observed during botanical inventories.
Butternut (*Juglans cinerea*)	**Known to Occur**	*Species and General Habitat Protection*	Generally grows in rich, moist, and well-drained soils often found along streams. It may also be found on well-drained gravel sites, especially those made up of limestone. It is also found, though seldomly, on dry, rocky and sterile soils. In Ontario, the Butternut generally grows alone or in small groups in deciduous forests as well as in hedgerows	Typical habitat not present on Subject Property. Not observed during botanical inventories.
Common Hoptree (*Ptelea trifoliata*)	**Known to Occur**	*N/A*	Generally grows in sandy soils in areas with a lot of natural disturbance - such as the outer edge of shoreline vegetation, sand spits, and sand points.	Suitable habitat not present on Subject Property. Not observed during botanical inventories.
Deerberry (*Vaccinium stamineum*)	**Known to Occur**	*Species and General Habitat Protection*	Generally occurs on sandy and well-drained soil, often in dry open woodlands (Niagara Gorge)	Suitable habitat not present on Subject Property. Not observed during botanical inventories.
Drooping Trillium (*Trillium flexipes*)	**Historically Known to Occur**	*Species and General Habitat Protection*	Generally grows in dry, sandy loam, nonacidic soils of mature, deciduous woodlands that are usually associated with watercourses.	Suitable habitat not present on Subject Property. Not observed during botanical inventories.
Eastern Flowering Dogwood *(Cornus florida)*	**Known to Occur**	*Species Protection and* ***Habitat Regulation***	Generally grows in deciduous and mixed forests, in the drier areas of its habitat, although it is occasionally found in slightly moist environments; Also grows around edges and hedgerows	Typical habitat not present on Subject Property. Not observed during botanical inventories.
Kentucky Coffee Tree (*Gynocladus dioicus*)	**Known to Occur**	*Species and General Habitat Protection*	Generally inhabits open areas of floodplains and the edges of wetlands . Shade-intolerant.	Suitable habitat not present on Subject Property. Not observed during botanical inventories.
Red Mulberry (*Morus rubra*)	**Known to Occur**	*Species and General Habitat Protection*	Generally grows in moist forest habitats. In Ontario, these include slopes and ravines of the Niagara Escarpment, and sand spits and bottom lands; Can grow in open areas such as hydro corridors	Suitable habitat not present on Subject Property. Not observed during botanical inventories.
Round-leaved Greenbrier (*Smilax rotundifolia*)	**Known to Occur**	*Species and General Habitat Protection*	Generally grows in open moist to wet woodlands, often growing on sandy soils. Habitat is variable.	Suitable habitat not present on Subject Property. Not observed during botanical inventories.
Shumard Oak (*Quercus shumardii*)	**Known to Occur**	*N/A*	Generally grows in deciduous forests, where the soils are poorly drained clay and clay loam. Requires full sunlight.	Suitable habitat not present on Subject Property. Not observed during botanical inventories.
Spotted Wintergreen (*Chimaphila maculata*)	**Known to Occur**	*Species and General Habitat Protection*	Generally grow in sandy habitats in dry-mesic oak-pine woods.	Suitable habitat not present on Subject Property. Not observed during botanical inventories.
Swamp Rose-mallow (*Hibiscus moscheutos*)	**Known to Occur**	*Species and General Habitat Protection*	Generally grows in open, coastal marshes, but it is also sometimes found in open wet woods, thickets and drainage ditches	Suitable habitat present in Lyons Creek. Not observed during botanical inventories.
White Wood Aster (*Eurybia divaricata*)	**Known to Occur**	*Species and General Habitat Protection*	Generally grows in open, dry, deciduous forests. It has been suggested that it may benefit from some disturbance, as it often grows along trails.	Suitable habitat not present on Subject Property. Not observed during botanical inventories.

REPTILES		ESA Protection	**Key Habitats Used By Species**	**Timing Of Life History Events**

Blanding's Turtle *(Emydonidea blandingii)*	**Known to Occur**	*Species and General Habitat Protection*	Generally occur in freshwater lakes, permanent or temporary pools, slow-flowing streams, marshes and swamps. They prefer shallow water that is rich in nutrients, organic soil and dense vegetation. Adults are generally found in open or partially vegetated sites, and juveniles prefer areas that contain thick aquatic vegetation including sphagnum, water lilies and algae. They dig their nest in a variety of loose substrates, including sand, organic soil, gravel and cobblestone. Overwintering occurs in permanent pools that average about one metre in depth, or in slow-flowing streams.	Potential habitat present in Lyon's Creek
Eastern Musk Turtle (*Sternotherus odoratus)*	**Known to Occur**	*Species and General Habitat Protection*	Generally prefers shallow, slowmoving water where it typically walks along the bottom rather than swimming	Potential habitat present in Lyon's Creek
Eastern Ribbonsnake *(Thamnophis sauritus)*	**Known to Occur**	*N/A*	Generally occur along the edges of shallow ponds, streams, marshes, swamps, or bogs bordered by dense vegetation that provides cover. Abundant exposure to sunlight is also required, and adjacent upland areas may be used for nesting.	Potential habitat present adjacent to Lyon's Creek
Snapping Turtle *(Chelydra serpentina)*	**Known to Occur**	*N/A*	Generally inhabit shallow waters where they can hide under the soft mud and leaf litter. Nesting sites usually occur on gravely or sandy areas along streams. Snapping Turtles often take advantage of man-made structures for nest sites, including roads (especially gravel shoulders), dams and aggregate pits.	Potential habitat present in Lyon's Creek

Appendix E

Significant Wildlife Habitat Summary Table

Table 1. Significant Wildlife Habitat Assessment – Ort Road

Significant Wildlife Habitat (SWH) Type	Known or Candidate SWH present/absent	Rationale
SEASONAL CONCENTRATION AREAS OF ANIMALS		
Waterfowl Stopover and Staging Areas	Absent	Suitable habitat not present on Subject Lands
Shorebird Migratory Stopover Area	Absent	Suitable habitat not present on Subject Lands
Raptor Wintering Area	Absent	Suitable habitat not present on Subject Lands
Bat Hibernacula	Absent	Suitable overwintering habitat not present on Subject Lands
Bat Maternity Colonies	Potentially Present	Potential maternal roost trees located in the PSW and woodland on the south end of the property.
Turtle Wintering Areas	Absent	Suitable overwintering habitat not present on Subject Lands
Reptile Hibernaculum	Absent	Potential hibernacula not identified on the Subject Lands
Colonially -Nesting Bird Breeding Habitat (Bank and Cliff)	Absent	Suitable habitat not present on Subject Lands
Colonially -Nesting Bird Breeding Habitat (Tree/Shrubs)	Absent	Suitable habitat not present on Subject Lands
Colonially -Nesting Bird Breeding Habitat (Ground)	Absent	Suitable habitat not present on Subject Lands
Migratory Butterfly Stopover Areas	Absent	Suitable habitat not observed on Subject Lands
Landbird Migratory Stopover Areas	Absent	Suitable habitat not observed on Subject Lands
Deer Winter Congregation Areas	Absent	Suitable winter concentration habitat not present on Subject Lands
RARE VEGETATION COMMUNITIES		
Cliffs and Talus Slopes	Absent	Habitat type not present on Subject Lands
Sand Barren	Absent	Habitat type not present on Subject Lands
Alvar	Absent	Habitat type not present on Subject Lands
Old Growth Forest	Absent	Habitat type not present on Subject Lands

Savannah	Absent	Habitat type not present on Subject Lands
Tallgrass Prairie	Absent	Habitat type not present on Subject Lands
Other Rare Vegetation Communities	Absent	No rare vegetation communities present on Subject Lands
SPECIALIZED HABITATS OF WILDLIFE CONSIDERED SWH		
Waterfowl Nesting Area	Absent	Suitable habitat not present on Subject Lands
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Absent	Suitable habitat not present on Subject Lands
Woodland Raptor Nesting Habitat	Absent	Suitable habitat not present on Subject Lands
Turtle Nesting Areas	Absent	Suitable habitat not present on Subject Lands
Seeps and Springs	Absent	Suitable habitat not present on Subject Lands
Amphibian Breeding Habitat (Woodland)	Absent	Suitable habitat not present on Subject Lands
Amphibian Breeding Habitat (Wetlands)	Absent	Number of documented amphibians not reflective of SWH.
Woodland Area-Sensitive Bird Breeding Habitat	Absent	Area sensitive bird species not present on property.
HABITATS OF SPECIES OF CONSERVATION CONCERN CONSIDERED SWH		
Marsh Breeding Bird Habitat	Absent	Suitable habitat not present on Subject Lands
Open Country Bird Breeding Habitat	Absent	Suitable habitat not present on Subject Lands
Shrub/Early Successional Bird Breeding Habitat	Absent	Suitable habitat not present on Subject Lands
Terrestrial Crayfish	Absent	Suitable habitat not present on Subject Lands
Special Concern and Rare Wildlife Species	Present	Property providing habitat for Eastern Wood-pewee and Wood Thrush.
ANIMAL MOVEMENT CORRIDORS		
Amphibian Movement Corridors	Absent	Suitable habitat not present on Subject Lands
Bat Migratory Stopover Area	Absent	Suitable habitat not present on Subject Lands

Please note the above SWH criteria are based on guidance provided by the Significant Wildlife Habitat Criteria Schedules For Ecoregion 7E and modified to be specific for the Subject Property.

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MEMORANDUM

TO: Mr. Jason Wood, Would Construction Inc. **RVA:** 226240

FROM: Steve de Faria, C.E.T., Principal
Nick Palomba, P.Eng.
Matthew Di Maria, C.Tech., CAPM

DATE: February 4, 2022

SUBJECT: Urban Boundary Expansion - Ort Road Lands Preliminary Transportation Strategy Brief

1.0 Introduction

The following memo presents the findings of the Preliminary Transportation Strategy Brief to support the proposed inclusion of the Ort Road lands (P.I.N. 64258-0062 and P.I.N. 64258-0061, Lot 1 Broken Front Concession W.R.) into the City of Niagara Falls Urban Boundary. The legal survey for the subject lands is provided in **Appendix A**.

The contents of the brief include a cursory assessment of the developable lands and the ability of the surrounding transportation infrastructure to support traffic generated by development of those lands.

As shown in **Figure 1**, the subject property is approximately 26.4 hectares in size and is located west of the community of Chippawa. The property is bordered by Lyons Creek to the north, Stanley Avenue to the east, Reixinger Road to the south and Ort Road to the west. Land use within the property is currently a mixture of residential and agricultural land uses.

2.0 Background

In completion of the Preliminary Transportation Strategy Brief, the following key documents were reviewed and utilized:

- Niagara Region Road Network Strategy Technical Paper (Transportation Master Plan) – July 2017

- Queensway Chippawa East Residential Development Traffic Impact Study – April 2018
- South Niagara Falls Development Traffic Impact Study – November 2021
- South Niagara Falls/Chippawa Concept Master Plan – September 2021
- Settlement Area Boundary Review Assessment Sheet (SABR ID 1370)
- 2019 Development Charges Background Study

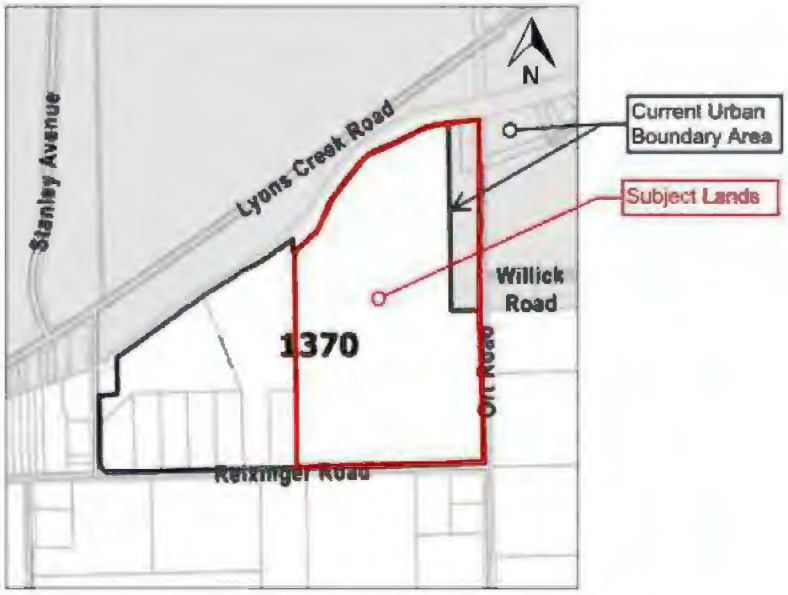


Figure 1: Subject Land Location

3.0 Existing Traffic Conditions

3.1 Existing Roadways

The roadways of Ort Road and Reixinger Road and Stanley Avenue which abut the subject lands are under the jurisdiction of the City of Niagara Falls. All three are currently 2-lane local roadways that contain rural cross-sections. Ort Road and Reixinger Road have posted speeds of 70km/hr while Stanley Avenue has a posted speed of 50 km/hr.

3.2 Existing Traffic Volumes

The existing traffic volumes for the major roadways which will service the development (Lyons Creek Road, Sodom Road and Stanley Avenue) have been extracted from the Traffic Impact Studies mentioned under Section 2. The volumes extracted were then grown by 1% per annum to a 2022 base year. The resulting volumes are presented in **Appendix B**.

3.3 Existing Capacity Analysis

A planning level capacity analysis was completed for the major roadways surrounding the lands based on typical capacity assumptions used in the transportation planning industry. Based on the surrounding roadways network and their characteristics (i.e., number of lanes, posted speed and general environment), a capacity of 800 vehicles per hour per lane was utilized.

The results of the analysis indicate that all of the major study area roadways are currently operating well under existing 2022 traffic conditions with ample reserve capacity to accommodate future growth. The resulting capacity analysis results are presented in **Appendix B**.

4.0 Developable Lands

As mentioned previously, the subject land is approximately 26.4 hectares in size, of which approximately 11.6 hectares is developable land and not identified as an Environmental Protection Area. The developable land is concentrated in the north portion of the subject lands, fronting Ort Road north of Willick Road. Based on a low-density population of 50 persons per hectare, this works out to a residential population of approximately 580 to 650 persons. Assuming a low-density unit count based on the developable lands and subject to City requirements, lot fabric, layout configuration and road layout etc., results in approximately 190-200 residential units.

4.1 Developable Lands Trip Generation

Based on the peak number of units established in the previous section, trip generation for the residential portion of the subject land was estimated utilizing the Institute of Transportation Engineer's (ITE) *Trip Generation Manual, 11th Edition*. Assuming a low-density land use similar to the surrounding area, the ITE Land Use Code (LUC) for Single Family Detached Housing (LUC #210) was referenced.

Table 1 presents the total two-way trip generation for the lands based on the ITE land use. As presented in the table, approximately 156 two-way trips are estimated to be generated during the weekday a.m. peak hour (36 inbound and 104 outbound). During the weekday p.m. peak hour approximately 175 two-way trips are estimated to be generated (120 inbound and 71 outbound).

