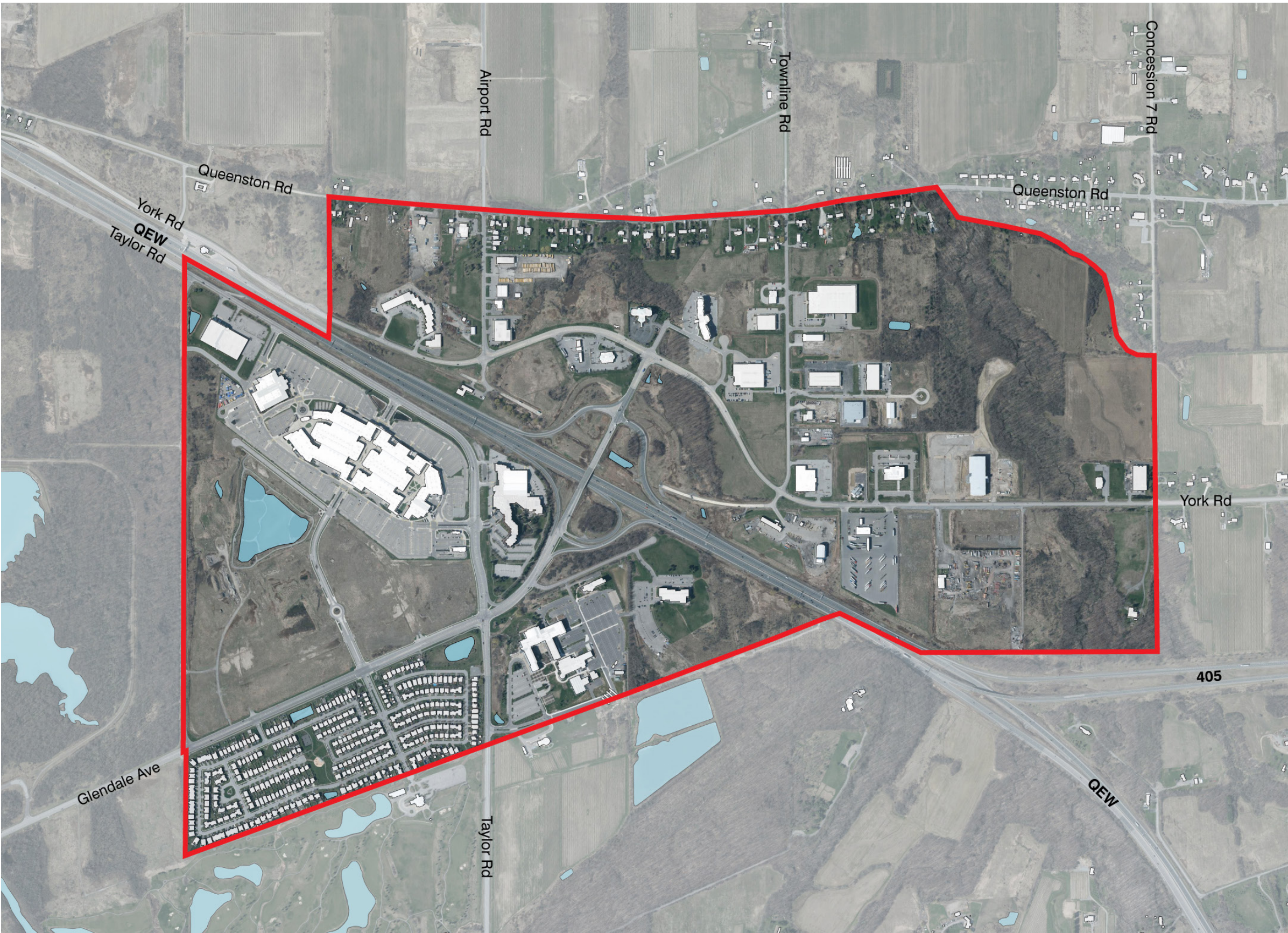


Glendale Secondary Plan Update

Public Information Session



November 7, 2022

 The Planning Partnership

Wood
GM Blue Plan
NCSI
Matrix
LEA
urbanMetrics

Purpose of Today's Meeting

In **Phase 1** of our work program - Understanding of Existing and Planned Context

Presentation on each component of the team's review of background information.

Review and discuss the key findings from the team's assessment of background information.

