



**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  
Thorold ON L2V 4T7

**RE: 4336 Willick Rd, Niagara Falls  
North East Corner of SABR 1372 (19.8 ha)  
Settlement Area Boundary Expansion**

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Dear Mr. Millar,

LANDx Developments Ltd. are planning consultants to Imran Ahmed regarding the potential for 4336 Willick Rd. (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 19.8 ha at the north east corner of SABR 1372. We are following up on our submission made to the Region, August 4, 2021.

4336 Willick is only one of the properties south of the Welland River that will together provide the Region and the City an opportunity to create a complete community 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 4336 Willick Rd. is strategically located to enable its incorporation as an individual property into the Settlement Area Boundary.

4336 Willick Rd. presently has 2.4 ha already designated Urban along the Willick Rd. frontage. 366 m frontage and 63m deep (2.4 ha) is designated Urban and within the Urban Area Boundary as illustrated on Schedule A Future Land Use in the city of Niagara Falls Official Plan. Services are readily available west of the subject lands on Willick Rd. as they are part of the servicing of the Chippawa West development which is presently being completed. As well, services will be available in the near future, at the corner of Willick and Sodom Rd. when the recently draft approved subdivision at the north east corner of Willick and Sodom Rds. (Chippawa East) is serviced and developed.



Its strategic location, partially within the Urban Boundary and immediately adjacent to existing and future services enables its development with appropriate further detailed analysis to be integrated into the development to the northwest and north east. The transportation network creates a strategic location at the corner of Willick and Sodom. There is the opportunity for non-residential “community building” land uses on these lands which would service the total community. It is recommended that the Recommendations found in PDS 41-2021 for the City of Niagara Falls be reconsidered and that 4336 Willick 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 the report described a revised Land Needs Assessment for Fort Erie by 2051 identifying 310 ha for Community Area Expansion.

The subject lands are shown in Figure 1 and comprise a parcel of land that totals approximately 19.8 ha with 366 m of road frontage on Willick Rd. as well as extensive on frontage on Sodom Rd. The 366m Willick Rd. frontage to a depth of 63m already designated Urban (2.4 ha). The balance of the property is currently designated Rural and can easily be integrated and developed with the existing Willick Road frontage.

The lands on the north side of Willick Rd. are within the Niagara Falls Settlement Area, designated urban, and are either under construction for residential uses or have been recently draft approved for future residential uses.

It is understanding that this property was 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 completed a preliminary environmental evaluation of the property and RV Anderson Associates Limited has prepared both a Preliminary Servicing Strategy and a Preliminary Transportation Strategy which are submitted for your review as part of submission. These describe in more detail the ability to service and the develop this property.

The review conducted by Colville has identified that during the analysis for the future development of this property the flood plain of the intermittent Hunter Drain and its buffer must be recognized and protected. No other environmental constraints have been identified. The majority of the subject property is available for development.



### Preliminary Servicing Strategy

The servicing of Willick Rd. has been part of the “servicing plans” for the City of Niagara Falls for some time as the lands to north have been developing and with the recent draft plan approval of the Chippawa East Lands to the immediate North East. The Strategy prepared by RVA illustrates that plans are already underway to extend storm sewers along Willick Road west of Sodom. There is a provision for watermains west of Hunter Drain to connect to the Sodom road system, as well as extending sanitary sewers along the Willick Road frontage of the subject lands. There will be capacity, both water and sewer in these planned services to service the future development of 4336 Willick Rd. Stormwater Management can be readily accommodated as the lands are developed and continue to drain into the “Hunter Drain”.

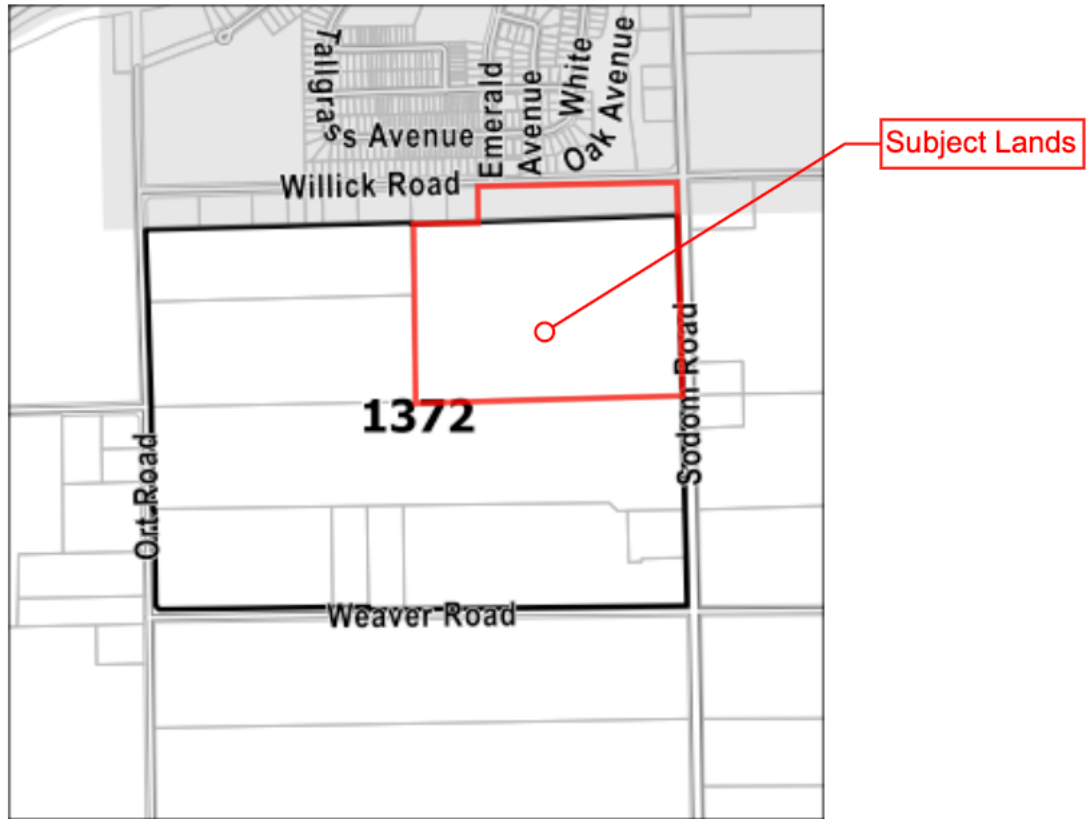
### Preliminary Transportation Strategy Brief

The transportation network in place and planned to service Sodom Road is a Regional Road with easy connection to lands and communities both north and south of the subject lands. The existing and proposed developments to the north and east already provide adequate infrastructure to service the development of 4336 Willick Rd. The future planned construction of the road network, Sodom Rd. and Willick Rd. and beyond ensures that the future development of the subject lands will be appropriately accommodated.

Settlement Area Boundary Review (SABR) ID 1372 evaluates the total area. The subject property 4336 Willick Rd., being the strategically located at the corner of Willick and Sodom Rds. is 19.8 ha in size with 2.4 ha inside the Urban Boundary. A summary of the planning rationale for inclusion in the Settlement Area Boundary is detailed below.



**Figure 1: 4336 Willick Rd Key Map**



**Figure 2: SABR 1372**



## Assessment Criteria

### *Sanitary Servicing*

<b>Criteria Item</b>	<b>Response</b>	<b>Commentary</b>
What is the capacity to accommodate the parcel or collection of parcels at WWTP during the planning period?	Highly Feasible	Highly Feasible - 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 - Sanitary sewers can be feasibly extended from Sodom Road along Willick Road. 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.
Will the extension of servicing have any impact on natural environment, including key hydrologic features and areas?	Low Impact	Low Impact with regards to the subject site. Extension of sewers along Willick Rd existing ROW has no impacts to natural environment or key hydrologic features.
In relation to sanitary servicing, how feasibly can the parcel support additional urban development in its Watershed through mitigating measures?	Feasible	Highly Feasible - Extension of sanitary sewers to the subject site from Sodom Rd along Willick Rd can facilitate the inclusion of adjacent lands via further sewer extension. New sanitary sewers are currently being proposed along Sodom from Mann St to Willick Road as part of the Chippawa East, Polo Corp development and in anticipation of servicing to the lands within the Urban Boundary along Willick Road.

### *Municipal Water Supply*

Does the existing system have capacity to accommodate the parcel or collection of parcels with	Feasible	Highly Feasible - No known capacity issues in either the Sodom Rd or Willick Rd mains. Sizes are adequate for extension
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municipal water supply during planning period?		
How easily can water supply connection be made?	Feasible	Highly Feasible - Extension of watermain infrastructure to the subject site via Sodom Rd and Willick Rd is feasible. New watermain is currently being proposed along Sodom Rd from Mann St to Willick Rd as part of the Chippawa East, Polo Corp development and in anticipation of servicing to the lands within the Urban Boundary along Willick Road. The subject development can feasibly connect the Sodom Rd to Emerald Ave watermains to service the site and interconnect the larger supply network which will further enhance supply/capacity.
Will the extension of water servicing have any impact on natural environment, including key hydrologic features and areas?	Low Impact	No Impacts to significant natural environments areas as watermain extensions will be on existing ROW's. No development within on-site natural environment areas.
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?	Feasible	Highly Feasible - Extension of watermain infrastructure to the subject site via Sodom and Willick Rd can facilitate the inclusion of adjacent lands via further extension southward along Sodom.

*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?	Available	Available - Through Sodom Rd., the subject site will also have access to Lyons Creek Rd. Both of these roadways also provide direct access to 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 Willick Rd. and Sodom Rd.



<p>What is the level of impact to existing road networks and level of service from the addition of the parcel or collection of parcels?</p>	<p>Low Impact</p>	<p>Low Impact - With the addition of proposed capacity improvements recommended in the Niagara Region TMP, a cursory review of the major arterial roadway network indicates that sufficient capacity will be provided to support the subject lands out to a 2032 horizon year with room for future traffic growth. Signalization of intersections within the immediate area would be addressed through larger studies to be conducted for proposed widening of the roadways</p>
<p>What is the feasibility of extending transit services to the parcel or collection of parcels?</p>	<p>Modest Impact</p>	<p>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 that residents of the subject lands will also use these services</p>
<p>What is the feasibility of extending active transportation facilities to the parcel or collection of parcels</p>	<p>Available</p>	<p>Available - The TMP also indefinites infill connections linking Sodom Rd. route to adjacent routes north towards Lyons Creek Rd. and south towards Netherby Rd. Opportunities also exist for active transportation connections with existing trails within woodland area immediately north of the subject lands on the northwest corner of Sodom Rd. and Willick Rd. as well as further west near Ort Rd.</p>

Based on this section, there are no anticipated adverse impacts to transportation which would result from the inclusion of the lands in the urban boundary. The lands can be accessed by Sodom Rd and Lyons Creek Rd, both of which are regional roads. There are no constraints in terms of creating a local road network. The surrounding regional roads have the capacity to connect a future road network. Furthermore, the road has potential for improvements such as public transportation, active transportation and operational improvements, as needed. It is these traffic connections that create the strategic location of this property and enable it to provide “community uses” to the surrounding community.