Table 1: Trip Generation Summary

ITE Land Use	Dwelling Units/ GFA	Peak Hour	Average Trip Rate	Total Two-Way Trips	Directional Split		Inbound	Outbound
Single Family Detached Housing (LUC 210)	200	Weekday a.m.	Ln(T)=0.91Ln(x)+0.12	140	26%	74%	36	104
		Weekday p.m.	Ln(T)=0.94Ln(x)+0.27	191	63%	37%	120	71
			Totals	**331**			**156**	**175**

4.2 Developable Lands Trip Assignment

The trips generated under Section 4.1 were assigned to the roadway network utilizing the existing travel patterns of the major roadway network. Based on the location of the developable lands it has been assumed the majority of site trips will utilize Willick Road to access the greater transportation network. Only a small portion of site trips have been assumed to enter the greater transportation network through the south leg of Stanley Avenue as these roads are less desirable based on their current roadway conditions.

No trips from the subject lands were assigned to Lyons Creek Parkway as the intention of this roadway is to remain as a cul-de-sac with no connection to Ort Road.

5.0 Recommended Future Roadway Improvements

5.1 Niagara Region

The Niagara Region Road Network Strategy Technical Paper as part of The Transportation Master Plan (TMP) document outlines future capacity expansion projects for Sodom Road, Lyons Creek Road and Stanley Avenue within the immediate area of the subject lands. The timeline for these improvements is as follows:

- Sodom Road from Lyons Creek Road to Netherby Road: Phase 2 (2022 – 2031)
- Lyons Creek Road from Sodom Road to Stanley Avenue: Phase 2 (2022 – 2031)
- Lyons Creek Road from Stanley Avenue to Montrose Road: Phase 3 (2032 - 2041)
- Stanley Avenue from Lyons Creek Road to Marineland Parkway: Phase 2 (2022 – 2031)

The TMP does not provide additional details concerning the capacity expansion projects, but it is expected the existing two-lane cross-sections (one lane per direction) of the

roads mentioned would be expanded to a four-lane cross-section in order to provide the additional link capacity that is required per the TMP study findings.

Confirmation of the required regional link capacities and associated corridor lane configurations will likely be determined within the Environmental Assessment (EA) to be completed for each road.

5.2 South Niagara Traffic Impact Study

In November 2021, RVA completed a Traffic Impact Study (TIS) for the proposed South Niagara Falls development located on the northeast corner of the Stanley Avenue and Lyons Creek Road intersection. As part of that study, several roadway infrastructure improvements were highlighted from previous approved traffic studies along with additional recommendations based on the study completion. Those improvements and their source are presented in **Table 2**.

Table 2: Recommended Infrastructure Improvements

Intersection	Recommendations	
	Niagara Village & Riverfront Community Developments	South Niagara Falls Development
Stanley Ave. and Chippawa Pkwy	• Signalize the intersection • Introduce auxiliary left turn lanes on all approaches.	• Signalize the intersection; • Introduce auxiliary left-turn lanes on all approaches; • Introduce an auxiliary right-turn lane on the north approach.
Stanley Ave. (north approach) and Lyons Creek Rd.	• Signalize the intersection; • Introduce auxiliary left turn lanes on all approaches.	• Signalize the intersection; • Introduce an auxiliary right-turn lane on the east approach • Increase the storage capacities of the existing auxiliary eastbound and southbound left-turn lanes;
Stanley Ave. (south approach) and Lyons Creek Rd.		• Introduce an auxiliary left-turn lane on the east approach and an auxiliary left-turn lane on the west approach should a private driveway be introduced at the north side of the intersection to service the future commercial lands.

5.3 Queensway Chippawa East Residential Development

RVA has also been provided with a completed TIS for the Queensway Chippawa East Residential Development to be located on the northeast corner of the Willick Road and Sodom Road intersection. As part of this study no roadway infrastructure improvements were recommended however it was noted the unsignalized intersection of Sodom Road with Lyons Creek Road is approaching capacity and may require future improvements.

5.4 2019 Development Charges Background Study

The municipal lands fronting onto the new development (ie: Ort Road ROW) are anticipated to be urbanized in conjunction with servicing infrastructure required to develop the site. It is noted that there are Development Charges allocated to Road Upgrade of both the Ort Rd and Willick Rd ROW's in the City of Niagara Falls 2019 Development Charges Background Study. As the necessary improvements to Ort Rd have already been identified for Development Charges, the necessary funding arrangements could be coordinated between the developer of the Ort Road Subdivision and the City. Additional information regarding the Development Charges study is provided in **Appendix C**.

6.0 Future 2032 Traffic Conditions

6.1 Future 2032 Traffic Volumes

The future 2032 midblock traffic volumes were established by first growing the existing 2022 traffic volumes by 1% per annum to the year 2032. Site generated traffic for the Ort Road lands, Willick Road lands, Queensway Chippawa Lands, South Niagara Falls lands and South Niagara Falls/Chippawa Concept Master Plan lands was then added to the background trips for two future horizon capacity analysis scenarios presented in the following sections.

6.2 Future 2032 Background Traffic Conditions

The first analysis scenario examined future 2032 traffic conditions with the roadway widening capacity improvements identified in Section 5 from the Niagara Region TMP plus development site trips from all other background developments excluding the Ort Road lands.

The resulting future 2032 background traffic volumes and subsequent volume to capacity ratios for the key midblock sections surrounding the lands are presented in **Appendix D**. The capacity analysis results indicate that with the planned additional roadway capacity there is still ample reserve capacity within the roadway network to accommodate additional traffic from development of the Ort Road lands.

6.3 Future 2032 Total Conditions

The second analysis scenario examined the future 2032 total traffic conditions with the roadway widening capacity improvements with background development site trips including site trips generated by the Ort Road lands.

The resulting future 2032 total traffic volumes with the Ort Road site trips and subsequent volume to capacity ratios for the key midblock sections surrounding the lands are presented in **Appendix E**.

The results of the capacity analysis indicate that the addition of the development trips to the network will have minimal impact to capacity along the major roadways surrounding the lands. Volume to capacity ratios remain satisfactory and no additional lane capacity improvements are required to support trips generated by the development beyond what is already planned as part of the Niagara Region TMP. Future EA studies for these Regional network improvements will identify any traffic control or auxiliary lane requirements at the intersection level.

7.0 Active Transportation Facilities

Pedestrian Facilities

As part of ongoing residential development to the north side of Willick Road between Ort Road and Sodom Road, improvements to Willick Road including a more urban roadway cross-section which includes sidewalk facilities are already implemented or currently slated for implementation. Opportunities exist for the subject lands to provide further connection to these facilities (i.e. sidewalks) which will provide connections to additional active transportation facilities in the area.

Cycling Facilities

Sodom Road is currently identified as an existing cycling facility within the Niagara Region TMP which stretches from Willick Rd. to Somerville Rd. The TMP also identifies infill connections linking this route to adjacent routes north towards Lyons Creek Road and south to toward Netherby Rd. Opportunities are available to provide connections to this network via Willick Road which directly abuts the subject lands.

Trail Facilities

There are currently several planned trails located within woodland area on the northeast corner of Ort Road and Willick Road which directly abuts the subject lands. An existing trail facility is also located further east along Willick Road which travels along the west side of the Hunter Drain from Willick Road to Lyon’s Creek adjacent Sodom Road. There is ample opportunity to provide connections to these facilities and support a more active lifestyle for the community resident of the subject lands. The available connection opportunities can be seen in **Appendix F**.

8.0 Settlement Area Boundary Review Assessment

A Settlement Area Boundary Review Assessment (SABR ID 1370) of the Ort Road lands was also completed. The document contains high level comments provided by the Niagara Region regarding Transit and Transportation. Based on the comments received, the Region had no objectionable concerns regarding the proposed roadway infrastructure accommodating development of the subject lands.

Additional responses and commentary to the Regions input is provided in **Appendix G**.

9.0 Summary of Findings

The main findings of our review are summarized as follows:

- The Ort Road land contains approximately 11.6 hectares of developable area. Based on a low-density population of 50 persons per hectare, this works out to a residential population of approximately 580 to 650 persons.
- A low-density unit count based on the developable lands and subject to City requirements, lot fabric, layout configuration and road layout etc., works out to approximately 190 to 200 units.
- Development of the proposed lands is forecast to generate approximately 156 two-way trips during the weekday a.m. peak hour (36 inbound and 140 outbound) and 175 two-way trips (120 inbound and 71 outbound) during the weekday p.m. peak hour.
- No trips from the subject lands were assigned to Lyons Creek Parkway as the intention of this roadway is to remain as a cul-de-sac with no connection to Ort Road.
- Roadway capacity analysis under future 2032 traffic conditions indicates that the major study area roadways surrounding the development lands will still have ample reserve capacity with the addition of trips generated by the Ort Road lands.
- No additional roadway widening capacity improvements are required beyond those identified in the Niagara region Transportation Master Plan.
- Right-of-way improvements to Ort Road have already been identified for Development Charges within the City's 2019 study. The necessary funding arrangements could be coordinated between the developer of the Ort Road Subdivision and the City.
- Opportunities exist to provide connections to existing active transportation facilities within the immediate are of the subject lands. This includes providing cycling connections to Sodom Road and Lyons Creek Road, sidewalk connections to existing

facilities along Willick Road and connection to planned trail facilities within woodland areas north of Willick Road and east of Ort Road.

- As outlined in the SABR for the subject lands, the Niagara Region had no objectionable concerns regarding the proposed roadway infrastructure accommodating development of the lands.

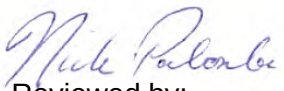
10.0 Closing

If there is any query related to this report, please feel free to contact Matthew Di Maria at 905-685-5049 ext. 4237 or by email at mdimaria@rvanderson.com.

Yours very truly,

R.V. ANDERSON ASSOCIATES LIMITED

Matthew Di Maria, C. Tech., CAPM
Transportation Planner



Reviewed by:
Nick Palomba, P.Eng.
Transportation Planning Manager

APPENDIX A

Subject Lands Legal Survey

NOTE: THIS SKETCH IS NOT A PLAN OF SURVEY

COMPILED SKETCH OF

9265 ORT ROAD
CITY OF NIAGARA FALLS
REGIONAL MUNICIPALITY OF NIAGARA

SCALE 1:2000

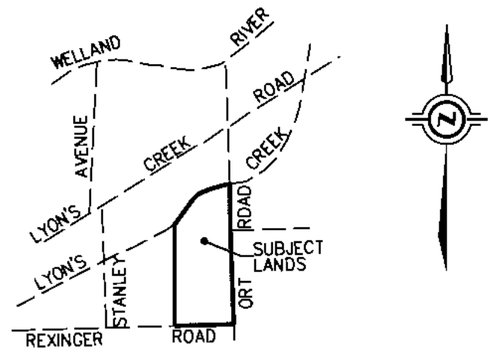
50 0 50 100 150 metres

J.D. BARNES LIMITED

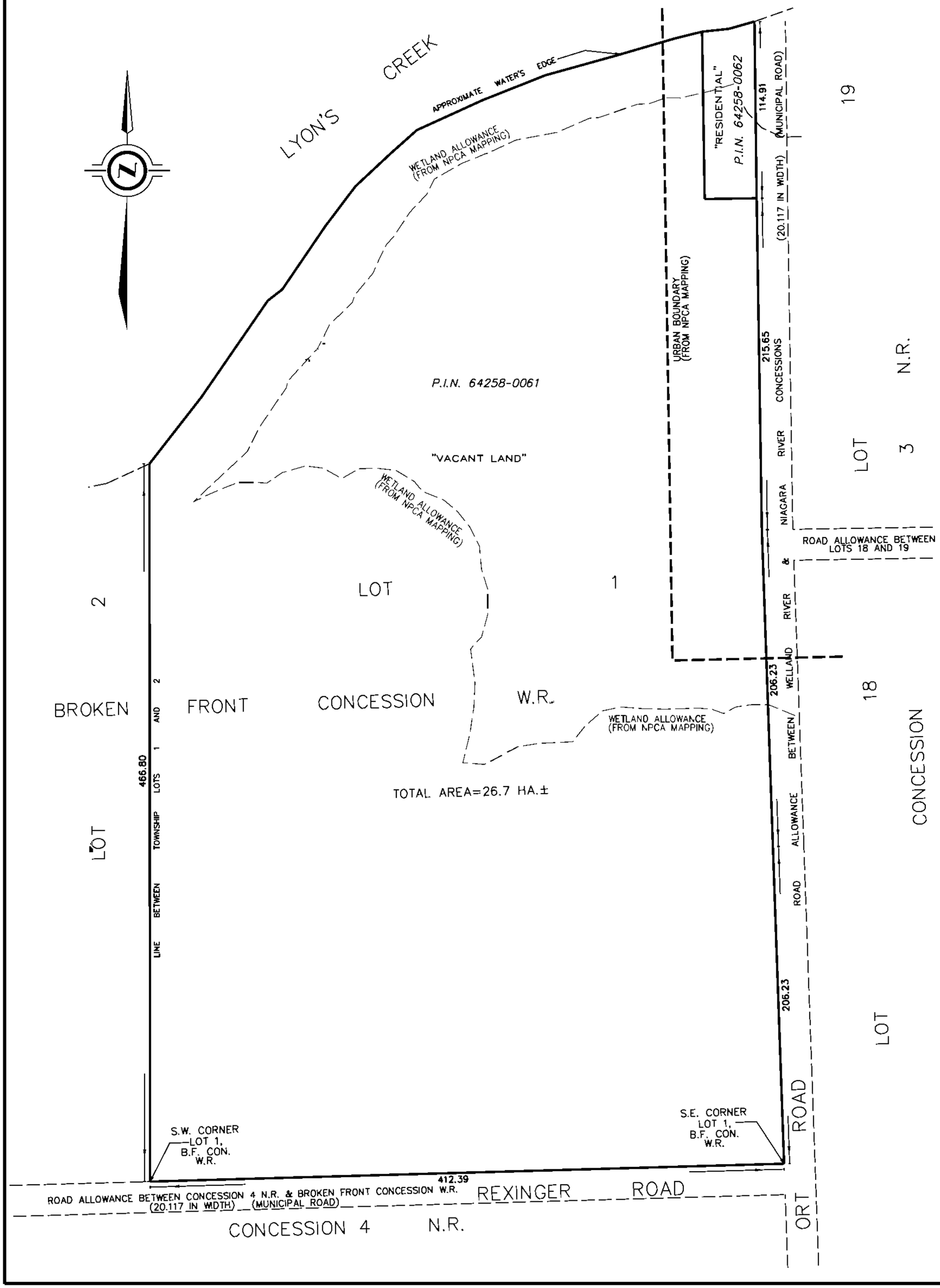
METRIC NOTE

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

KEY PLAN (not to scole)



CITY OF NIAGARA FALLS



CAUTION

(A) THIS IS NOT A PLAN OF SURVEY AND SHALL NOT BE USED EXCEPT FOR THE PURPOSE INDICATED IN THE TITLE BLOCK.

(B) THIS SKETCH IS PROTECTED BY COPYRIGHT.