Discuss the key directions with respect to:

- Planning
- Employment and Commercial Land Needs
- Subwatershed Study
- Servicing
- Transportation

Confirm issues or opportunities in the Secondary Plan Area that should be explored

Phase 2 is confirming the land use, population and employment projections and urban design direction. Expected to be completed in early in 2023

Phase 3 Secondary Plan - policies, mapping, guidelines to direct the development in the Glendale District. Expected to be completed in mid to late 2023

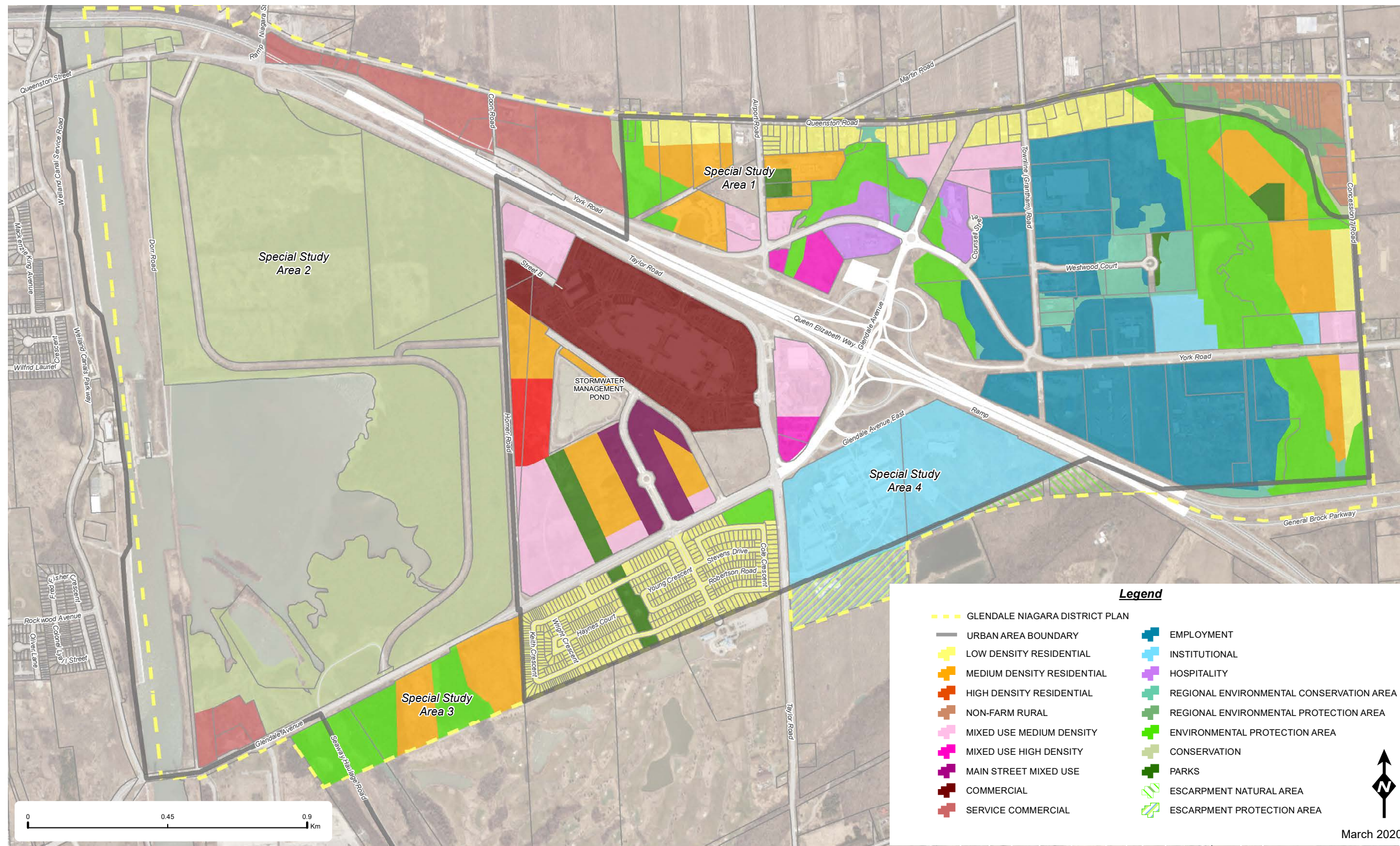
Consultation to date

- one-on-one conversations with 14 landowners
- met with the school boards
- in the process of connecting with the Indigenous communities
- regular meetings with a Technical Advisory Committee comprised of Town and Regional staff, and other agencies

Glendale District Plan - land use concept

- Key directions from the technical inputs and status of current development applications will be used to review the District Plan's land use concept

Land Use Concept



Planning - Summary & Key Directions

The review of Provincial, Regional, and Local policy frameworks has established the following as key parameters for the Glendale Secondary Plan Update:

- Design of **complete communities**.
- Support for **economic development** and **competitiveness** by **ensuring sufficient and appropriate sites** are available for **employment uses**.
- Provide **commercial uses** as a fundamental part of a complete community.
- Provide a **full range and mix of housing options**.
- Community design with **compatible housing forms** and **appropriate transitions** to abutting residential communities and Natural Heritage Systems, and transitions from higher to lower densities within the community.
- Protect **cultural heritage resources** and **involve Indigenous communities** in the planning process.