*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 only develop feasible areas which are not identified as part of the NHS. Therefore, no effect to the NHS on the subject site.
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 to Willick Road and Sodom Rd and be a continuous community within its development portion.
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?	Modest Impact	Modest Impact - Subject site can provide its own on-site stormwater management for quantity control, quality control/treatment, and water balance in accordance with NPCA and MECP criteria. Discharge of stormwater runoff would be to the Hunter Drain, as consistent with the predevelopment site drainage. Site can mitigate any impacts of development with implementation of stormwater management techniques.
What is the level of feasibility related to introducing mitigation measures to improve water quality?	Highly Feasible	It is Highly Feasible that the subject site can provide its own on-site stormwater management for quantity and quality control and treatment in accordance with NPCA and MECP criteria.
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 - No species at risk identified within the subject site bounds.
What is the impact of including the parcel or	Low Impact	Low impact - Site will utilize natural contours towards the Hunter Drain



collection of parcels on topography and the ability to minimize significant earthworks that could interfere with hydrogeological function?		for storm runoff conveyance. Site-specific water balance can be accommodated using SWM techniques to supplement the Hunter Drain. New sanitary sewers extended along Willick Rd would be approximately 3m deep to existing grade, therefore sewers can be installed at a suitable depth without the need for extensive earthmoving to provide suitable sewer cover.
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Colville Consulting determined that only 4 acres (1.5 ha) of the 4336 Willick Rd contains environmental constraints, meaning the vast majority of the property is suitable for development without adverse impacts to the environment.

*Agriculture Agri-Food Network*

As defined by the PPS, using the range provided, how best are the parcel or collection of parcels described?	Prime Agricultural Lands Completely (Class 1-3)	Subject site is not used for agricultural purposes.
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 purposes. No impact to active livestock operations.
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 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)	No Impact	Negligible impact as stated.
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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)		
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The site is not within 500 m of a known deposit of mineral aggregate. There is no aggregate operations (existing or proposed) within 1000m of the site which would result in incompatible land uses. As such, the lands are suitable for urban development from a land use compatibility standpoint.

*Growth Management*

Does including the parcel or collection of parcels meaningfully contribute to a complete community?	Higher Contribution	High Contribution - Subject site can be integrated with the Chippawa West and East low density development lands.
Does inclusion of the parcel or collection of parcels represent a favourable way to achieve the outcome of the Region-identified land needs?	Higher Favourability	High Favorability as stated.
What are the planning impacts on neighbouring or nearby lands by including the parcel or collection of parcels in the urban area?	No Impact	No Impact as stated.



## Conclusion

4336 Willick Rd., the northeastern portion of SABR 1372 is a strategic addition to the urban boundary at the northeast corner of Willick and Sodom Rd., an important intersection to connect these lands to the urban development to the north and an opportunity develop alternative community building land uses for the newly developing residential community.

Its 366m of frontage along Willick Rd. is already included within the Urban Boundary and plans are in place at the City of Niagara Falls to allow for the extension of sanitary sewers and watermains along the Willick Road Frontage from Sodom Road. 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. A Stormwater Management Plan will be completed as part of the future development analysis which would continue to drain the lands into the "Hunter Drain".

It is recommended that the north eastern corner of SABR 1372, 4336 Willick Rd., be incorporated into the City of Niagara Falls Settlement Area Boundary. It represents the highest potential to contribute to a complete community makes better use of existing facilities, infrastructure and transportation.

Yours truly,


A handwritten signature in black ink that reads "Stephen Bedford". The signature is written in a cursive, flowing style.

Stephen Bedford, MCIP, RPP, PLE  
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LANDx Developments Ltd.

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CC:  
Imran Ahmed  
Abhay Mathur



<p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="color: red;">—</span> Subject Property</li> <li><span style="color: blue;">—</span> Watercourses</li> <li><span style="color: blue;">- - - -</span> 15m buffer from watercourses</li> <li><span style="color: black;">- - - -</span> Urban Boundary</li> </ul> <p><small>Notes: Extent of watercourses approximate. The 15m buffer is intended for illustration purposes only and is subject to refinement as part of future applications.</small></p>	<p><b>Extent of Natural Heritage Features on the Subject Property</b></p>		
	<p><b>4336 Willick Road Property</b></p>		
	<p>Prepared for:</p>	<p><b>Achievers Exim Consultants Inc.</b></p>	
	<p>Prepared by:</p>	<p><b>COLVILLE CONSULTING INC.</b> </p>	
<p>January 2022</p>		<p>FILE: C2071</p>	

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## MEMORANDUM

**TO:** Mr. Imran Ahmed c/o Achievers Exim Consultants 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 - Willick Road Lands Preliminary Transportation Strategy Brief

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### 1.0 Introduction

The following memo presents the findings of the Preliminary Transportation Strategy Brief to support the proposed inclusion of the Willick Road lands (Settlement Area Boundary Review ID 1372) into the City of Niagara Falls Urban Boundary.

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 19.8 hectares in size and is located south of the community of Chippawa. The property is bordered by Willick Road to the north, Sodom Road to the east, Weaver 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

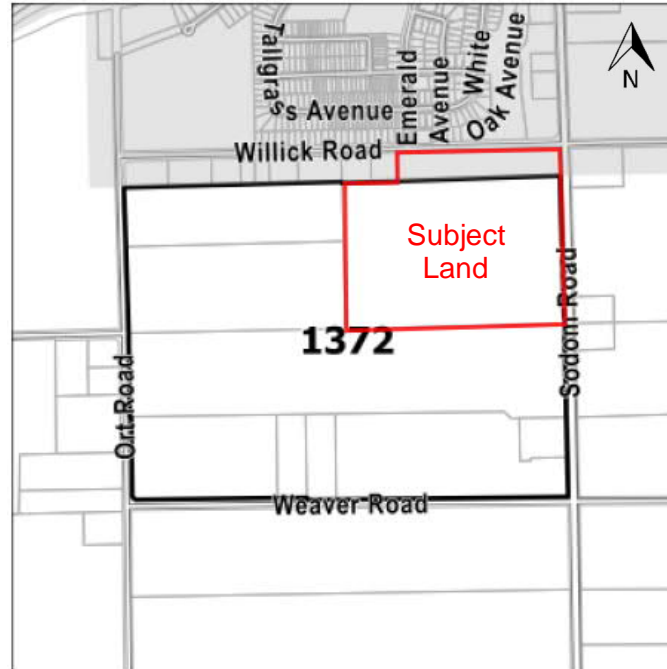


Figure 1: Subject Land Location

### 3.0 Existing Traffic Conditions

#### 3.1 Existing Roadways

The roadways of Willick Road, Ort Road and Weaver Road 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 although a portion of Willick Road immediately east of Emerald Avenue does contain an urban cross section on the north side of the roadway but remains rural on the south side. Willick Road has a posted speed of 50km/hr while Ort Road and Weaver Road have posted speeds of 70 km/hr.

Sodom Road (Regional Road 116) which runs north-south on the east side of the subject lands is 2-lane arterial road with a rural cross-section. Under the jurisdiction of the Niagara Region, Sodom Road has a posted speed limit of 80 km/hr. and provides access to the Queen Elizabeth Way south of the property and the community of Chippawa north of the property.

### **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 A**.

### **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 are 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 A**.

### **4.0 Developable Lands**

As mentioned previously, the subject land is approximately 19.8 hectares in size, of which approximately 16 hectares is developable land. The developable land is concentrated on the southwest corner of the Sodom Road and Willick Road intersection fronting both roadways. Based on a low-density population of 50 persons per hectare, this works out to a residential population of approximately 800 persons. 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 260 to 280 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, 11<sup>th</sup> 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 190 two-way trips are estimated to be generated during the weekday a.m. peak hour (49 inbound and 141 outbound). During the weekday p.m. peak hour approximately 262 two-way trips are estimated to be generated (165 inbound and 97 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)	280	Weekday a.m.	$\ln(T)=0.91\ln(x)+0.12$	190	26%	74%	49	141
		Weekday p.m.	$\ln(T)=0.94\ln(x)+0.27$	262	63%	37%	165	97
<b>Totals</b>				<b>452</b>			<b>214</b>	<b>238</b>

## 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. It has been assumed the majority of trips will utilize Sodom Road to access the greater roadway network while a small portion will utilize the south leg of Stanley Ave.

## 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	<ul style="list-style-type: none"> <li>Signalize the intersection</li> <li>Introduce auxiliary left turn lanes on all approaches.</li> </ul>	<ul style="list-style-type: none"> <li>Signalize the intersection;</li> <li>Introduce auxiliary left-turn lanes on all approaches;</li> <li>Introduce an auxiliary right-turn lane on the north approach.</li> </ul>
Stanley Ave. (north approach) and Lyons Creek Rd.	<ul style="list-style-type: none"> <li>Signalize the intersection;</li> <li>Introduce auxiliary left turn lanes on all approaches.</li> </ul>	<ul style="list-style-type: none"> <li>Signalize the intersection;</li> <li>Introduce an auxiliary right-turn lane on the east approach</li> <li>Increase the storage capacities of the existing auxiliary eastbound and southbound left-turn lanes;</li> </ul>
Stanley Ave. (south approach) and Lyons Creek Rd.		<ul style="list-style-type: none"> <li>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.</li> </ul>

## 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: Willick Rd 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 the Willick Rd ROW's in the City of Niagara Falls 2019 Development Charges Background Study. As the necessary improvements to Willick Rd have already been identified for Development Charges, the necessary funding arrangements could be coordinated between the developer of the Achievers Willick Road Subdivision and the City. Additional information regarding the Development Charges study is provided in **Appendix B**.

#### 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 Willick Road lands, Ort 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 Volumes

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 C**. 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 Willick 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 Willick Road lands.

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

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 is currently an existing trail facility directly adjacent the subject land on the north side of Willick Road which runs north-south parallel Sodom Road. There are also several



proposed trails to be constructed within woodland area on the northeast corner of Ort Road and Willick Road which is located further west of the subject lands. 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 E**.

## 8.0 Settlement Area Boundary Review Assessment

A Settlement Area Boundary Review Assessment (SABR ID 1372) of the Willick 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 F**.