LEGAL DESCRIPTION

PART OF LOT 1, BROKEN FRONT CONCESSION WELLAND RIVER, TOWNSHIP OF WILLOUGHBY, NOW CITY OF NIAGARA FALLS

BOUNDARY INFORMATION HAS BEEN COMPILED FROM AVAILABLE RECORDS AND HAS NOT BEEN VERIFIED BY ACTUAL FIELD MEASUREMENTS. THIS IS NOT A PLAN OF SURVEY

J.D.BARNES LIMITED
SURVEYING MAPPING GIS
LAND INFORMATION SPECIALISTS
4318 PORTAGE ROAD - UNIT 2, NIAGARA FALLS, ON L2E 6A4
T: (905) 358-3693 F: (905) 358-6224 www.jdbarnes.com

S.S.	DRAWN
A.J.H.	CHECKED
2019/12/04	DATED:
19-16-396-00	Ref. No.

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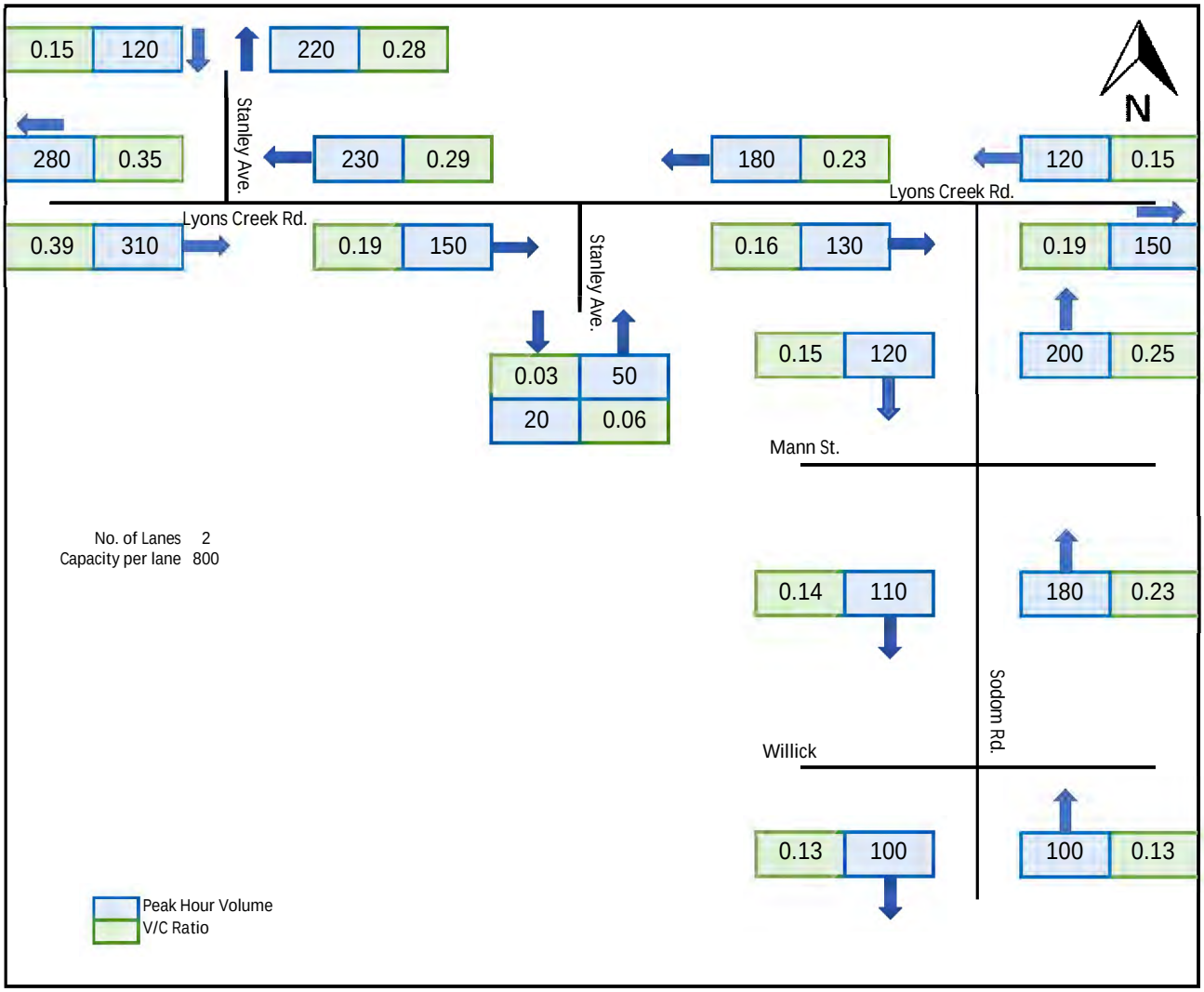
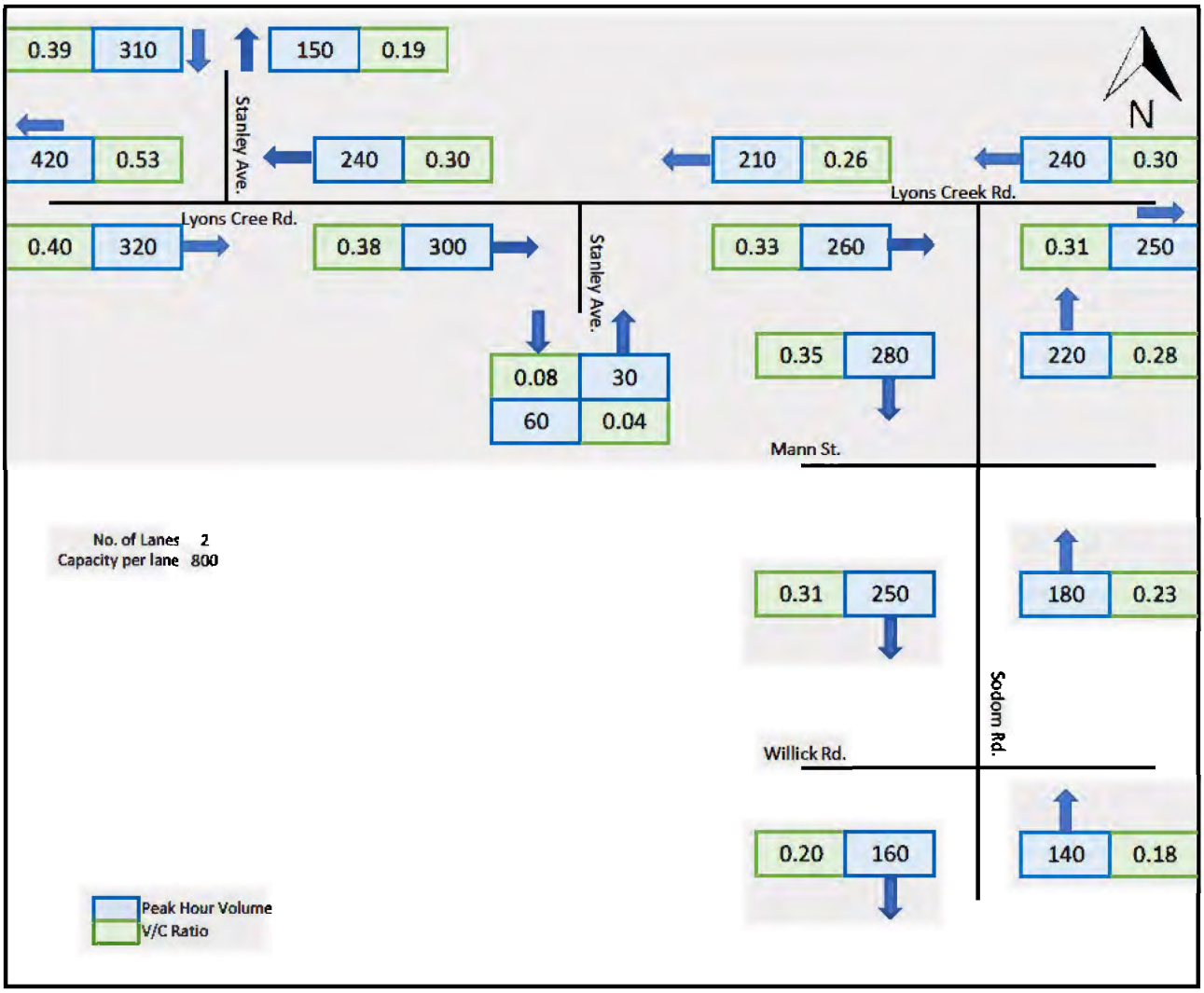
APPENDIX B

Existing 2022 Midblock Traffic Volumes and Capacity Results

2022 AM Peak Hour



2022 PM Peak Hour



APPENDIX C

2019 Development Charges Background Study

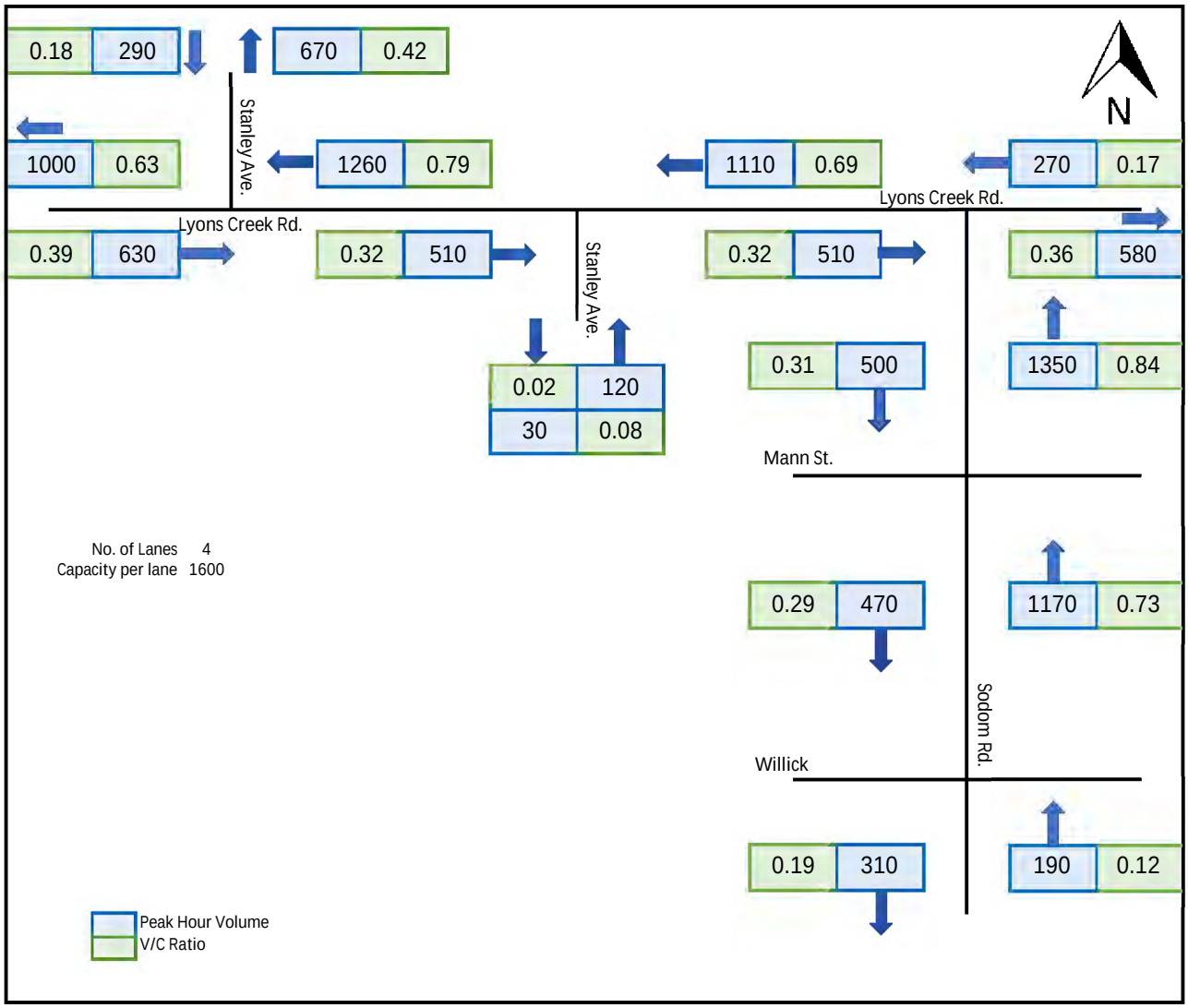
2019 CITY OF NIAGARA FALLS DEVELOPMENT CHARGES BACKGROUND STUDY SUMMARY

Infrastructure Type	Infrastructure Requirement	Limits	Approximate Length (m)	Type of Im ement
New Road	Lyon's Parkway (Easement)	Lyon's Parkway Easement Limit – Ort Road	180m	New evelopment
Road Upgrade	Ort Road	North Limit – Willick Road	255m	New lopment
Road Upgrade	Willick Road (Sodom Road – Ort Road)	Sodom Road – Ort Road	1 0m	New Develo nt
Box Culvert Crossing Replacement	Willick Road (Sodom Road – Ort Road)	Sodom Road – Ort Road	N/A	New Developmen
Watermain	Lyon's Parkway (Easement)	Lyon's Parkway Easement Limit – Ort Road	1 m	New Development
Watermain	Ort Road	imit – lick R	25	New Development
Watermain	Willick Road (Sodom Road – Ort Road)	So m Road – Ro	1000m	New Development
Sanitary Sewer	Lyon's P (Eas nt)	Lyon's ay Easem Limit – Ort Road	180m	New Development
Sanitary Sewer	t Road	North Lim Willick Roa	255m	New Development
Sanitary Sewer	Willick Road d – O oad)	Road – Ort Road	1000m	New Development
St	Lyon's way (Easemen	Lyon's Parkway Easement Limit – Ort Road	180m	New Development
Storm Sewer	O oad	North Limit – Willick Road	255m	New Development
Storm Sewer	Wi Road (Sodom Ro – Ort Road)	Sodom Road – Ort Road	1000m	New Development