## 9.0 Summary of Findings

The main findings of our review are summarized as follows:

- The Willick Road land contains approximately 16 hectares of developable area. Based on a low-density population of 50 persons per hectare, this works out to a residential population of approximately 800 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 260 to 280 units.
- Development of the proposed lands is forecast to generate approximately 190 two-way trips during the weekday a.m. peak hour (49 inbound and 141 outbound) and 262 two-way trips (165 inbound and 97 outbound) during the weekday p.m. peak hour.
- 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 Willick 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 Willick 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 Achievers Willick 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.
- 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](mailto: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

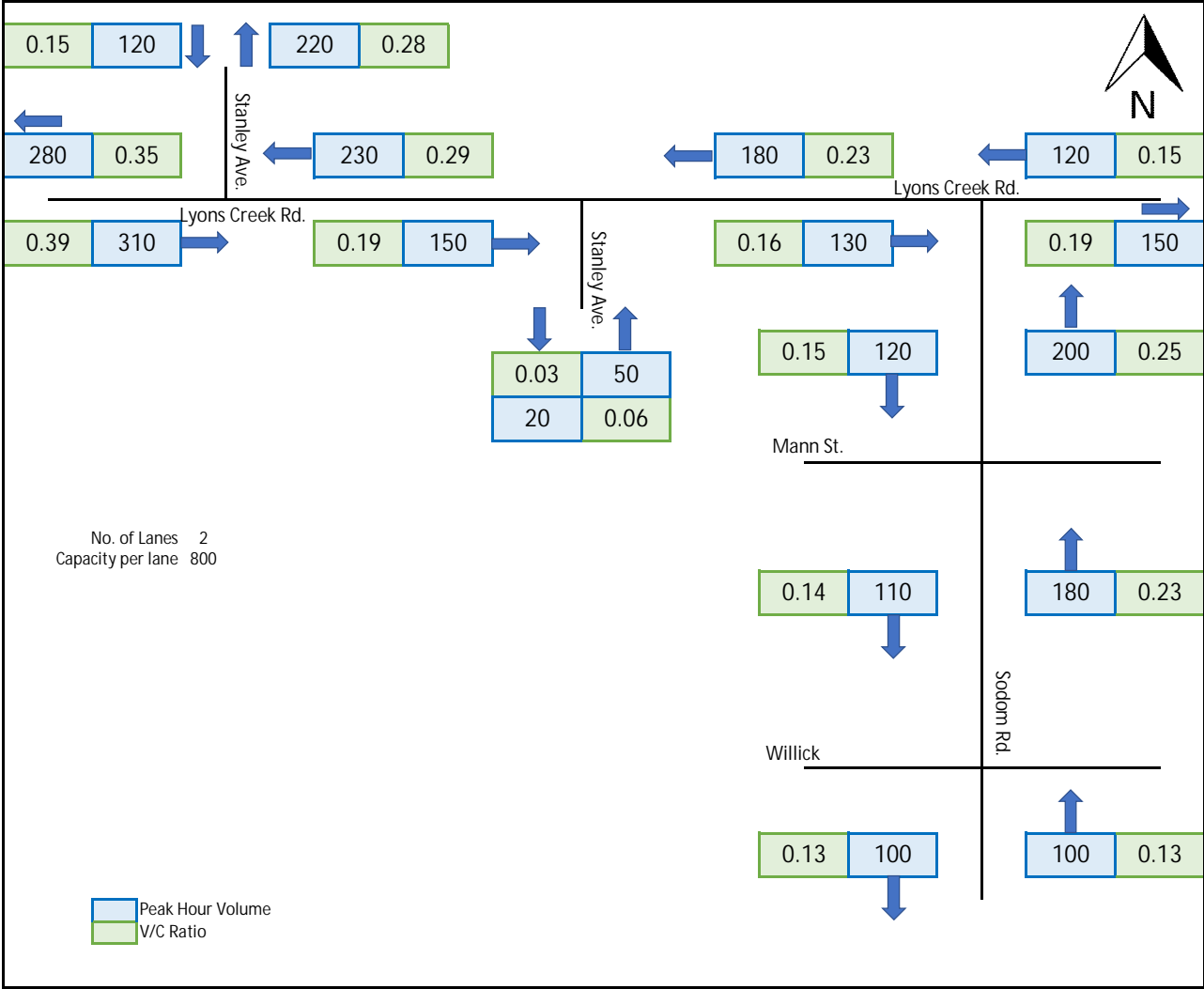
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## **APPENDIX A**

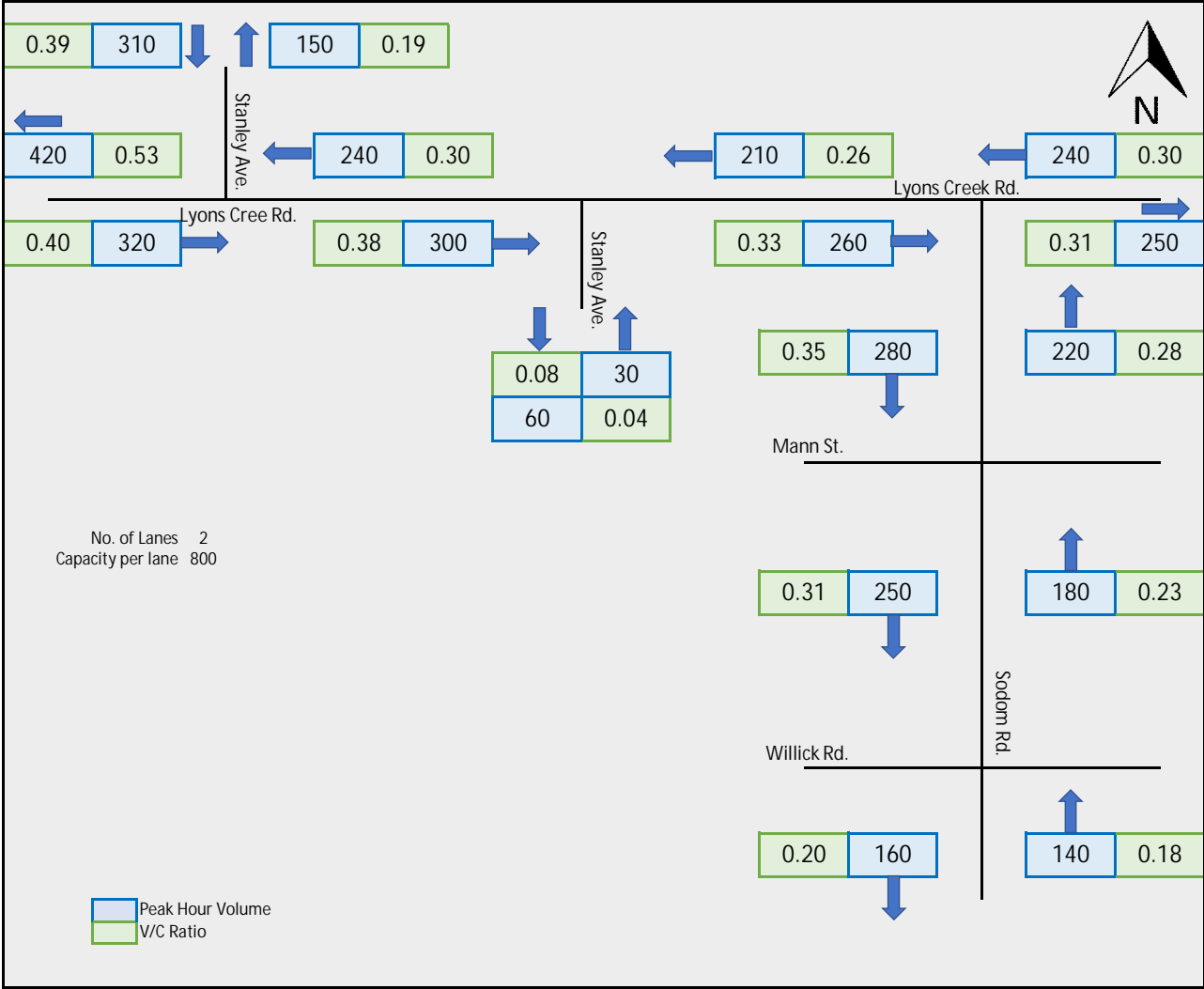
### **Existing 2022 Midblock Traffic Volumes and Capacity Results**

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2022 AM Peak Hour



2022 PM Peak Hour



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## **APPENDIX B**

### **2019 Development Charges Background Study**

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**2019 CITY OF NIAGARA FALLS DEVELOPMENT CHAGES BACKGROUND STUDY SUMMARY**

<b>Infrastructure Type</b>	<b>Infrastructure Requirement</b>	<b>Limits</b>	<b>Approximate Length (m)</b>	<b>Type of Improvement</b>
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	Willick Road (Sodom Road – Ort Road)	Sodom Road – Ort Road	1000m	New Development
Sanitary Sewer	Willick Road (Sodom Road – Ort Road)	Sodom Road – Ort Road	1000m	New Development
Storm Sewer	Willick Road (Sodom Road – Ort Road)	Sodom Road – Ort Road	1000m	New Development

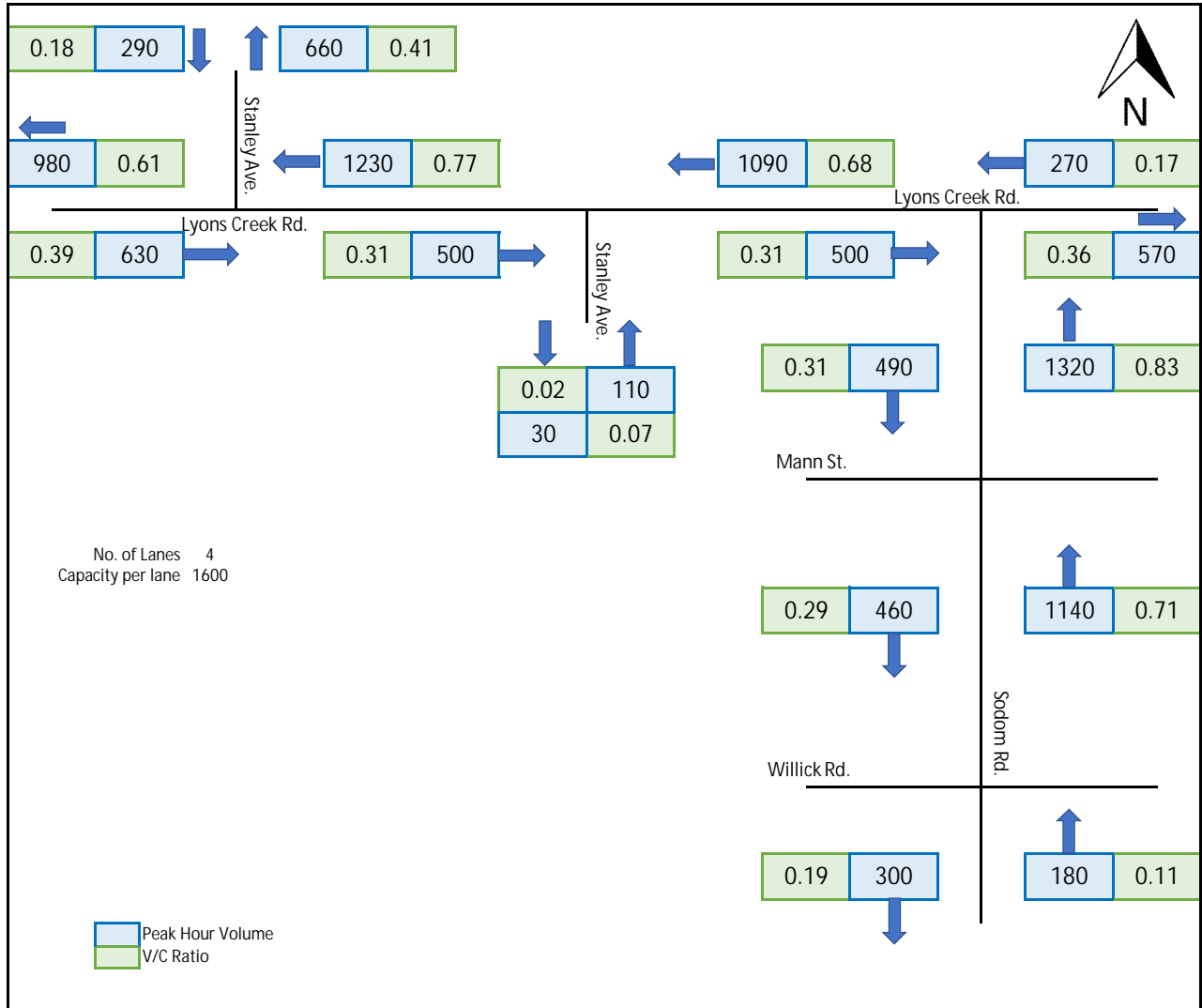
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## **APPENDIX C**

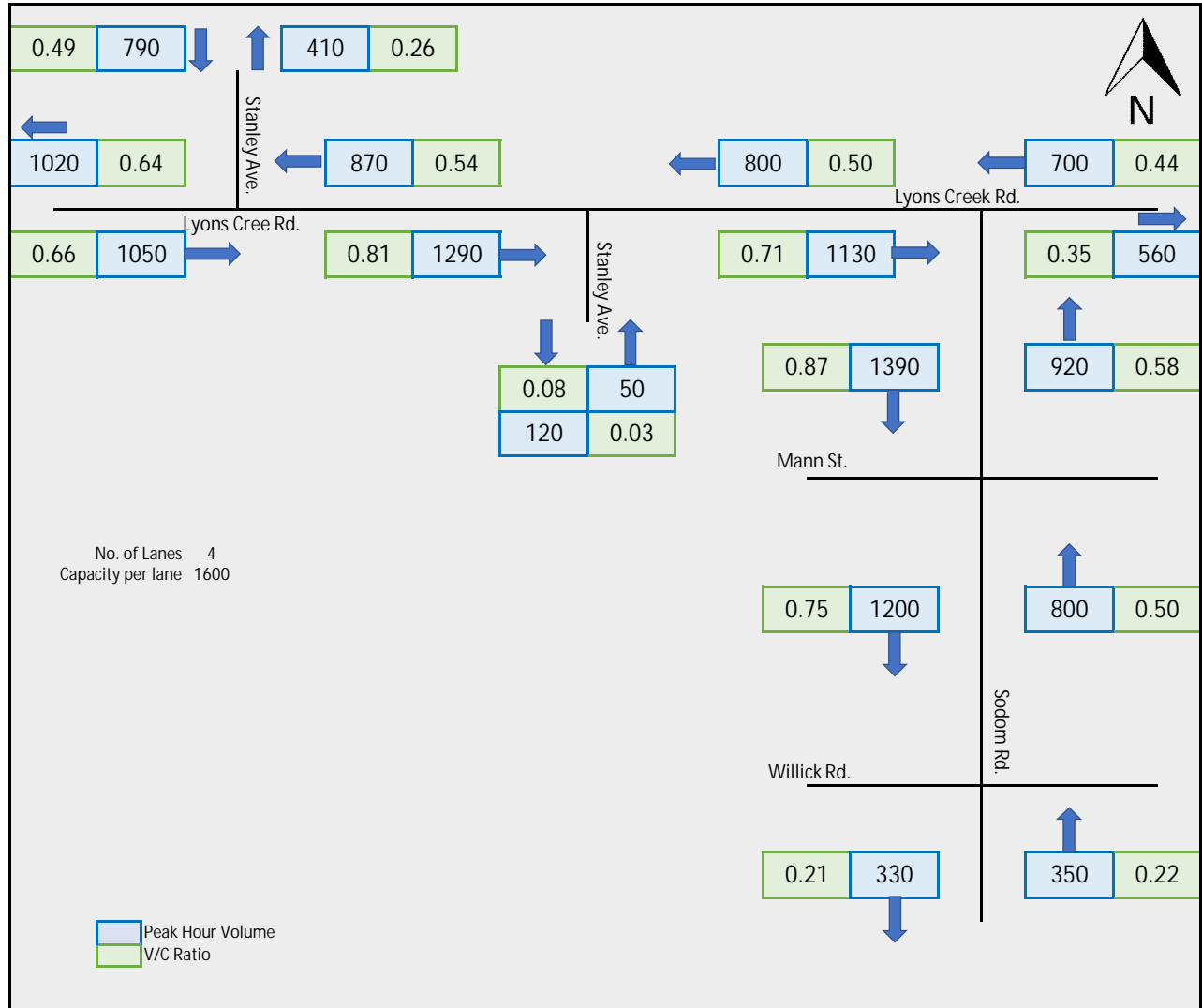
### **Future 2032 Background Conditions - Midblock Traffic Volumes and Capacity Results**

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# 2032 Background AM Peak Hour (No Willick Land Trips)



# 2032 Background PM Peak Hour (No Willick Land Trips)



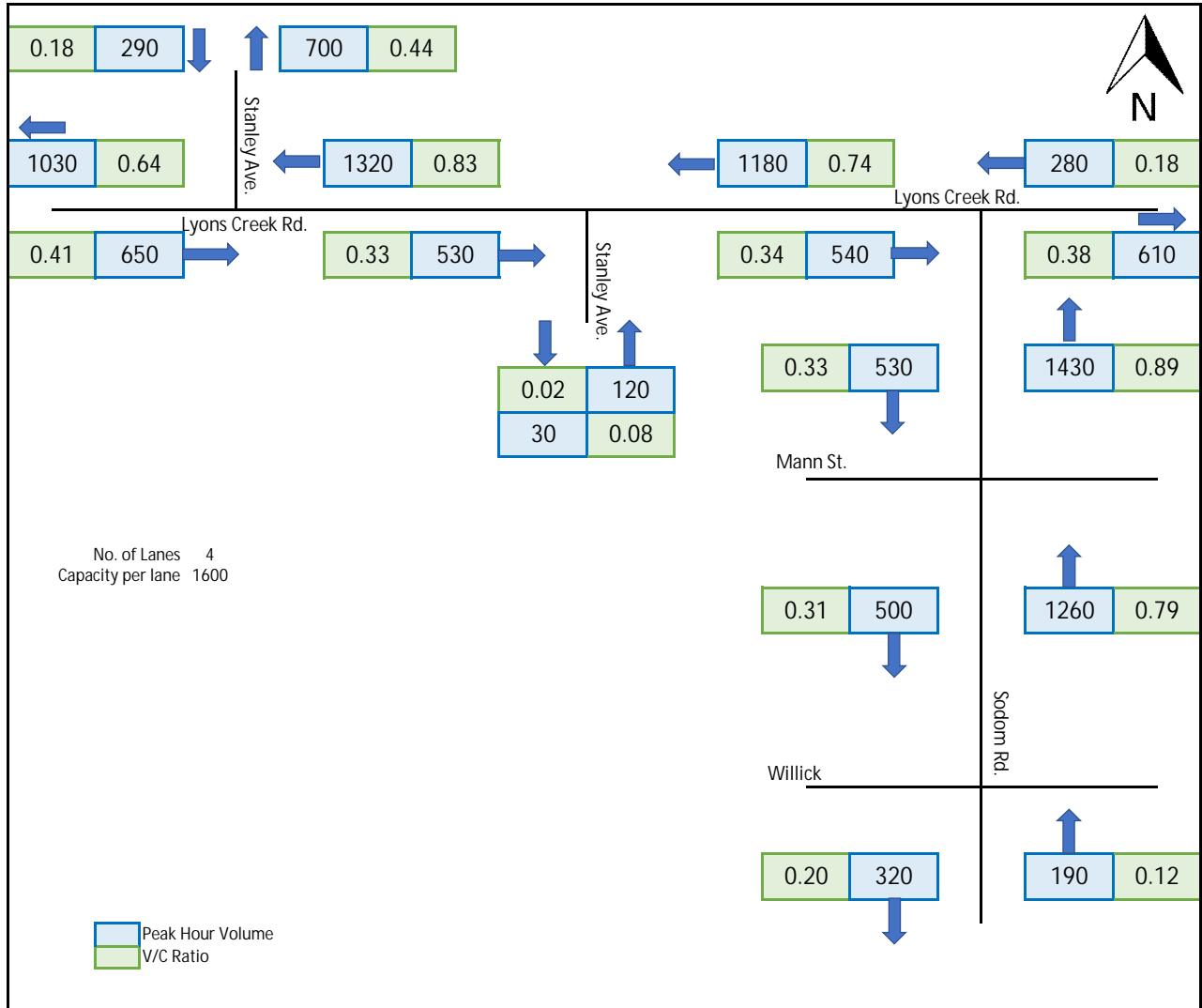
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## **APPENDIX D**

### **Future 2032 Total Conditions - Midblock Traffic Volumes and Capacity Results**

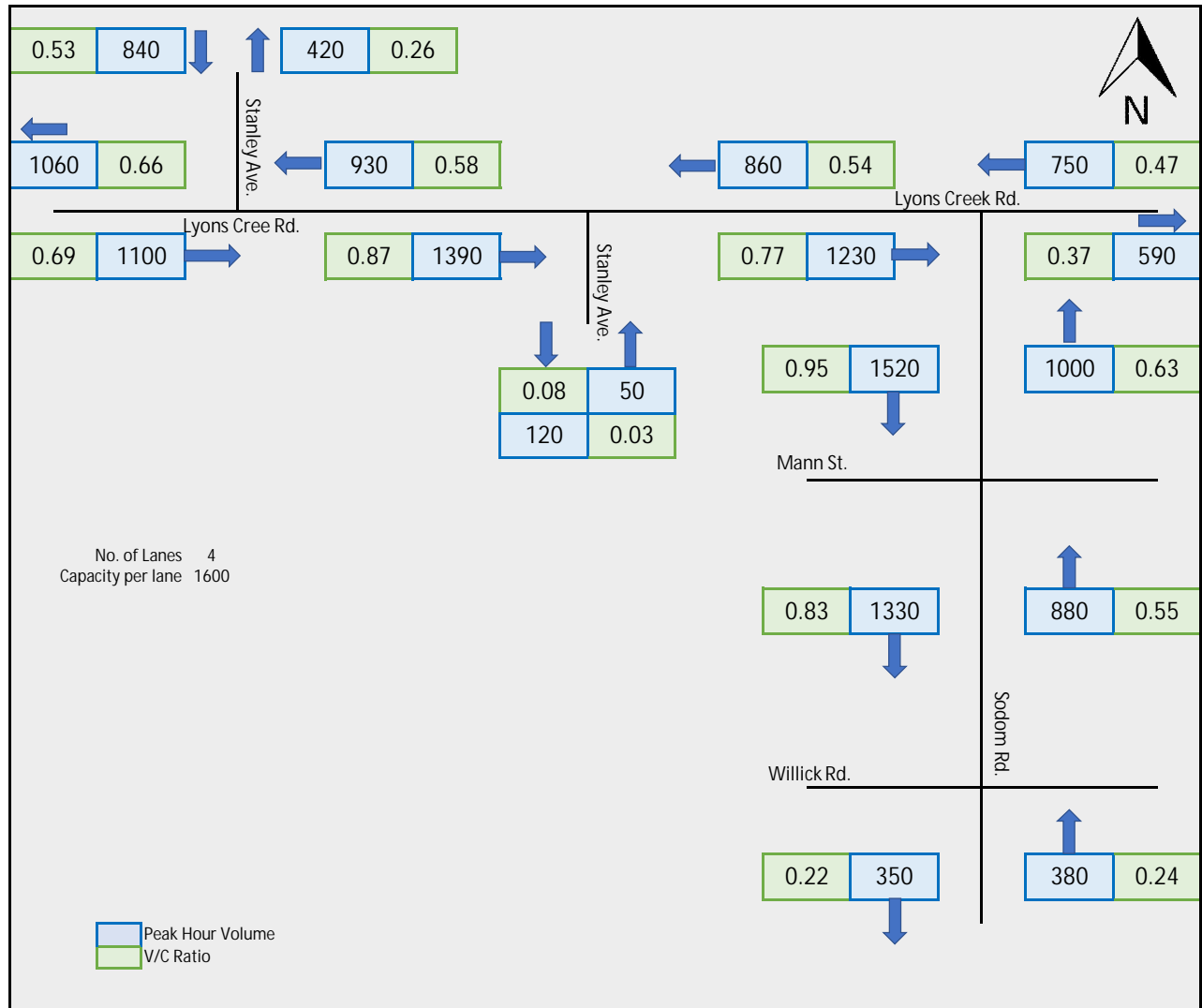
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# 2032 Total AM Peak Hour