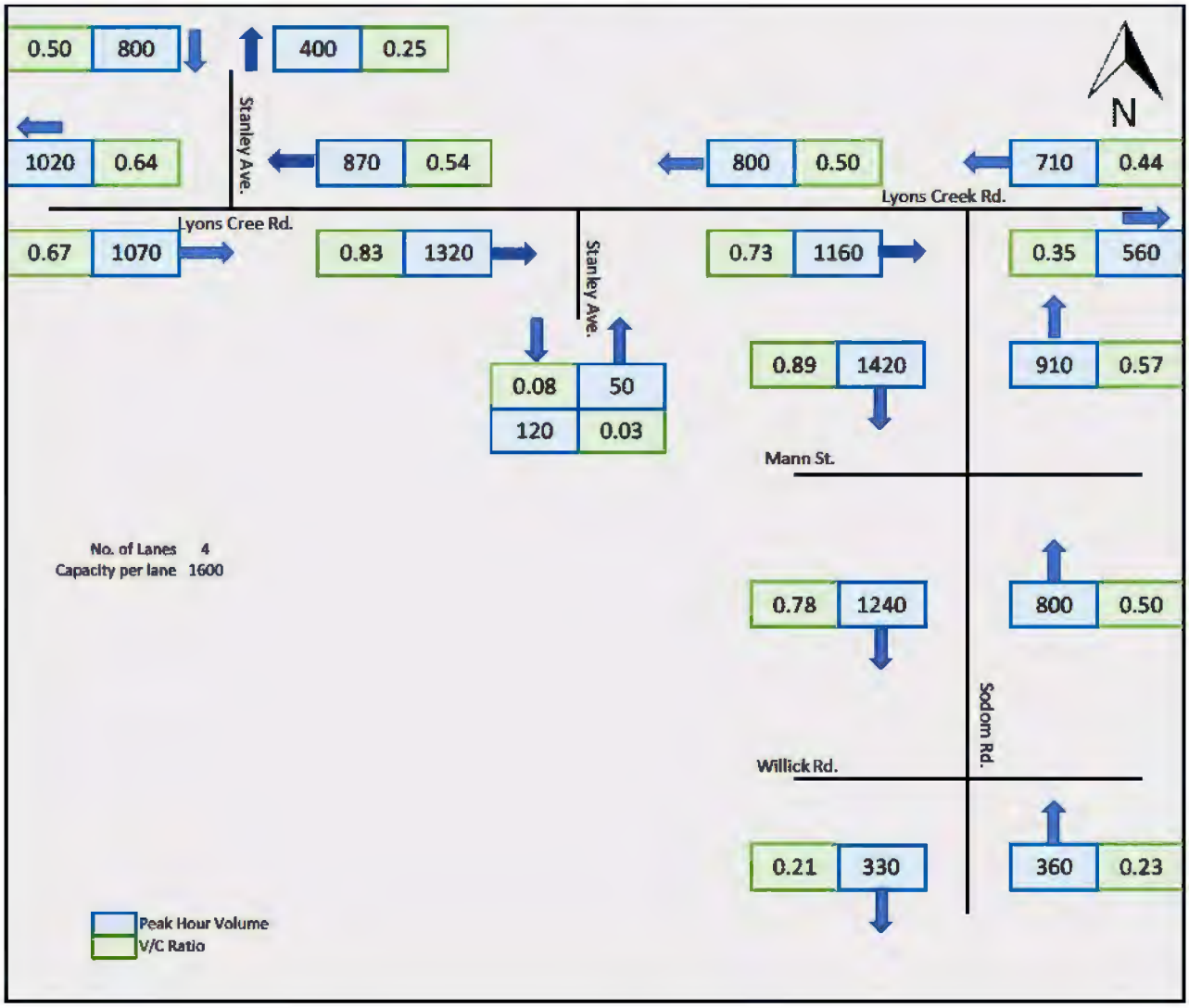
APPENDIX D

Future 2032 Background Conditions - Midblock Traffic Volumes and Capacity Results

2032 Background AM Peak Hour (No Ort Land Trips)



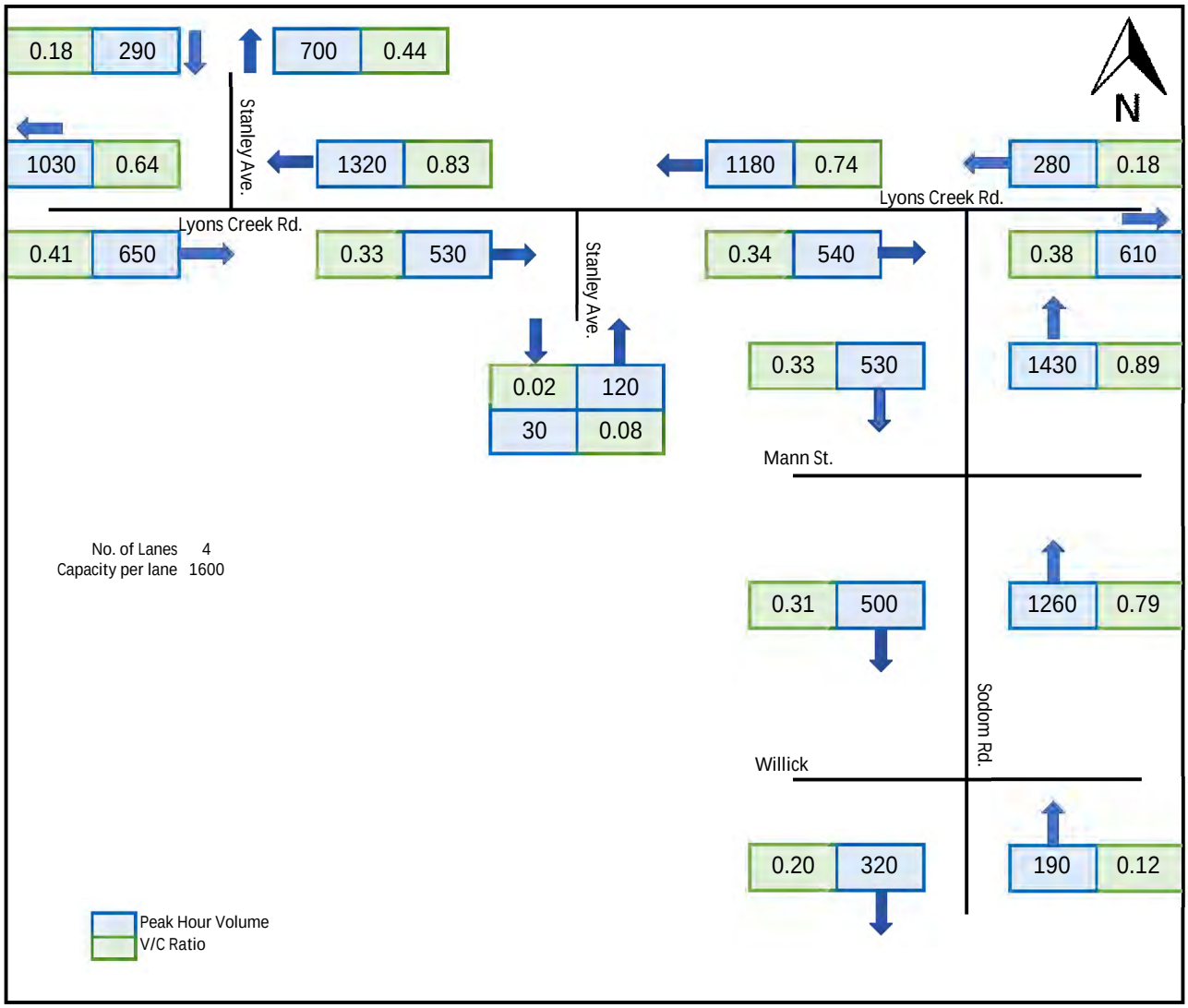
2032 Background PM Peak Hour (No Ort Land Trips)



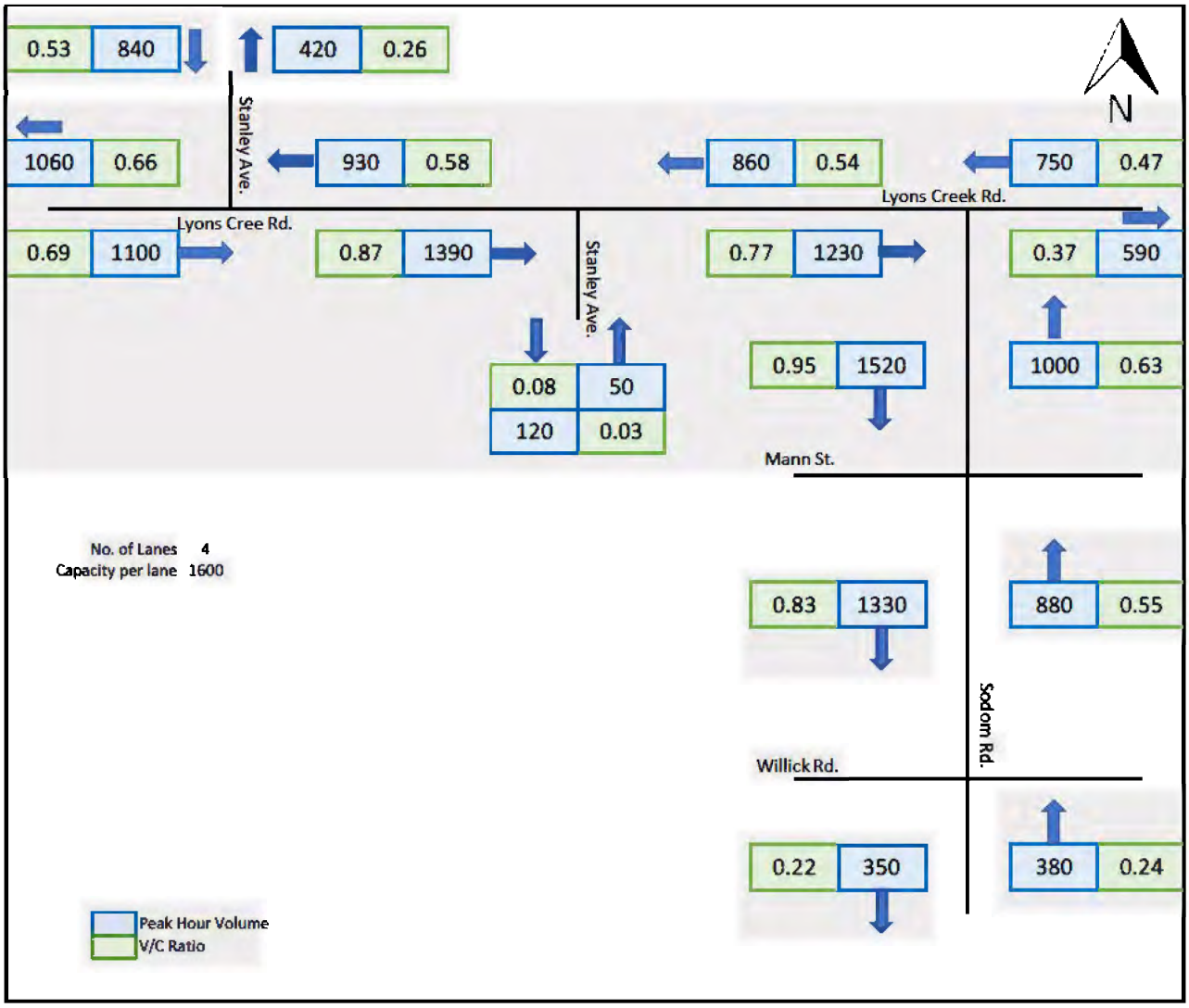
APPENDIX E

Future 2032 Total Conditions - Midblock Traffic Volumes and Capacity Results

2032 Total AM Peak Hour



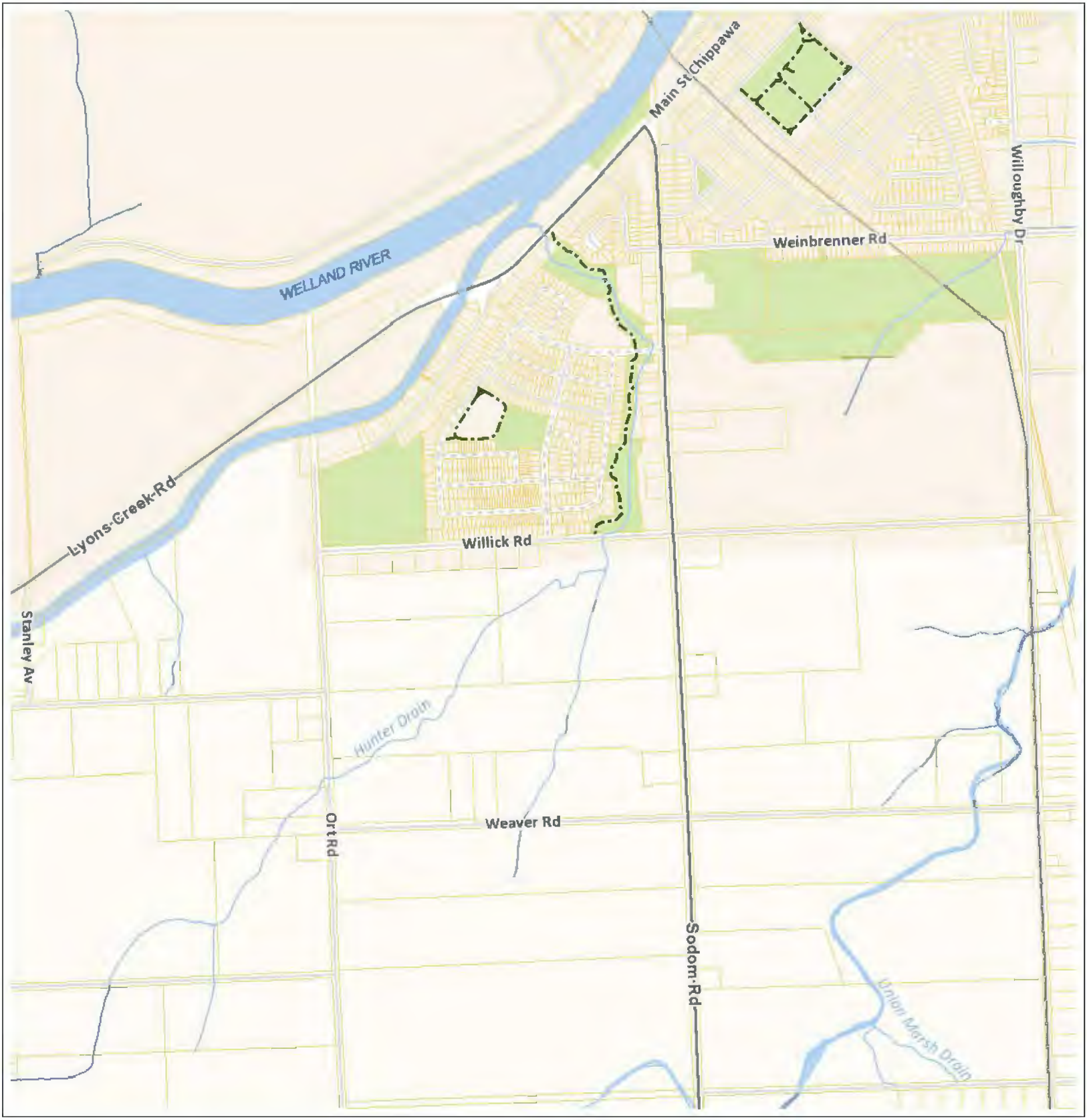
2032 Total PM Peak Hour



APPENDIX F

Existing Parks & Trail Facilities

Location Map



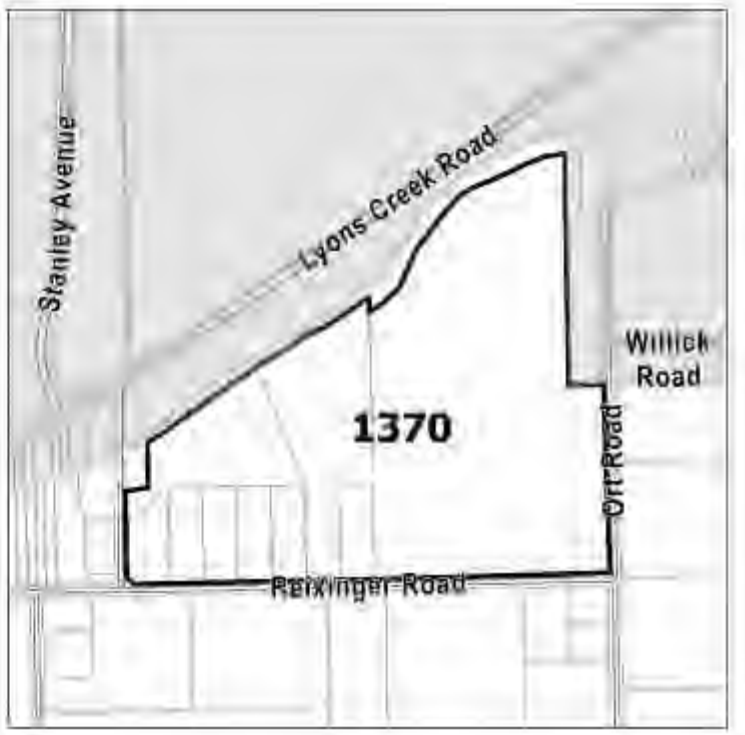
Print Date: 2/2/2022

APPENDIX G

Settlement Area Boundary Review Assessment (SABR 1370) – Traffic & Transportation Comments & Responses