# 2032 Total PM Peak Hour



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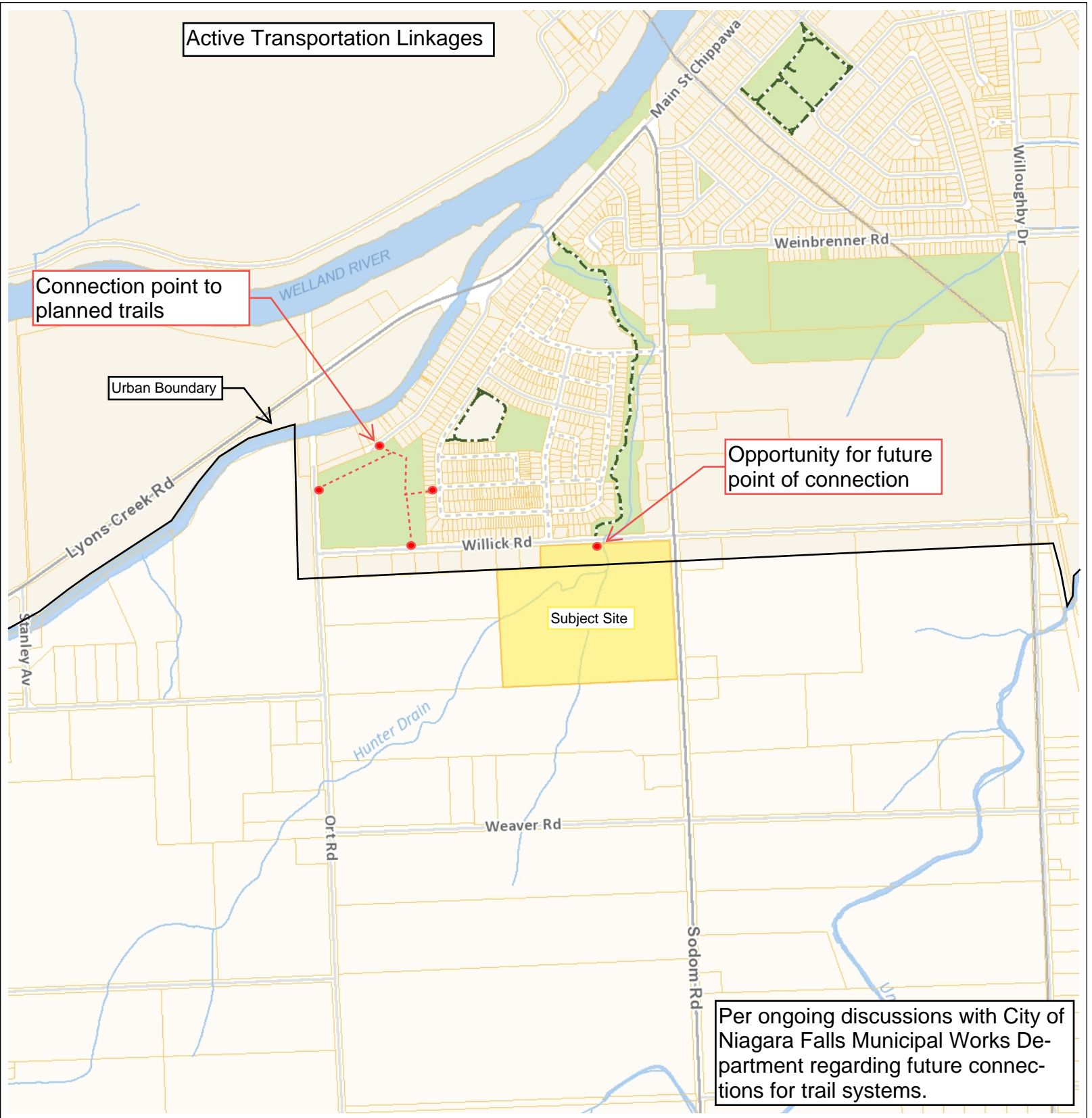
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## **APPENDIX E**

### **Existing Parks & Trail Facilities**

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## **APPENDIX F**

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

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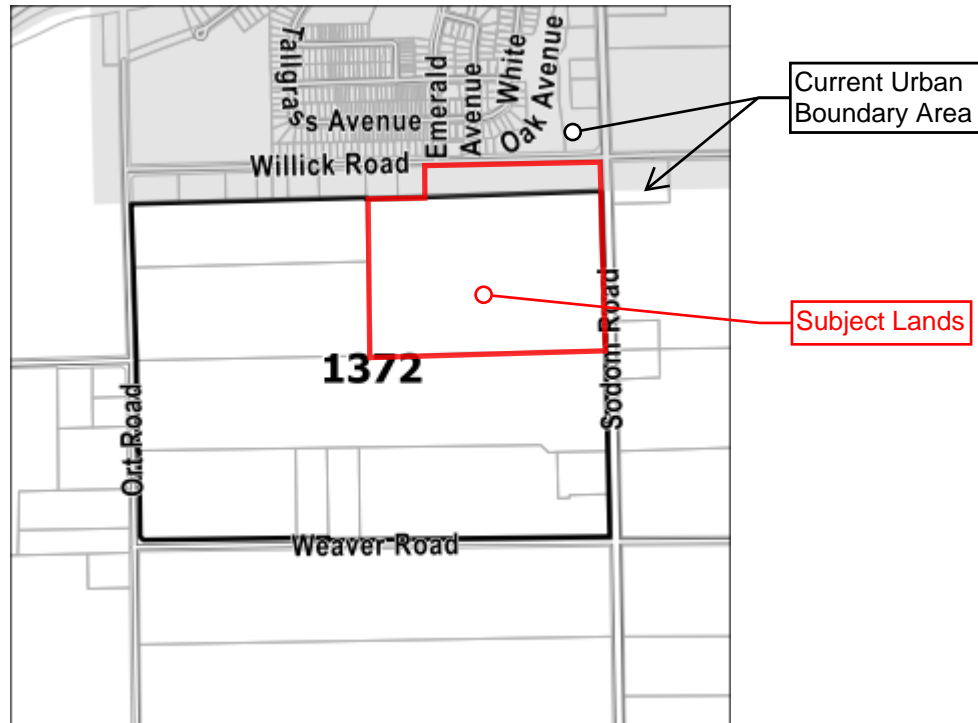
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# SETTLEMENT AREA BOUNDARY REVIEW ASSESSMENT SHEET

MUNICIPALITY: Niagara Falls

SABR ID: 1372

GROSS AREA: 74.8ha



The following text boxes represent responses by RVA 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

**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

Note: Refer to the 'Willick Road Lands Preliminary Transportation Strategy Brief' (February 4, 2022) by RVA for additional information regarding responses to Transit and Transportation comments.

## 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:** Available Available

**Comment:** The subject lands have a good access to Regional Rds (Sodom Rd and Lyons Creek Rd).

1. RVA agrees with the comment. Through Sodom Rd. the subject site will also have access to Lyons Creek Rd. Both of these roadways also provide direct access to the Q.E.W.

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

**Criteria Response:** Highly Feasible 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.

2. RVA agrees with this comment. Opportunities exist to provide local road connections between the subject site and Willick Rd. and Sodom Rd.

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 Low Impact

**Comment:** As highlighted in the NR TMP 2017, a capacity and operational improvement is planned for Sodom Rd east of the subject site in Phase 2 (2022-2031) which will facilitate the site. Traffic signals may be warranted at Weaver Rd & Sodom Rd Dr or Sodom RD & Lyons Creek Rd depending on future development size and density .

3. With the addition of proposed capacity improvements recommended in the Niagara Region TMP, a cursory review of the major arterial roadway network indicates that sufficient capacity will be provided to support the subject lands out to a 2032 horizon year with room for future traffic growth.

Signalization of intersections within the immediate area would be addressed through larger studies to be conducted for proposed widening of the roadways.

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

**Criteria Response:** Modest Impact Modest Impact

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

4. 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.

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



**Criteria Response:** Available

**Comment:** As per the Strategic Cycling Network map shown in the NR TMP 2017, the subject location is bounded by an existing cycling facility at Sodom Rd from east.

5. RVA agrees with this comment. The TMP also identifies infill connections linking the Sodom Road route to adjacent routes north towards Lyons Creek Rd. and south towards Netherby Rd.

Opportunities also exist for active transportation connections with planned trails within woodland area immediately north of the subject lands on the northwest corner of Sodom Rd. and Willick Rd. as well as further west near Ort Rd.

## 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:** Less than half shown as NHS

**Comment:** Site 1372 is an "L" shaped site at the NE corner of Ort Road and Weaver Rd. A portion of the site is in the PNHS. There is a PSW on the site, as well as significant woodlands and several minor watercourses.

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:** Highly Feasible.

Multiple options from adjacent lands

**Comment:** The extent of natural features on the site will provide some limitations for access, however overall there is sufficient number of areas of the site that are not constrained.

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 1372 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:** Available

**Comment:** There is likely a range of opportunities to implement water quality mitigation measures

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:** Modest Impact

**Comment:** Potential for SAR is modest. Potential is associated with the natural features and other vegetated areas on the site.

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:** Minimal Impact

**Comment:** Topography of the site is flat. Impacts are considered minimal assuming water balance to the wetlands can be maintained.