SETTLEMENT AREA BOUNDARY REVIEW ASSESSMENT SHEET

MUNICIPALITY: Niagara Falls **SABR ID:** 1370 **GROSS AREA:** 39.6ha



SANITARY SERVICING

1. *What is the capacity to accommodate the parcel or collection of parcels at WWTP during the planning period?*

   Criteria Response: Highly Feasible

   Comment: Highly Feasible - as long as new South NF WWTP is constructed - lands will be in new South NF WWTP catchment area

2. *Is sanitary servicing available or can it be made available to the lands?*

   Criteria Response: Feasible

   Comment: Feasible - needs servicing plan and new sewers to convey South development area flows to new SNF WWTP system with servicing strategy in conjunction with 1374,1370,1371,1375. This area is undeveloped now, limited to no trunk servicing. Area servicing plan would be required. With south

development area, recommend redirecting Chippawa to new SNF WWTP. Wet Weather reduction identified for Chippawa

3. *Will the extension of servicing have any impact on natural environment, including key hydrologic features and areas?*

   Criteria Response: High Impact

   Comment: High Impact - appears to have environmental features as well as other land uses (agricultural, other)

4. *In relation to sanitary servicing, how feasibly can the parcel or collection of parcels support additional urban development in its Watershed through mitigating measures?*

   Criteria Response: Feasible

   Comment: Feasible - Servicing strategy would greatly support other connections and address other issues

MUNICIPAL WATER SUPPLY

1. *Does the existing system have capacity to accommodate the parcel or collection of parcels with municipal water supply during planning period?*

   Criteria Response: Feasible

   Comment: Feasible - supplied through integrated water supply system with NF WTP, and Decew WTP, there is available capacity at WTP but will most likely require future expansion

2. *How easily can a water supply connection be made*

   Criteria Response: Feasible

   Comment: Feasible - will require new trunk and local water distribution infrastructure, area servicing plan, good pressure being close to WTP, will require additional floating storage beyond current 2016 MSP recommendations, network enhancements to ensure fire flows

3. *Will the extension of water servicing have any impact on natural environment, including key hydrologic features and areas?*

   Criteria Response: High Impact

   Comment: High Impact - appears to have environmental features as well as other land uses (agricultural, other)

4. *In relation to municipal water supply, how feasibly can the parcel or collection of parcels support additional urban development in its Watershed through mitigation or supplemental measures?*

   Criteria Response: Feasible

   Comment: Feasible - review of distribution network required

TRANSIT AND TRANSPORTATION

1. *How well can the parcel or collection of parcels access major transportation corridor such as Provincial Highway, Regional Road, rail or marine systems?*

   Criteria Response: Highly Feasible

   Comment: The subject lands have good potential access to Regional Rds (Lyons Creek Rd, Stanley Ave) with improvements to creek crossings.

2. *Can a local road network be incorporated for the parcel or collection of parcels, including consideration of environmental matters?*

   Criteria Response: Highly Feasible

   Comment: Cursory review of the site does not present any notable constraints in terms of creating a local road network. As the subject site has accesses to major transportation networks, there are multiple opportunities to access future built local road network.

3. *What is the level of impact to existing road networks and level of service from the addition of the parcel or collection of parcels?*

   Criteria Response: Modest Impact

   Comment: Traffic signals may be warranted at Lyons Creek Rd & Stanley Ave depending on future development size and density .

4. *What is the feasibility of extending transit services to the parcel or collection of parcels?*

   Criteria Response: Modest Impact

   Comment: Not currently served. Future coverage by on-demand services possible, though not currently planned.

5. *What is the feasibility of extending active transportation facilities to the parcel or collection of parcels?*

   Criteria Response: Feasible

Comment: Although the land is in approximate to existing cycling facility to north at Lyon's Creek Rd but the creek crossing road needs to be improved to accommodate cycling facility. This has not been highlighted in 2017 TMP yet but maybe in the future TMP.

ENVIRONMENTAL PROTECTION AND NATURAL RESOURCES

1. *In terms of Provincial Natural Heritage System, how much the parcel or collection of parcels are affected/impacted?*

   Criteria Response: More than half shown as NHS

   Comment: Site 1370 is a triangular site at the NW corner of Ort Rd and Rexinger Rd. More than 1/2 of site 1370 is in the PNHS. There is a PSW and large wooded area on the site. The site is adjacent to Lyons Creek.

2. *In considering the parcel or collection of parcels in the context of NHS constraints, and as part of the broader NHS, what level of feasibility would be represented on the parcel or collection of parcels in gaining access to fragmented development parcels (without existing R.O.W. frontage)?*

   Criteria Response: Feasible.

   Reliance on single adjacent property for access

   Comment: Access to the site from Ort road appears to be fully constrained. What appears to be the only part of the site with development potential has access from Rexinger Rd.

3. *With respect to Watershed Planning and the overall health of the respective Watershed, what is the impact should the parcel or collection of parcels be added to the urban area and developed for urban use?*

   Criteria Response: High Impact

   Comment: Site 1370 is in the watershed planning area NF-6 and is assessed as high impact.

4. *What is the level of feasibility related to introducing mitigation measures to improve water quality?*

   Criteria Response: Feasible

   Comment: Ability to implement water quality mitigation on the site could be constrained by the extent of natural features and PNHS policies.

5. *With available information concerning species at risk, what level of impact would be experienced if the parcel or collection of parcels were to be added to the urban area and developed for urban purpose?*

   Criteria Response: High Impact

   Comment: Potential for SAR is considered high given the extent of natural features on the site and the proximity to Lyons Creek.

6. *What is the impact of including the parcel or collection of parcels on topography and the ability to minimize significant earthworks that could interfere with hydrogeological function?*

   Criteria Response: Modest Impact

   Comment: There is modest slope on the site associated with the Lyons creek valleyland. Potential impacts are considered modest.

AGRICULTURE AGRI-FOOD NETWORK

1. *As defined by the PPS, using the range provided, how best are the parcel or collection of parcels described?*

   Criteria Response: Prime Agricultural Lands

   Completely

   (Class 1-3)

   Comment: Prime Ag Area

2. *What is the level of impact on active livestock operations and MDS setbacks by including the parcel or collection of parcels in the Urban Area?*

   Criteria Response: Outside any Setback

   Comment: No visible livestock locations in proximity

3. *What is the impact to the broader Agri-Food Network if the parcel or collection of parcels were Urban Area?*

   Criteria Response: Modest Impact

   Comment: Active agriculture on 50% of site.

AGGREGATE RESOURCES

1. *In terms of distance/separation of sensitive land use, and in the context of Ministry D6 Guidelines, what level of impact on existing or planned Aggregate*

(Stone and Sand & Gravel) operations can be expected if the parcel or collection of parcels were added to the existing Urban Area Boundary? (Within 300m being Critical and beyond 1000m being Negligible)

Criteria Response: Negligible Impact

Comment: Site 1370 is not within 500m of a known deposit of mineral aggregate resource. Site 1370 is not within 1000m of an existing or proposed mineral aggregate operation.

GROWTH MANAGEMENT

1. *Does including the parcel or collection of parcels meaningfully contribute to a complete community? (2,3)*

   Criteria Response: Lower

   Contribution

   Comment: This location is made up of what appears to be recent rural residential subdivision in the eastern half of the west half of the lands and environmental lands on the east half and along Lyons Creek. Given the size collectively of what represents as vacant or unconstrained, and should it remain vacant (despite subdivision), there is limited potential on it's own. If lands adjacent to the south (south of Rexinger Road) are considered for inclusion, the contribution of this site (collection of parcels) could be viewed as a higher contribution to complete community building.

2. *Does inclusion of the parcel or collection of parcels represent a favourable way to achieve the outcome of the Region-identified land needs?*

   Criteria Response: Lower

   Favourability

   Comment: Similar to the above context, as a collection of parcels the overall contribution to achieving the land need is lower if considered in isolation. If adjacent lands to the south and even further east were to be identified for inclusion, the lands could become more favourable given access and anticipated related capital (bridge reconstruction) would be a consideration. For the purposes of assessment the lower favourability is selected. There is some dependence (not wholly) on these lands being included if lands south of Rexinger Rd. are to be considered for continuity with the existing settlement boundary.

3. *What are the planning impacts on neighbouring or nearby lands by including the parcel or collection of parcels in the urban area? (2)*

Criteria Response: Modest Impact

Comment: The assessment for these lands is being assumed as community, which is shared with lands west and south. that community lands consideration is given to lands west and south, in which case the impact to neighbouring or nearby lands would be less impactful. Impacts to environmental in the area would need detailed study for appropriate mitigation. If lands east of Stanley were considered for employment, this site would have some influence on compatibility. A modest impact is assessed on that basis.

Ort Road Subdivision

Urban Boundary Expansion

Niagara Falls, ON

Preliminary Servicing Strategy

Prepared For:

Would Construction Inc.

RVA 226240

Original: February 4, 2022

TABLE OF CONTENTS

1.0 INTRODUCTION

R.V. Anderson Associates Limited (RVA) has been retained by Would Construction Inc. (WCI) to investigate the serviceability of the lands at or generally associated with municipal address of 9265 Ort Rd (the "Subject lands"), owned within the Chippawa community of the City of Niagara Falls with regards to an Urban Boundary expansion.

The intent of this investigation is: 1) to provide a preliminary understanding of existing municipal infrastructure available in the vicinity of the subject lands, 2) to demonstrate a reasonable servicing strategy to support the development of the lands for inclusion within the expansion of the Niagara Falls Urban Boundary, and 3) to address the Settlement Area Boundary Review - Assessment Responses put forth in the Niagara Region Official Plan Appendix 9 – PDF 41-2021 dated December 8, 2021.

It should be noted that the subject site is a portion of SABR ID: 1370 as identified in the Urban Settlement Area Assessment Review. The report, and specifically Appendix 9, presented comments and concerns with regards to sanitary servicing, municipal water supply, transit and transportation, environmental protection and natural resources, agri-culture agri-food network, aggregate resources, and growth management. Appendix A provides our site-specific responses to the SABR comments which will further be elaborated on in the servicing sections of this report. A separate Preliminary Transportation Strategy Brief will also be issued to address specific transportation related comments.

1.1 Background and Resource Information

The following information was reviewed in preparing this report:

- Ort Lands Preliminary Transportation Strategy Brief by R.V. Anderson and Associates Limited, dated February 4, 2022
- Niagara Region Official Plan, Appendix 9 – PDF 41-2021, Urban Settlement Area Assessment Review and Comments, December 2021
- Natural Heritage Characterization and Constraints Analysis, 9265 Ort Road and Adjacent Lands, City of Niagara Falls, by Colville Consulting Inc., dated Jan 2022
- Niagara Region 2016 Water and Wastewater Master Servicing Plan Update, by GM BluePlan Engineering, dated June 2017
- Development Charges Background Study, Version for Public Consultation by Hemson Consulting Ltd, dated March 29, 2019
- Sketch of 9265 Ort Road, City of Niagara Falls, Regional Municipality of Niagara by J.D. Barnes Limited dated 2019/12/04

2.0 SITE INFORMATION

The subject lands are a 26.4 ha site located west of Ort Road, north of Rexinger Road, and south of Lyons Creek. The majority of the lands are currently outside of the Niagara Falls Urban Boundary, with the exception of a 2.24 ha portion of frontage along Ort Road. The subject lands are identified as P.I.N. 64258-0062 and P.I.N. 64258-0061, Lot 1 Broken Front Concession W.R, as per the sketch by J.D. Barnes (refer to Appendix B).

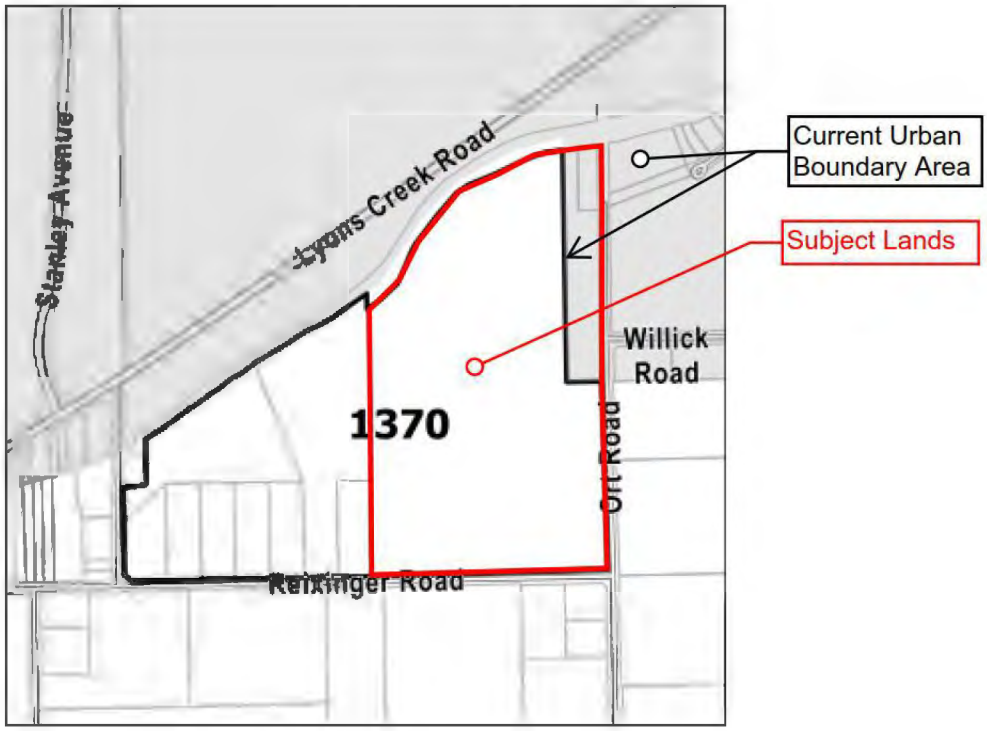


Figure 2.1 – Site Location Plan & Current Urban Boundary Limit

The site, in its current state, consists of dense forest/wetland throughout the southern portion, and thinner forested/brush areas throughout the northern portion. A residential dwelling and garage structures are located the northeast corner of the property off of Ort Rd. It is understood that, based on the Colville report, the southern portion of the site is identified as Environmental Protection Area (Wetland) and therefore has limited development potential. The developable portion of the lands are situated in the northern portion of the site, which will be the focus of the servicing strategy in this report.

Figure 2.2 – Site Aerial Plan

2.1 Development Population

Of the 26.4 ha total site area, approximately 11.6 ha is suitable for development as it is not identified as an Environmental Protection Area indicated in the Colville report.

Based on a low-density usage of 50 persons per hectare, the site can be expected to generate a residential population of approximately 580 persons. This corresponds to an approximately 190-200 residential units (subject to City density requirements and practical lot fabric configuration, road layout, etc).

Note: for transit and transportation related considerations refer to the Ort Lands Preliminary Transportation Strategy Brief (RVA, February 4, 2022).

3.0 SANITARY SERVICING

The Settlement Area Boundary Review Assessment Sheet for Block 1370 generally regarded the sanitary servicing of the block as feasible, with the exception of impact to natural environment and key hydrologic features. With respect to the subject lands, the sanitary servicing is highly feasible and impact to the natural environment or key hydrologic features can be mitigated by offsets/buffers of development limits from the Environmental Protection Areas and through implementation of stormwater management (see 5.0). Refer to Appendix A for site-specific responses to the SABR comments.

It is also noted that there are City of Niagara Falls Development Charges allocated for the future sanitary sewer construction in Ort Rd from Lyon's Pkwy to Willick Rd. Refer to Appendix B for additional information and to the 2019 DC Background Study.

3.1 Existing Sewer Infrastructure

There is an existing 375mm sanitary sewer in Lyon's Pkwy northeast of the site. This sewer system continues flowing northeastward where it is joined by sewers from Mann St and flows from the Chippawa West subdivision. The sewers continue to Lyons Creek Road which turns into Main St. The sewers cross the Welland River via siphon across from Sodom Rd and then drain to the South Side Low Lift Sanitary Pumping Station at the north side of the river.

There are current plans by an adjacent developer in conjunction with preliminary approval from the City of Niagara Falls (CONF) to extend the municipal sanitary sewers and watermains from Lyon's Pkwy to Ort Rd. (Note: it is understood that the Lyon's Pkwy roadway will remain a cul-de-sac and will not be extended through to Ort Rd.)

3.2 Site Specific Sanitary Loading

Based on the preliminary population of 580 person, the development site is anticipated to generate the following sanitary load:

Average Dry Weather Flow = 275 L/person/day

Peaking Factor [Harmon] = 1 + 14/(4+(p/1000)^0.5) = 1+ 14/(4+0.58^0.5) = 3.94

Wet Weather Infiltration Rate = 0.286 L/s/ha

Total Peak Sanitary Discharge = (275 * 580 * 3.94) / 86400 + 0.286 * 11.6 = 10.6 L/s

3.3 Sanitary Servicing

The subject site is located where it is possible to extend nearby sanitary sewers from Lyon's Pkwy. Again, it is noted that the CONF is currently processing an application which will include the extension of existing sanitary sewers and watermain to Ort Rd. The extension of the sanitary sewer (and watermain) system from Lyon's Pkwy to Ort Rd is supported by the City of Niagara Falls and is included in the 2019 DC Background Study.

Taking into account the ultimate development population of the Chippawa West lands and future development of approximately 3 lots on the Lyon's Pkwy extension, there is additional capacity within the 375mm sewers along Lyon's Pkwy to Lyons Creek Rd.

The Lyon's Pkwy sanitary sewer extension to Ort Rd by the adjacent developer will supply a 375mm sewer approximately 4-5m deep to the north end of Ort Rd. The subject development could then further extend this sewer system approximately 250m southward to the intersection with Willick Road and the limit of the current Urban Boundary. Adequate sewer depths can be constructed without necessity to raise the Ort Rd ROW.

Refer to the sanitary catchment and servicing concept figures in Appendix B.

3.4 Regional Pumping Station Capacity and Future Wastewater Treatment

The South Side Low Lift SPS, a Niagara Region pumping station, would receive sanitary sewage from the subject lands. The 2016 Niagara Region MSP identified that the SPS has sufficient (and surplus) capacity to meet wet weather flow demands projected to 2041.

The South Side Low Lift SPS pumps sewage to the South Side High Lift SPS. As identified in the 2016 MSP, the High Lift SPS has adequate dry weather capacity projected to 2041 and, at the time of the report identified adequate wet weather capacity in the existing condition.

Ultimately the South Side High Lift SPS will be decommissioned when the new South Niagara Falls Wastewater Treatment Plant (SNF-WWTP) is constructed. Sewage from the High Lift SPS are proposed to drain by gravity to the WWTP.

4.0 WATER SERVICING

The Settlement Area Boundary Review Assessment Sheet for Block 1370 generally regarded the municipal water servicing of the block as feasible, with the exception of impact to natural environment and key hydrologic features. With respect to the subject lands, the municipal water servicing is highly feasible and in our opinion would be no impact to the natural environment or key hydrologic features. Refer to Appendix A for site-specific responses to the SABR comments.

It is also noted that there are City of Niagara Falls Development Charges allocated for the future watermain construction in Ort Rd from Lyon's Pkwy to Willick Rd. Refer to Appendix B for additional information and to the 2019 DC Background Study.

4.1 Water Infrastructure

There is an existing 250mm watermain in Lyon's Pkwy northeast of the site. This main is dead-ended at the existing cul-de-sac. Again, it is noted that the CONF is currently processing an application which will include the extension of the existing sanitary sewers and a 250mm watermain to Ort Rd. (Note: it is understood that the Lyon's Pkwy roadway will remain a cul-de-sac and not extend through to Ort Rd.)

There is also an existing 250mm watermain stub in Willick Rd directly east of the site. The stub is approximately 350m west of Emerald Avenue and 320m east of Ort Rd. It was installed as part of the Chippawa West subdivision works.

4.2 Site-Specific Water Demands

Based on the preliminary population of 580 person, the development site is anticipated to generate the following water demand:

Residential per capita Usage = 300 L/person/day

Average Day Demand = (580 * 300) / 86400 = 2.01 L/s

Residential Max Day Factor = 2.75

Max Day Demand = (580 * 300 * 2.75) / 86400 = 5.54 L/s

Residential Peak Hour Factor = 4.13

Peak Hour Demand = (580 * 300 * 4.13) / 86400 = 8.32 L/s

Fire Flow Demand = 4000 L/min = 67 L/s (per FUS Guidelines)

4.3 Municipal Water Servicing

The subject site is located where it is possible to extend nearby municipal watermains from Lyon's Pkwy.

The existing 250mm watermain in Lyon's Pkwy will be extended approximately 175m westward to Ort Road by an adjacent developer. This watermain can then be further extended approximately 250m southward to the intersection with Willick Road and to the limit of the current Urban Boundary, or as required based on the site-specific layout of the subject lands.

This watermain extension can be further interconnected with the 250mm stub on Willick Road to provide a looped and interconnected system with the Chippawa West lands.

Through RVA's experience with subdivision development in the area, there are no known water supply (pressure and flow) concerns to meet residential demands. It is recommended that, as a matter of good practice, further hydrant flow testing be undertaken and a watermain network analysis to confirm this based on the site-specific demands, location, and current condition of the watermains in the area.

Refer to the servicing concept figures in Appendix B.

5.0 STORM SERVICING AND STORMWATER MANAGEMENT

The Settlement Area Boundary Review Assessment Sheet for Block 1370 generally regarded the Environmental Protection and Natural Resources concerns as feasible but with high impact to natural heritage systems, at-risk species, and watershed planning.

With respect to the subject lands, redevelopment would be located generally within the north portion which has not been identified as an Environmental Protection Area per the Colville report. This report also did not identify any at-risk species within the northern portion. Any hydrologic deficits can be mitigated through stormwater management implementation. The subject lands should be regarded as feasible with low impact to natural heritage systems, at-risk species, and watershed planning. Refer to Appendix A for site-specific responses to the SABR comments.

It is also noted that there are City of Niagara Falls Development Charges allocated for the future storm sewer construction and stormwater management in Ort Rd from Lyon's Pkwy to Willick Rd. Refer to Appendix B for additional information and to the 2019 DC Background Study.

5.1 Existing Topography and Drainage

The subject lands generally follow a gradual slope in a south to north direction towards Lyons Creek. There is a small southern portion of the site which drains southward toward Reixinger Rd; however, this portion has limited potential for development, based on the current Colville report.

5.2 General Stormwater Management

The subject lands would implement local on-site stormwater management measures as required to satisfy the Region, City of Niagara Falls, the Niagara Peninsula Conservation Authority (NPCA), and the Ministry of Environment, Conservation and Parks (MECP). It is anticipated that this would require measures primarily for water quality control and erosion and sediment control. It is understood that water quantity control beyond the 25mm event is not warranted as the site drains directly to Lyons Creek as part of the Welland River system.

The site would be developed respecting the natural contour of the landscape, following a south to north drainage pattern. Stormwater management facilities are anticipated to be located at the north (ie: downstream) limits of the site with outfall directly to Lyons Creek.

SWM and water balance requirements can be addressed to meet approval requirements. The use of OGS units for quality treatment as well as other forms of at source measures as part of a treatment train would be implemented to meet the established criteria at the time of development. The outfall from the site could be strategically located at the north end of Ort Rd which could include the Ort Rd ROW catchment/drainage within the SWM facility design. This would therefore minimize the requirement for a secondary outlet along the south edge of Lyons Creek where there is a greater possibility of environmental sensitivity.

If development of the southern portion of the lands is permitted (ie: a road or selectively placed lots), they could either be serviced with the north portion and drain to the north or be incorporated into future infrastructure along Reixinger Rd while also accommodating other lands along the east-west corridor to Stanley Ave if deemed more suitable at the time of development of adjacent surrounding properties.

6.0 ROW URBANIZATION & SERVICING DEVELOPMENT CHARGES

The lands fronting onto the new development (ie: Ort Road ROW) are anticipated to be urbanized in conjunction with the sewer and watermain infrastructure extensions required to service the site.

It is noted that there are Development Charges allocated to Road Upgrade of both the Ort Rd and Willick Rd ROWs. Additionally, there are Development Charges allocated for each of sanitary, storm, and watermain infrastructure within Ort Rd and Willick Rd.

As the necessary improvements to Ort Rd have already been identified in the DC Background Study for Development Charges, the necessary funding arrangements could be coordinated between the developer of the Ort Road Subdivision and the City. Refer to Appendix B for summary costs associated with the works identified in the 2019 DC Background Study applicable to the site.

7.0 CONCLUSION

The subject lands represent one of the last remaining parcels of undeveloped land south of Lyons Creek and north of Willick Road. When considered in isolation from the surrounding undeveloped SABRID1370 lands, it is our opinion that it is highly feasibly and practical to service the subject lands with both sanitary, storm, and and watermain infrastructure. The sanitary servicing is a natural extension of the adequately sized sewer system from Lyon's Pkwy. The watermain extension is also a natural extension of the Lyon's Pkwy system while also providing for the further expansion of the system, to service lands to the south and even along currently privately serviced lots along Willick Rd east of Ort Rd. Stormwater management can be feasibly implemented locally on-site to meet City, Regional, Ministry, and Conservation criteria. The development of the north portion of the lands can also occur without disrupting natural heritage systems or species at-risk.

Should you have any questions, please do not hesitate to contact the undersigned.

R.V. Anderson Associates Limited

Robert Babic, P.Eng.

Project Engineer

APPENDIX A

SABR RESPONSES

SETTLEMENT AREA BOUNDARY REVIEW ASSESSMENT SHEET

MUNICIPALITY: Niagara Falls **SABR ID:** 1370 **GROSS AREA:** 39.6ha

The following text boxes represent responses by RVA in conjunction with Colville to the SABR Assessment Sheet comments which are specific to the subject lands

SANITARY SERVICING

1. *What is the capacity to accommodate the parcel or collection of parcels at WWTP during the planning period?*

   Criteria Response: Highly Feasible Highly Feasible

   Comment: Highly Feasible - as long as new South NF WWTP is constructed - lands will be in new South NF WWTP catchment area

1. Capacity for the subject lands can be easily accounted for in the design of the new South NF WWTP.

2. *Is sanitary servicing available or can it be made available to the lands?*

   Criteria Response: Feasible Highly Feasible

   Comment: Feasible - needs servicing plan and new sewers to convey South development area flows to new SNF WWTP system with servicing strategy in conjunction with 1374,1370,1371,1375. This area is undeveloped now, limited to no trunk servicing. Area servicing plan would be required. With south

2. As lands suitable for development are within the north portion of the site (which are not encumbered by Environmental Protection areas as identified in the Colville report), sanitary sewers can be extended from Lyon's Pkwy and along Ort Road. The sewer extension can easily service the northern portion of the site without need to develop a new drainage system to the south and west toward Stanley Ave/Chippawa Creek. Sanitary sewage from the subject lands would be conveyed to the South Side Low Lift SPS which is within the catchment of the future WWTP. CONF are continuing with wet weather I/I reduction measures which would be recognized as part of the development requirements.

development area, recommend redirecting Chippawa to new SNF WWTP. Wet Weather reduction identified for Chippawa

3. *Will the extension of servicing have any impact on natural environment, including key hydrologic features and areas?*

   Criteria Response: High Impact Low Impact

   Comment: High Impact - appears to have environmental features as well as other land uses (agricultural, other)

4. *In relation to sanitary servicing, how feasibly can the parcel or collection of parcels support additional urban development in its Watershed through mitigating measures?*

   Criteria Response: Feasible Highly Feasible

   Comment: Feasible - Servicing strategy would greatly support other connections and address other issues

3. Sanitary sewers can be extended from Lyon's Pkwy along Ort Road to approximately Willick Road (ie: south of the current Urban Boundary to immediately capture the majority of developable lands on the subject property. No impacts to significant natural environments to extend the existing sewers as they are being conveyed across development lands at the west end of Lyon's Pkwy or within the existing Ort Road ROW to service the boundary of the subject lands. The subject site would not require the construction of infrastructure in a way that would impact lands identified as Environmental Protection Areas as per the Colville report.

4. Extension of sanitary sewers to the subject site via Lyon's Pkwy and Ort Rd via Lyon's Pkwy. The sewer extension from the existing Lyon's Pkwy cul-de-sac is currently supported by staff and is in the process of being approved by CONF through a development application at the west end of Lyon's Pkwy.