### **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:** Several active field crop locations at this site. Moderate impact to the agri-food system if converted

## 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 1372 is not within 500m of a known deposit of mineral aggregate resource. Site 1372 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:** Higher Contribution

**Comment:** These lands have a higher contribution to complete community building. Generally displays some potential for constrained lands in parts. However is adjacent to the existing settlement area where newer development has been taking place. Opportunities to enhance the community services facilities and amenities, including any environmental protections can be anticipated through additional secondary planning.

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:** Higher

Favourability

**Comment:** These lands have a higher favourability. When considered with adjacent lands to the east, collectively they would further enhance the contribution to meeting land need.

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:** Negligible Impact

**Comment:** Addition of these lands would not negatively impact neighbouring or nearby land use.

**Achievers Willick Road  
Subdivision**

**Urban Boundary Expansion**

**Niagara Falls, ON**

**Preliminary Servicing Strategy**

*Prepared For:*

**Mr. Imran Ahmed**  
**c/o Achievers Exim Consultants Inc.**



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**RVA 226238**

**Original: February 4, 2022**

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## 1.0 INTRODUCTION

R.V. Anderson Associates Limited (RVA) has been retained by Achievers Exim Consultants Inc. (AEC) on behalf of Mr. Imran Ahmed (Owner) to investigate the serviceability of 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: 1372 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, agriculture 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 transportation strategy report 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:

- Willick Road Lands Preliminary Transportation Strategy Brief by R.V. Anderson and Associates Limited, dated February 2022
- Niagara Region Official Plan, Appendix 9 – PDF 41-2021, Urban Settlement Area Assessment Review and Comments, December 2021
- Extent of Natural Heritage Features on the Subject Property figure prepared by Colville Consulting Inc, dated January 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

## 2.0 SITE INFORMATION

The subject lands are a 19.8 ha site located west of Sodom 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 2.19 ha portion of frontage along Willick Road.

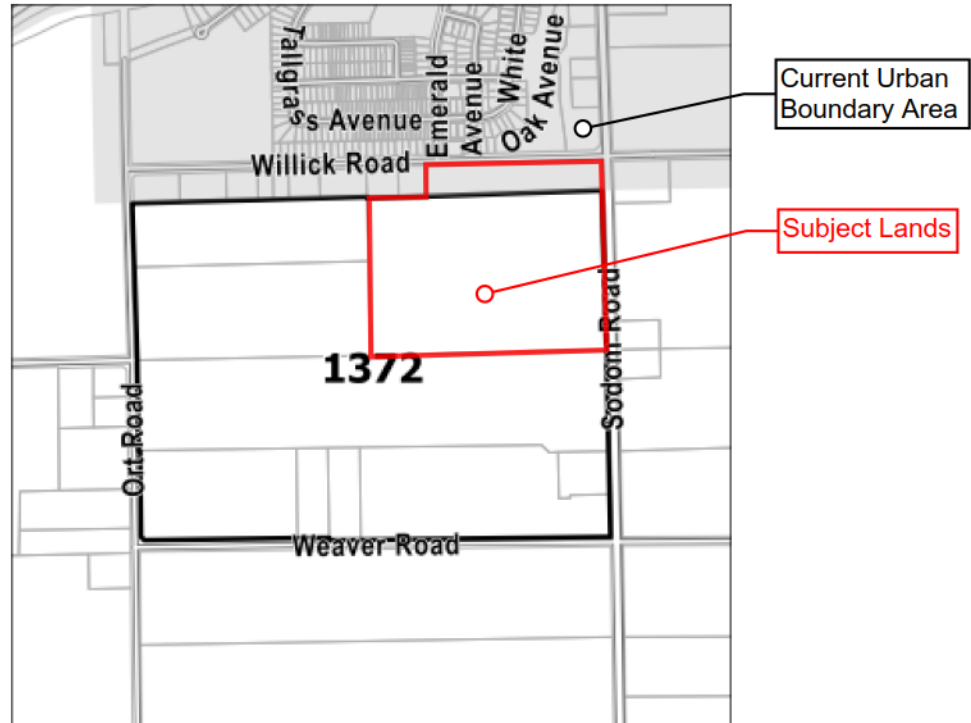


Figure 2.1 – Site Location Plan & Current Urban Boundary Limit

The site, in its current state, consists of primarily of open grassland/field. A watercourse known as the Hunter Drain is split into two branches on the site, both which traverse the site from a southwest to northeast direction and drain to a box culvert under Willick Rd. Fronting onto Willick there is a driveway access at the northwest corner of the property.





**Figure 2.2 – Site Aerial Plan**

## **2.1 Development Population**

Of the 19.8 ha total site area, approximately 16 ha is suitable for development. There are no Natural Heritage Features identified on the subject site, as indicated in the Colville figure, however there is an onsite watercourse with associated 15m buffer area as depicted in the Extent of Natural Heritage Features figure by Colville.

Based on a low-density usage of 50 persons per hectare, the site can be expected to generate a residential population of approximately 800 persons. This corresponds to approximately 260-280 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 Willick Road Lands Preliminary Transportation Strategy Brief (RVA, February 4, 2022).

### 3.0 SANITARY SERVICING

The Settlement Area Boundary Review Assessment Sheet for Block 1372 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 to the onsite watercourse, and through implementation of stormwater management (see Section 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 Willick Rd west of Sodom Rd fronting the site. Refer to Appendix B for additional information and to the 2019 DC Background Study.

#### 3.1 Existing Sewer Infrastructure

There is existing sanitary sewers at the intersection of Weinbrenner Rd, Sodom Rd, and Nassau Ave. It is known that, as part of the Chippawa East subdivision development proposal, a 375-450mm sanitary sewer extension will be construction along Sodom Rd southward to Willick Rd, directly at the northeast corner of the subject lands.

These sewers drain from Sodom Rd to Nassau Ave, to Lyons Creek Rd/Main St, then cross the Welland River via siphon across from Sodom Rd which then drains to the South Side Low Lift Sanitary Pumping Station (SPS) at the north side of the river.

There is an existing 200mm sanitary sewer in Willick Rd, west of the existing storm box culvert, which drains to Emerald Ave and through the Chippawa West subdivision. It is not likely that this sewer can be extended further eastward beyond the culvert. The subject site, however, has approximately 120m of direct frontage on Willick Rd with access to this sewer. This sewer system drains to Lyons Creek Rd via Mann St and Lyon's Pkwy, ultimately combining with the above system at Nassau Ave, crossing the river and discharging at the South Side Low Lift SPS.

#### 3.2 Site Specific Sanitary Loading

Based on the preliminary population of 800 person, the development site is anticipated to generate the following sanitary load:

Average Dry Weather Flow = 275 L/person/day

Peaking Factor [Harmon] =  $1 + 14 / (4 + (p/1000)^{0.5}) = 1 + 14 / (4 + 0.58^{0.5}) = 3.86$

Wet Weather Infiltration Rate = 0.286 L/s/ha

Total Peak Sanitary Discharge =  $(275 * 800 * 3.94) / 86400 + 0.286 * 16 = 14.4$  L/s

### 3.3 Sanitary Servicing

Upon completion of the Sodom Rd sanitary sewer construction to Willick Rd in conjunction with the works associated with the Chippawa East subdivision, the subject lands can feasibly construct a new sanitary extension both westward on Willick Rd along the site frontage to the culvert (approximately 170m) and further south along Sodom Rd as required.

It is possible to extend nearby sanitary sewers at the intersection of Willick Rd and Sodom Rd, westward along Willick Rd and along the frontage of the subject site. Taking into account the ultimate development population of the Chippawa East lands, there is additional capacity within the 375-450mm sewer extension along Sodom Rd including the 600mm sewers in Nassau Ave to Lyons Creek Rd.

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

Should the subject lands be accepted as part of the Urban Boundary expansion with the adjacent properties in SABR ID 1372 and/or the greenfield lands east of Sodom Rd (ie: MHBC lands), then all are likely to be serviced to the south and west along Reixinger Rd and Stanley Ave, and ultimately to the future South Niagara Falls Wastewater Treatment Plant.

### 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 (SNFWWTP) 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 1372 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 impact to the natural environment or key hydrologic features can be mitigated by offsets/buffers of development limits to the onsite watercourse, and through implementation of stormwater management (see Section 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 watermain construction in Willick Rd west of Sodom Rd fronting the site. Refer to Appendix B for additional information and to the 2019 DC Background Study.

### 4.1 Water Infrastructure

There is an existing 300mm watermain at the intersection of Sodom Rd and Mann St. It is known that, as part of the Chippawa East subdivision development, a 250mm watermain extension will be construction along Sodom Rd southward to Willick Rd, directly at the northeast corner of the subject lands.

There is also an existing 250mm watermain in Willick Rd, which is capped just west of the existing storm box culvert, and was constructed as part of the Chippawa West subdivision.

### 4.2 Site-Specific Water Demands

Based on the preliminary population of 800 person, the development site is anticipated to generate the following water demand:

Residential per capita Usage = 300 L/person/day

Average Day Demand =  $(800 * 300) / 86400 = 2.78$  L/s

Residential Max Day Factor = 2.75

Max Day Demand =  $(800 * 300 * 2.75) / 86400 = 7.64$  L/s

Residential Peak Hour Factor = 4.13

Peak Hour Demand =  $(800 * 300 * 4.13) / 86400 = 11.47$  L/s

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

### 4.3 Municipal Water Servicing

Upon completion of the Sodom Rd watermain construction to Willick Rd as part of the Chippawa East subdivision, the subject lands can feasibly construct a new watermain extension along its frontage to interconnect the 250mm capped main (from the Chippawa West lands) to the Sodom & Willick Rd intersection main. This is a total new main length of approximately 190m. Depending on the site layout, a further extension southward ending in a capped main is also feasible, with distribution throughout the site via the internal road network with a connection back to Willick. Refer to the water servicing concept figure in Appendix B.

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 watermains in the area.

## 5.0 STORM SERVICING AND STORMWATER MANAGEMENT

The Settlement Area Boundary Review Assessment Sheet for Block 1372 has varying level of concern regarding the Environmental Protection and Natural Resources criteria.

With respect to the subject lands only, redevelopment would be located within the suitable lands not impacted by the onsite watercourse and associated buffers. Any hydrologic deficits can be mitigated through stormwater management implementation. The subject lands should be regarded as feasible with no to 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 and stormwater management in Willick Rd west of Sodom Rd fronting the site. 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 the Hunter Drain and the culvert below Willick Rd.

## **5.2 General Stormwater Management**

The subject lands would implement local on-site stormwater management measures as required to satisfy the City of Niagara Falls, Region of Niagara, the Niagara Peninsula Conservation Authority (NPCA), and the Ministry of Environment, Conservation and Parks (MECP). It is anticipated that this would require measures for water quantity and water quality control as well as erosion and sediment control.

The site would be developed respecting the natural contour of the landscape, following a drainage pattern toward the Hunter Drain and the existing box culvert at the north limit. Stormwater management facilities are anticipated to be located at the north (ie: downstream) limits of the site adjacent to Willick Road.

SWM and water balance requirements can be addressed to meet approval requirements. The use of OGS units and/or a pond facility 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.