MUNICIPAL WATER SUPPLY

1. *Does the existing system have capacity to accommodate the parcel or collection of parcels with municipal water supply during planning period?*

   Criteria Response: Feasible Highly Feasible

   Comment: Feasible - supplied through integrated water supply system with NF WTP, and Decew WTP, there is available capacity at WTP but will most likely require future expansion

2. *How easily can a water supply connection be made*

   Criteria Response: Feasible Highly Feasible

   Comment: Feasible - will require new trunk and local water distribution infrastructure, area servicing plan, good pressure being close to WTP, will require additional floating storage beyond current 2016 MSP recommendations, network enhancements to ensure fire flows

3. *Will the extension of water servicing have any impact on natural environment, including key hydrologic features and areas?*

   Criteria Response: High Impact Low Impact

   Comment: High Impact - appears to have environmental features as well as other land uses (agricultural, other)

1. Extension of watermain infrastructure to the subject site via Lyon's Pkwy and Ort Rd is feasible. Further looping/ interconnection with Willick Rd watermain is feasible and will provide redundancy in the system while also providing better flows to the existing mains along Lyon's Pkwy.

2. Water supply connection and extension is feasible. Further hydrant flow testing and water network modelling is recommended to confirm infrastructure extensions can meet site demands in lieu of "additional floating storage". Watermain improvements extension from Lyon's Pkwy, in Ort Road and Willick road are currently noted for implementation in the 2019 DC Background study.

3. Watermains can be extended from Lyon's Pkwy to Ort Rd, then southerly to the Willick Rd intersection, and even further south towards Reixinger Rd. No impacts to significant natural environments areas as they are existing ROW's. The subject site would not be developed within the onsite Environmental Protection Areas identified in the Colville report. Watermain improvements in Ort Road and Willick road are currently noted for implementation in the 2019 DC Background study.

4. *In relation to municipal water supply, how feasibly can the parcel or collection of parcels support additional urban development in its Watershed through mitigation or supplemental measures?*

   Criteria Response: Feasible Highly Feasible

   Comment: Feasible - review of distribution network required

4. Extension of watermains to the subject site via Lyon's Pkwy and Ort Rd (and interconnection with Willick Road) can facilitate the inclusion of adjacent lands via further extension. Looping/interconnection with existing Willick Road watermain will increase viability for further extension towards Reixinger. Suggested watermain size would be 250mm to provide a continuous main size from Lyon's Pkwy to Willick Road.

TRANSIT AND TRANSPORTATION

1. *How well can the parcel or collection of parcels access major transportation corridor such as Provincial Highway, Regional Road, rail or marine systems?*

   Criteria Response: Highly Feasible

   Comment: The subject lands have good potential access to Regional Rds (Lyons Creek Rd, Stanley Ave) with improvements to creek crossings.

Note: Refer to the 'Ort Lands Preliminary Transportation Strategy Brief' (Feb 4 2022) by RVA for responses to Transit and Transportation comments.

2. *Can a local road network be incorporated for the parcel or collection of parcels, including consideration of environmental matters?*

   Criteria Response: Highly Feasible

   Comment: Cursory review of the site does not present any notable constraints in terms of creating a local road network. As the subject site has accesses to major transportation networks, there are multiple opportunities to access future built local road network.

3. *What is the level of impact to existing road networks and level of service from the addition of the parcel or collection of parcels?*

   Criteria Response: Modest Impact

   Comment: Traffic signals may be warranted at Lyons Creek Rd & Stanley Ave depending on future development size and density .

4. *What is the feasibility of extending transit services to the parcel or collection of parcels?*

   Criteria Response: Modest Impact

   Comment: Not currently served. Future coverage by on-demand services possible, though not currently planned.

5. *What is the feasibility of extending active transportation facilities to the parcel or collection of parcels?*

   Criteria Response: Feasible

Comment: Although the land is in approximate to existing cycling facility to north at Lyon's Creek Rd but the creek crossing road needs to be improved to accommodate cycling facility. This has not been highlighted in 2017 TMP yet but maybe in the future TMP.

ENVIRONMENTAL PROTECTION AND NATURAL RESOURCES

1. *In terms of Provincial Natural Heritage System, how much the parcel or collection of parcels are affected/impacted?*

   Criteria Response: More than half shown as NHS Low Impact

   Comment: Site 1370 is a triangular site at the NW corner of Ort Rd and Rexinger Rd. More than 1/2 of site 1370 is in the PNHS. There is a PSW and large wooded area on the site. The site is adjacent to Lyons Creek.

2. *In considering the parcel or collection of parcels in the context of NHS constraints, and as part of the broader NHS, what level of feasibility would be represented on the parcel or collection of parcels in gaining access to fragmented development parcels (without existing R.O.W. frontage)?*

   Criteria Response: Feasible. Highly Feasible
   Reliance on single adjacent property for access

   Comment: Access to the site from Ort road appears to be fully constrained. What appears to be the only part of the site with development potential has access from Rexinger Rd.

3. *With respect to Watershed Planning and the overall health of the respective Watershed, what is the impact should the parcel or collection of parcels be added to the urban area and developed for urban use?*

   Criteria Response: High Impact Low Impact

   Comment: Site 1370 is in the watershed planning area NF-6 and is assessed as high impact.

4. *What is the level of feasibility related to introducing mitigation measures to improve water quality?*

   Criteria Response: Feasible Highly Feasible

   Comment: Ability to implement water quality mitigation on the site could be constrained by the extent of natural features and PNHS policies.

1. Subject site would primarily develop feasible areas in the north portion which are not identified as Environmental Protection Area (Wetland) in the Colville report. Site development area is approximately 11.6 ha of the total 26.4 ha area.

2. Subject site would have access from significant frontage along Ort Road and be a continuous community within the north portion of the property. No constraints related to access for the subject site.

3. Subject site can provide its own on-site stormwater management for quality control/treatment and water balance measures in accordance with NPCA and MECP criteria. Discharge of stormwater runoff would be to the Lyons Creek, as consistent with the predevelopment site drainage. SWM for Ort Rd can also be implemented in conjunction with the subject lands to contain a single SWM facility and discharge point to Lyons Creek to minimize impacts to any sensitive lands along the water edge.
Lyons Creek provides significant habitat for a variety of species. However, development on the subject lands can easily be developed to reduce/eliminate negative impacts on the ecological and hydrological functions of Lyons Creek.

4. It is highly feasible that the subject site can provide its own on-site stormwater management for quality control and treatment in accordance with NPCA and MECP criteria. The site development area is continuous within the north portion which is not constrained by natural features or Environmental Protection Areas. SWM for Ort Rd can also be implemented in conjunction with the subject lands to contain a single SWM facility and discharge point to Lyons Creek to minimize impacts to lands along the water edge and provide greater efficiency to water quality treatment of the overall area.

5. *With available information concerning species at risk, what level of impact would be experienced if the parcel or collection of parcels were to be added to the urban area and developed for urban purpose?*

   Criteria Response: High Impact Low Impact

   Comment: Potential for SAR is considered high given the extent of natural features on the site and the proximity to Lyons Creek.

5. Subject site would concentrate development primarily on feasible areas which are not identified as Environmental Protection Area (Wetland) in the Colville report. Species at risk identified in the Colville report are only present in the southern portion of the site.
Lyons Creek is known to provide habitat for a number of species at risk. Development on the parcel will not impact habitat in Lyons Creek or species at risk habitat.

6. *What is the impact of including the parcel or collection of parcels on topography and the ability to minimize significant earthworks that could interfere with hydrogeological function?*

   Criteria Response: Modest Impact Low Impact

   Comment: There is modest slope on the site associated with the Lyons creek valleyland. Potential impacts are considered modest.

6. Subject site developable area slopes towards Lyons Creek. Proposed development will respect the existing topography and utilize the natural contours for associated stormwater conveyance. New sanitary sewers extended along Ort Rd would be approximately 4m deep to existing grade, therefore sewers can be installed at a suitable depth without the need for extensive earthmoving to provide suitable sewer cover.

AGRICULTURE AGRI-FOOD NETWORK

1. *As defined by the PPS, using the range provided, how best are the parcel or collection of parcels described?*

   Criteria Response: Prime Agricultural Lands

   Completely

   (Class 1-3)

   Comment: Prime Ag Area No Impact

1. Subject site is currently not used for agricultural purposes. As evidenced by site aerial photography in the Colville report, images from 2002 show no agricultural usage onsite.

2. *What is the level of impact on active livestock operations and MDS setbacks by including the parcel or collection of parcels in the Urban Area?*

   Criteria Response: Outside any Setback

   Comment: No visible livestock locations in proximity

2. Subject site is currently not used for agricultural purposes. No impact to active livestock operations in the area.

3. *What is the impact to the broader Agri-Food Network if the parcel or collection of parcels were Urban Area?*

   Criteria Response: Modest Impact No Impact

   Comment: Active agriculture on 50% of site.

3. Subject site is currently not used for agricultural purposes. No impact to Agri-Food Network.

AGGREGATE RESOURCES

1. *In terms of distance/separation of sensitive land use, and in the context of Ministry D6 Guidelines, what level of impact on existing or planned Aggregate*

(Stone and Sand & Gravel) operations can be expected if the parcel or collection of parcels were added to the existing Urban Area Boundary? (Within 300m being Critical and beyond 1000m being Negligible)

1. Negligible impact as stated.

Criteria Response: Negligible Impact No Impact

Comment: Site 1370 is not within 500m of a known deposit of mineral aggregate resource. Site 1370 is not within 1000m of an existing or proposed mineral aggregate operation.

GROWTH MANAGEMENT

1. *Does including the parcel or collection of parcels meaningfully contribute to a complete community? (2,3)*

1. Subject site can be integrated with the pending low-density developments at the west limit of Lyons Parkway in addition to the completion of the Chippawa west subdivision. Active transportation opportunities will add to the connectivity of the subject lands to the existing and proposed residential communities as well as the Chippawa West subdivision to the east. The subject site represents the continuation of urbanization of the remaining lands north of Willick Road and south of Lyons Creek. Criteria Response for the specific subject site should be considered as Higher Contribution.

Criteria Response: Lower High Contribution

Contribution

Comment: This location is made up of what appears to be recent rural residential subdivision in the eastern half of the west half of the lands and environmental lands on the east half and along Lyons Creek. Given the size collectively of what represents as vacant or unconstrained, and should it remain vacant (despite subdivision), there is limited potential on it's own. If lands adjacent to the south (south of Rexinger Road) are considered for inclusion, the contribution of this site (collection of parcels) could be viewed as a higher contribution to complete community building.

2. *Does inclusion of the parcel or collection of parcels represent a favourable way to achieve the outcome of the Region-identified land needs?*

2. Similar to the above response, the subject site in isolation represents a feasibly developable low-density residential parcel. Criteria Response for the specific subject site should be considered as Modes to High Contribution.

Criteria Response: Lower High Fabourability

Favourability

Comment: Similar to the above context, as a collection of parcels the overall contribution to achieving the land need is lower if considered in isolation. If adjacent lands to the south and even further east were to be identified for inclusion, the lands could become more favourable given access and anticipated related capital (bridge reconstruction) would be a consideration. For the purposes of assessment the lower favourability is selected. There is some dependence (not wholly) on these lands being included if lands south of Rexinger Rd. are to be considered for continuity with the existing settlement boundary.

3. *What are the planning impacts on neighbouring or nearby lands by including the parcel or collection of parcels in the urban area? (2)*

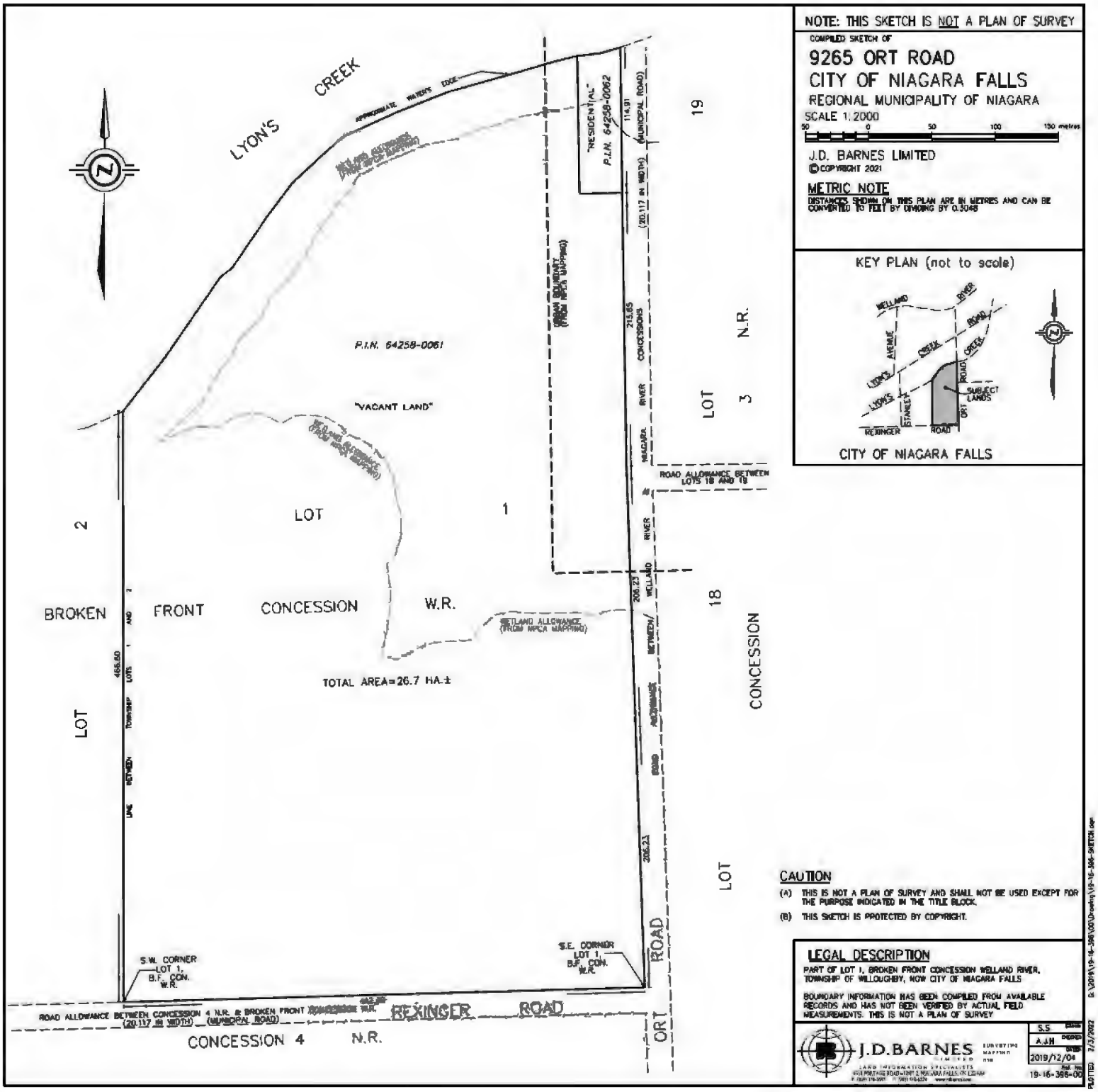
Criteria Response: Modest Impact Low Impact

Comment: The assessment for these lands is being assumed as community, which is shared with lands west and south. that community lands consideration is given to lands west and south, in which case the impact to neighbouring or nearby lands would be less impactful. Impacts to environmental in the area would need detailed study for appropriate mitigation. If lands east of Stanley were considered for employment, this site would have some influence on compatibility. A modest impact is assessed on that basis.