## **6.0 ROW URBANIZATION & SERVICING DEVELOPMENT CHARGES**

The lands fronting onto the new development (ie: Willick Rd 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 the Willick Rd ROWs. Additionally, there are Development Charges allocated for each of sanitary, storm, and watermain infrastructure within Willick Rd.

As the necessary improvements to Willick Rd have already been identified for Development Charges, the necessary funding arrangements could be coordinated between the developer of the Achievers Willick 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

It is our opinion that the development of the subject lands, when considered in isolation from the surrounding undeveloped SABR ID1372 lands, is highly feasible and practical to be serviced with both sanitary and watermain infrastructure while also able to meet stormwater management criteria with little impacts to natural heritage and environmental systems. The sanitary servicing will be a natural extension of the sewer system from Sodom Road. The watermain extension will also be a natural extension of the adjacent system and provide the final interconnection of Willick Rd to Sodom Rd. Stormwater management can be feasibly implemented locally on-site to City, Regional, Ministry, and Conservation criteria.

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

**R.V. Anderson Associates Limited**



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Robert Babic, P.Eng.

Project Engineer

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**APPENDIX A**

**SABR RESPONSES**

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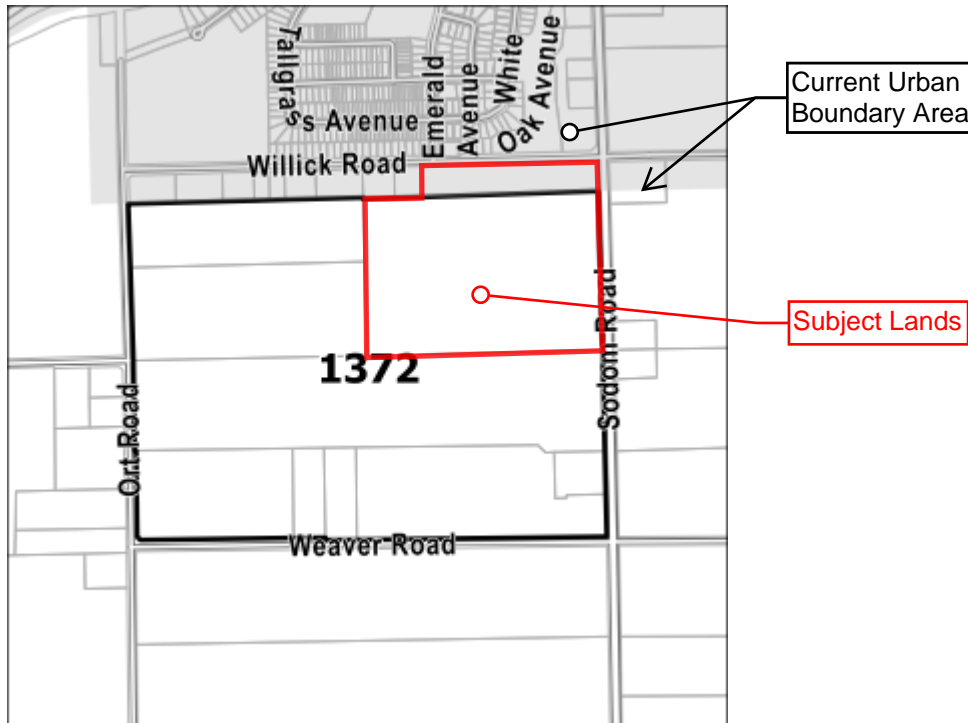


# SETTLEMENT AREA BOUNDARY REVIEW ASSESSMENT SHEET

MUNICIPALITY: Niagara Falls

SABR ID: 1372

GROSS AREA: 74.8ha



The following text boxes represent responses by RVA 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

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

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

2. Sanitary sewers can be feasibly extended from Sodom Road along Willick Road. 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. Low Impact with regards to the subject site. Extension of sewers along Willick Rd existing ROW has no impacts to natural environment or key hydrologic features.

4. Extension of sanitary sewers to the subject site from Sodom Rd along Willick Rd can facilitate the inclusion of adjacent lands via further sewer extension. New sanitary sewers are currently being proposed along Sodom from Weinbrenner Rd to Willick Road as part of the Chippawa East & Polo Corp development and in anticipation of servicing to the lands within the Urban Boundary along Willick Road.

## 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. No know capacity issues in either the Sodom Rd or Willick Rd water mains. Sizes are adequate for extension.

2. Extension of watermain infrastructure to the subject site via Sodom Rd and Willick Rd is feasible. New watermain is currently being proposed along Sodom Rd from Mann St to Willick Rd as part of the Chippawa East & Polo Corp development and in anticipation of servicing to the lands within the Urban Boundary along Willick Road. The subject development can feasibly connect the Sodom Rd to Emerald Ave water mains to service the site and interconnect the larger supply network which will further enhance supply/ capacity.

3. No impacts to significant natural environments areas as watermain extensions will be on existing ROW's. No development within on-site natural environment areas.

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 watermain infrastructure to the subject site via Sodom and Willick Rd can facilitate the inclusion of adjacent lands via further extension southward along Sodom.

## 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:** Available

**Comment:** The subject lands have a good access to Regional Rds (Sodom Rd and Lyons Creek Rd).

Note: Refer to the 'Willick Road 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:** As highlighted in the NR TMP 2017, a capacity and operational improvement is planned for Sodom Rd east of the subject site in Phase 2 (2022-2031) which will facilitate the site. Traffic signals may be warranted at Weaver Rd & Sodom Rd Dr or Sodom RD & Lyons Creek Rd 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:** Available

**Comment:** As per the Strategic Cycling Network map shown in the NR TMP 2017, the subject location is bounded by an existing cycling facility at Sodom Rd from east.

## 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:** Less than half shown as NHS **Low Impact**

**Comment:** Site 1372 is an "L" shaped site at the NE corner of Ort Road and Weaver Rd. A portion of the site is in the PNHS. There is a PSW on the site, as well as significant woodlands and several minor watercourses.

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:** Highly Feasible. **Highly Feasible**

Multiple options from adjacent lands

**Comment:** The extent of natural features on the site will provide some limitations for access, however overall there is sufficient number of areas of the site that are not constrained.

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 **Modest Impact**

**Comment:** Site 1372 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:** Available **Highly Feasible**

**Comment:** There is likely a range of opportunities to implement water quality mitigation measures

1. Subject site would only develop feasible areas which are not identified as part of the NHS. Therefore no effect to the NHS on the subject site.

2. Subject site would have access to Willick Road and Sodom Rd and be a continuous community within its development portion.

3. Subject site can provide its own on-site stormwater management for quantity control, quality control/treatment, and water balance in accordance with NPCA and MECP criteria. Discharge of stormwater runoff would be to the Hunter Drain, as consistent with the predevelopment site drainage. Site can mitigate any impacts of development with implementation of stormwater management techniques.

4. It is highly feasible that the subject site can provide its own on-site stormwater management for quantity and quality control and treatment in accordance with NPCA and MECP criteria.

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:** Modest Impact **Low Impact**

**Comment:** Potential for SAR is modest. Potential is associated with the natural features and other vegetated areas on the site.

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:** Minimal Impact **Low Impact**

**Comment:** Topography of the site is flat. Impacts are considered minimal assuming water balance to the wetlands can be maintained.

5. No species at risk identified within the subject site bounds.

6. Site will utilize natural contours towards the Hunter Drain for storm runoff conveyance. Site-specific water balance can be accommodated using SWM techniques to supplement the Hunter Drain. New sanitary sewers extended along Willick Rd would be approximately 3m 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**

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 **No Impact**

**Comment:** Several active field crop locations at this site. Moderate impact to the agri-food system if converted

1. Subject site is not used for agricultural purposes.

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

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)*

**Criteria Response:** Negligible Impact    **No Impact**

**Comment:** Site 1372 is not within 500m of a known deposit of mineral aggregate resource. Site 1372 is not within 1000m of an existing or proposed mineral aggregate operation.

1. Negligible impact as stated.

## GROWTH MANAGEMENT

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

**Criteria Response:** Higher Contribution    **High Contribution**

**Comment:** These lands have a higher contribution to complete community building. Generally displays some potential for constrained lands in parts. However is adjacent to the existing settlement area where newer development has been taking place. Opportunities to enhance the community services facilities and amenities, including any environmental protections can be anticipated through additional secondary planning.

1. High Contribution as stated. Subject site can be integrated with the Chippawa West and East low density development lands.

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:** Higher    **High Favourability**

Favourability

**Comment:** These lands have a higher favourability. When considered with adjacent lands to the east, collectively they would further enhance the contribution to meeting land need.

2. High Favourability as stated.

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:** Negligible Impact    **No Impact**

**Comment:** Addition of these lands would not negatively impact neighbouring or nearby land use.

3. Negligible impact as stated.

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**APPENDIX B**

**PRELIMINARY SERVICING CONCEPTS**

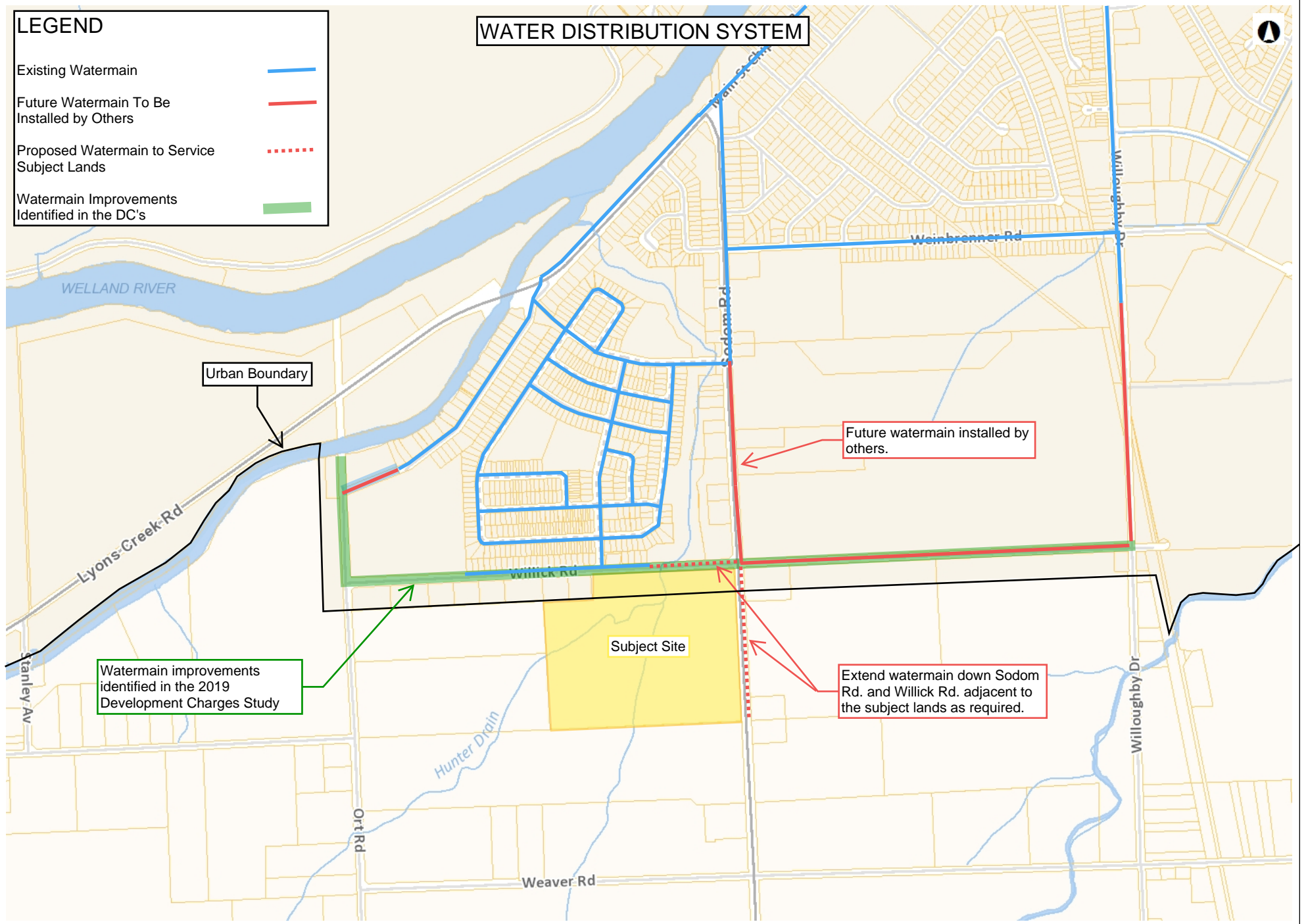
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# LEGEND