3. The subject site lands and northern portion developable area can be regarded in isolation from other (more southerly and westerly) parcels in area 1370. The subject lands can be developed from a servicing and transportation component without relying on adjacent sites.

APPENDIX B

PRELIMINARY SERVICING CONCEPTS



NOTE: THIS SKETCH IS NOT A PLAN OF SURVEY

COMPILED SKETCH OF

9265 ORT ROAD
CITY OF NIAGARA FALLS

REGIONAL MUNICIPALITY OF NIAGARA

SCALE 1:2000

50 0 50 100 150 metres

J.D. BARNES LIMITED

METRIC NOTE

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

KEY PLAN (not to scale)

CITY OF NIAGARA FALLS

CAUTION

(A) THIS IS NOT A PLAN OF SURVEY AND SHALL NOT BE USED EXCEPT FOR THE PURPOSE INDICATED IN THE TITLE BLOCK.

(B) THIS SKETCH IS PROTECTED BY COPYRIGHT.

LEGAL DESCRIPTION

PART OF LOT 1, BROKEN FRONT CONCESSION WELLAND RIVER, TOWNSHIP OF WILLOUGHBY, NOW CITY OF NIAGARA FALLS

BOUNDARY INFORMATION HAS BEEN COMPILED FROM AVAILABLE RECORDS AND HAS NOT BEEN VERIFIED BY ACTUAL FIELD MEASUREMENTS. THIS IS NOT A PLAN OF SURVEY

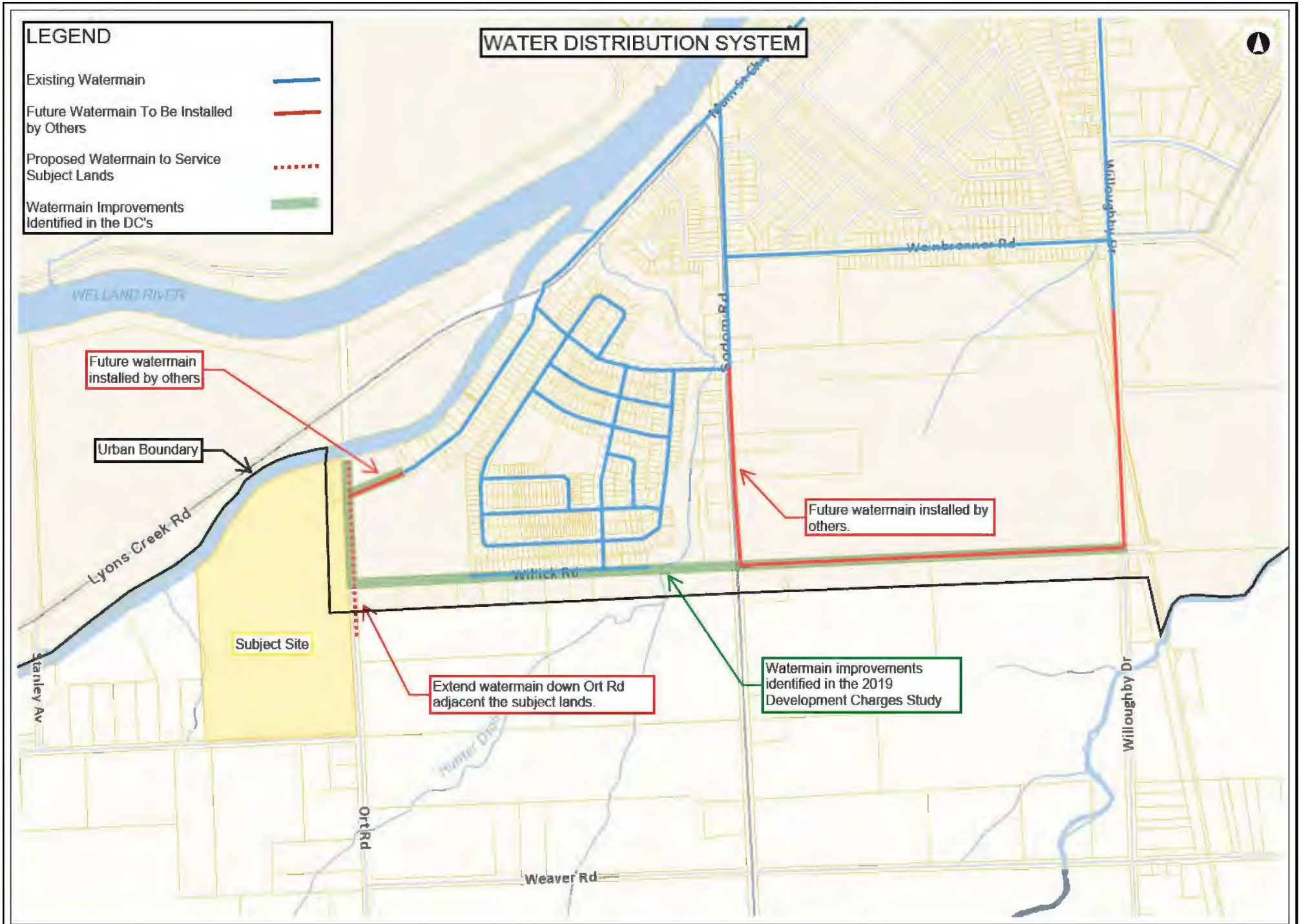
J.D.BARNES LIMITED

LAND INFORMATION SPECIALISTS

SURVEYING MAPPING GIS

DRAWN	S.S
CHECKED	A.J.H
DATE	2019/12/04
Ref. No.	19-16-396-00

PLOTTED: 2/3/2022 D:\2019\19-16-396\00\Drawing\19-16-396-SKETCH.dwg



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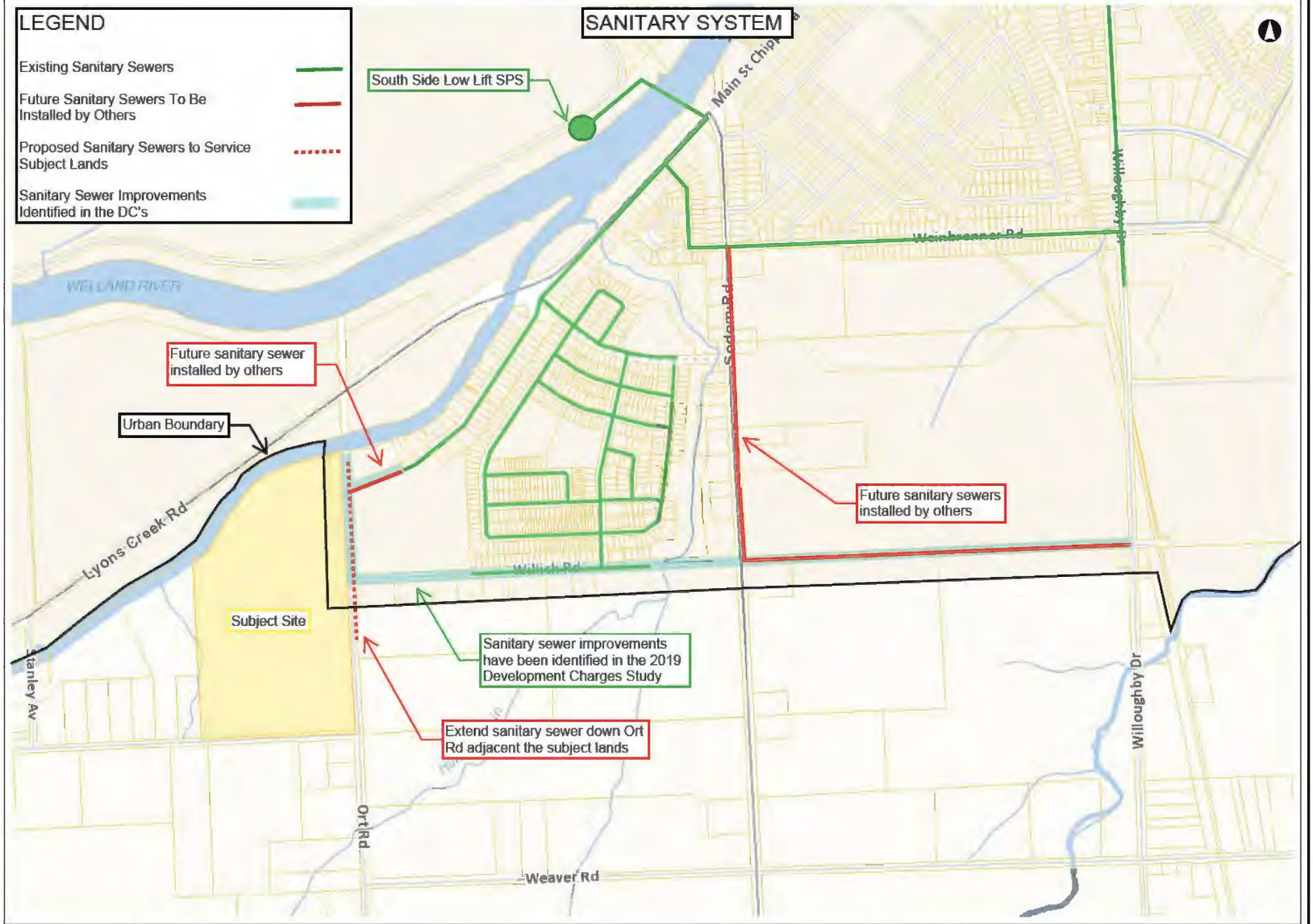

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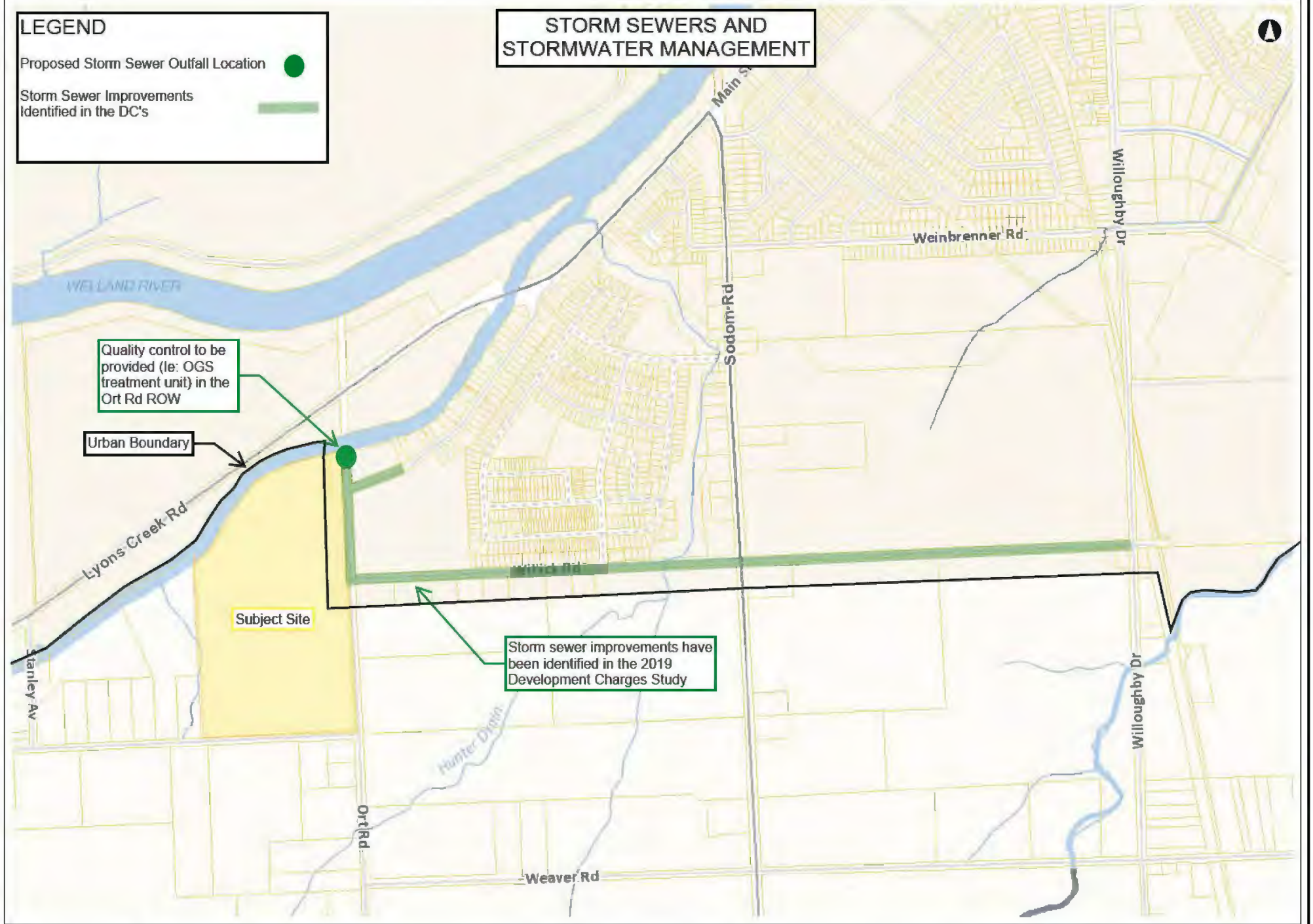

Print Date: 1/27/2022

2019 CITY OF NIAGARA FALLS DEVELOPMENT CHARGES BACKGROUND STUDY SUMMARY

Infrastructure Type	Infrastructure Requirement	Limits	Approximate Length (m)	Type of Improvement
New Road	Lyon's Parkway (Easement)	Lyon's Parkway Easement Limit – Ort Road	180m	New Development
Road Upgrade	Ort Road	North Limit – Willick Road	255m	New Development
Road Upgrade	Willick Road (Sodom Road – Ort Road)	Sodom Road – Ort Road	1000m	New Development
Box Culvert Crossing Replacement	Willick Road (Sodom Road – Ort Road)	Sodom Road – Ort Road	N/A	New Development
Watermain	Lyon's Parkway (Easement)	Lyon's Parkway Easement Limit – Ort Road	180m	New Development
Watermain	Ort Road	North Limit – Willick Road	255m	New Development
Watermain	Willick Road (Sodom Road – Ort Road)	Sodom Road – Ort Road	1000m	New Development
Sanitary Sewer	Lyon's Parkway (Easement)	Lyon's Parkway Easement Limit – Ort Road	180m	New Development
Sanitary Sewer	Ort Road	North Limit – Willick Road	255m	New Development
Sanitary Sewer	Willick Road (Sodom Road – Ort Road)	Sodom Road – Ort Road	1000m	New Development
Storm Sewer	Lyon's Parkway (Easement)	Lyon's Parkway Easement Limit – Ort Road	180m	New Development
Storm Sewer	Ort Road	North Limit – Willick Road	255m	New Development
Storm Sewer	Willick Road (Sodom Road – Ort Road)	Sodom Road – Ort Road	1000m	New Development