- Existing Watermain 
- Future Watermain To Be Installed by Others 
- Proposed Watermain to Service Subject Lands 
- Watermain Improvements Identified in the DC's 

# WATER DISTRIBUTION SYSTEM



Urban Boundary

Future watermain installed by others.

Watermain improvements identified in the 2019 Development Charges Study

Subject Site

Extend watermain down Sodom Rd. and Willick Rd. adjacent to the subject lands as required.

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# LEGEND

- Existing Sanitary Sewers —
- Future Sanitary Sewers To Be Installed by Others —
- Proposed Sanitary Sewers to Service Subject Lands ⋯
- Sanitary Sewer Improvements Identified in the DC's —

## SANITARY SYSTEM

South Side Low Lift SPS

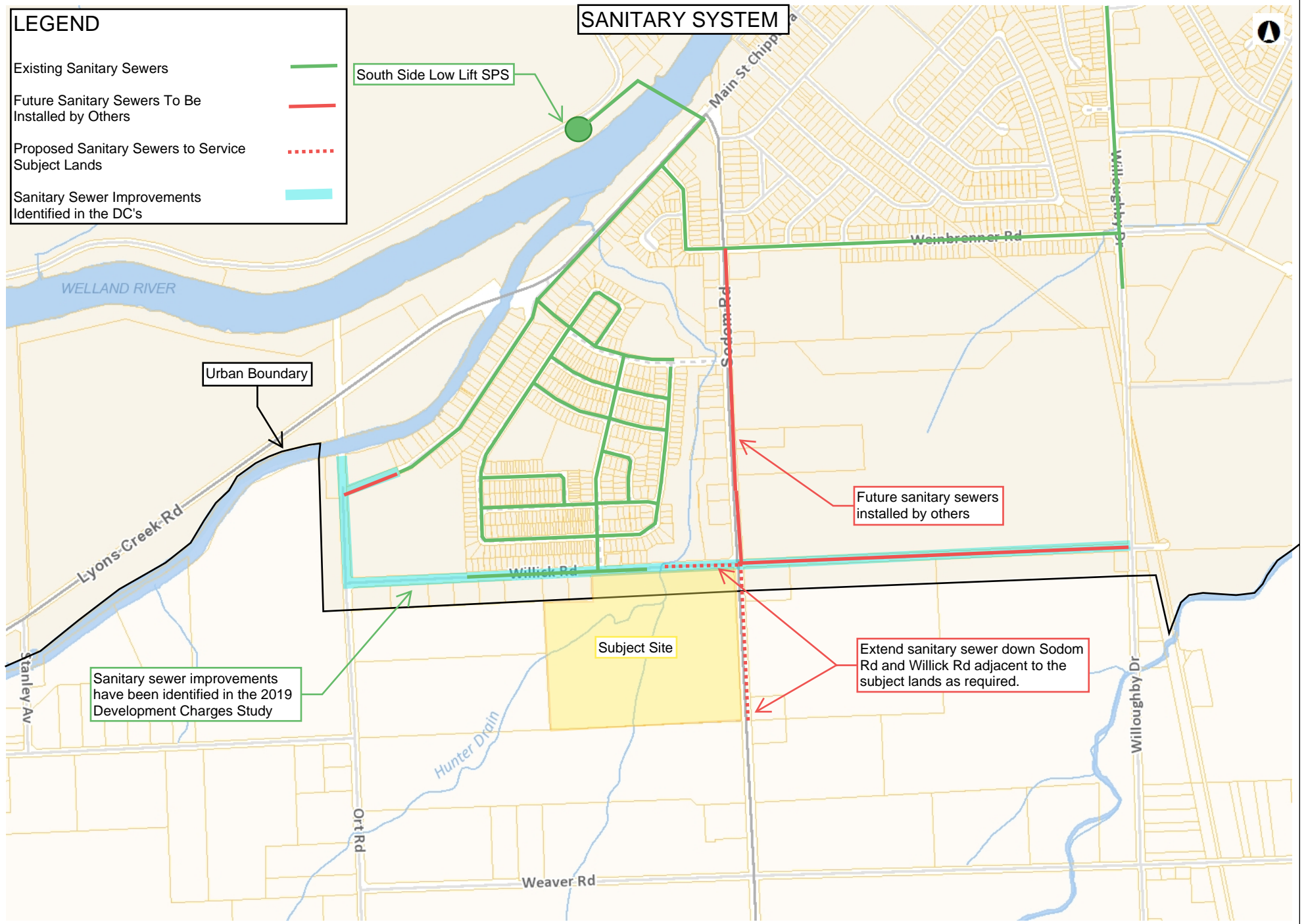
Urban Boundary

Sanitary sewer improvements have been identified in the 2019 Development Charges Study

Subject Site

Future sanitary sewers installed by others

Extend sanitary sewer down Sodom Rd and Willick Rd adjacent to the subject lands as required.

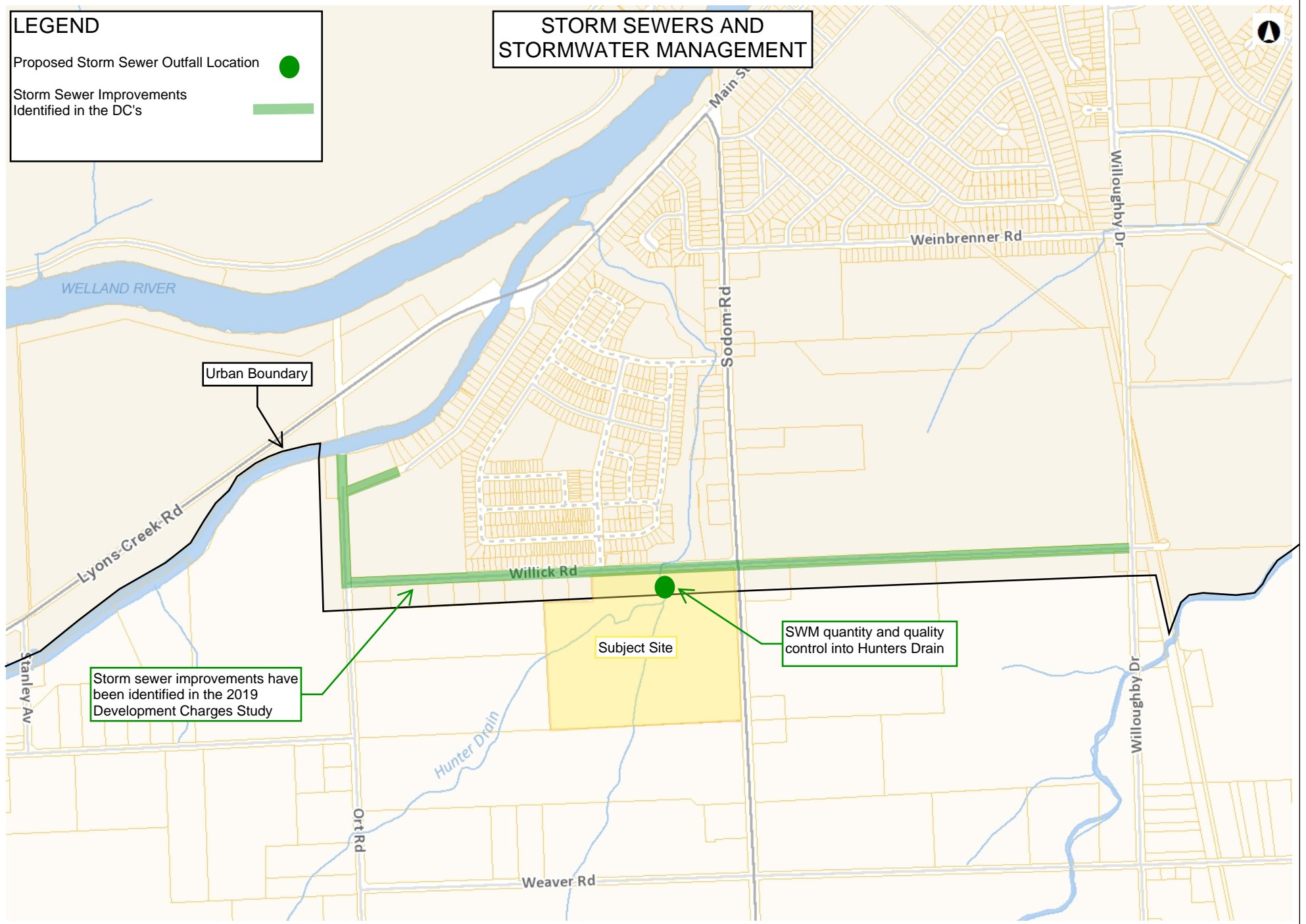


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# STORM SEWERS AND STORMWATER MANAGEMENT

**LEGEND**

- Proposed Storm Sewer Outfall Location ●
- Storm Sewer Improvements Identified in the DC's —



Urban Boundary

Storm sewer improvements have been identified in the 2019 Development Charges Study

Subject Site

SWM quantity and quality control into Hunters Drain

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**2019 CITY OF NIAGARA FALLS DEVELOPMENT CHAGES BACKGROUND STUDY SUMMARY**

<b>Infrastructure Type</b>	<b>Infrastructure Requirement</b>	<b>Limits</b>	<b>Approximate Length (m)</b>	<b>Type of Improvement</b>
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	Willick Road (Sodom Road – Ort Road)	Sodom Road – Ort Road	1000m	New Development
Sanitary Sewer	Willick Road (Sodom Road – Ort Road)	Sodom Road – Ort Road	1000m	New Development
Storm Sewer	Willick Road (Sodom Road – Ort Road)	Sodom Road – Ort Road	1000m	New Development