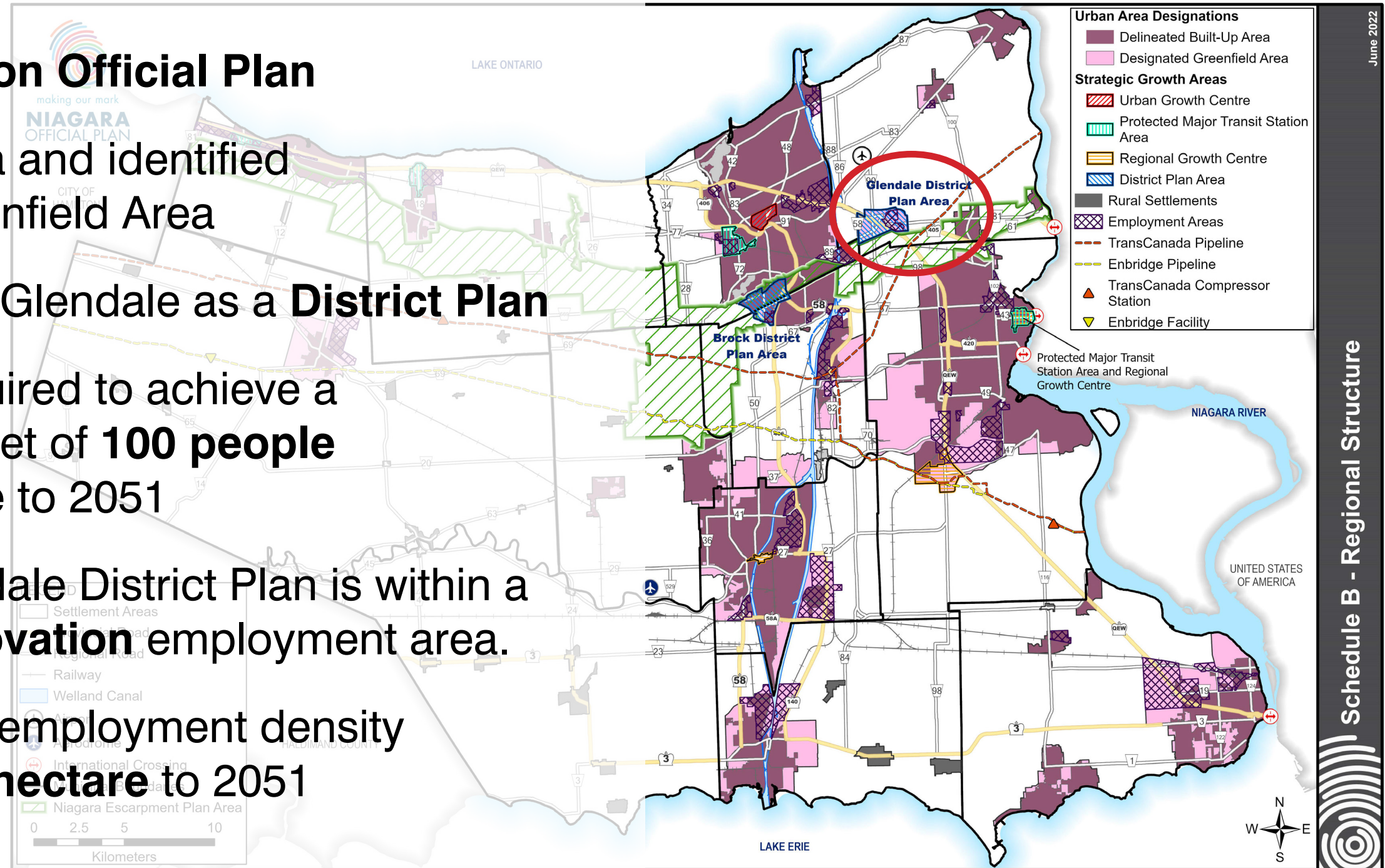
Planning - Summary & Key Directions

- Encourage and facilitate the coordinated development, maintenance and expansion of public service facilities in **community hubs**.
- **High quality public realm design** to support active transportation and spur private investment.
- Support **water and energy conservation**, plan for efficient land use and development, support **alternative transportation modes** and embrace the use of **green infrastructure** and natural areas for water infiltration.
- Plan for the impacts of a **changing climate** and identify actions to **reduce greenhouse gas emissions** and address **climate change adaptation**.
- Plan for a well connected, attractive and functional **multi-modal transportation system**. Support a **full spectrum of mobility options**.

Planning - Density Provisions

Adopted Niagara Region Official Plan

- Within the Urban Area and identified as a Designated Greenfield Area
- ROPA 17 established Glendale as a **District Plan**
- District Plans are required to achieve a minimum density target of **100 people and jobs per hectare** to 2051
- A portion of the Glendale District Plan is within a **Knowledge and Innovation** employment area.
- The minimum overall employment density target is **60 jobs per hectare** to 2051



June 2022

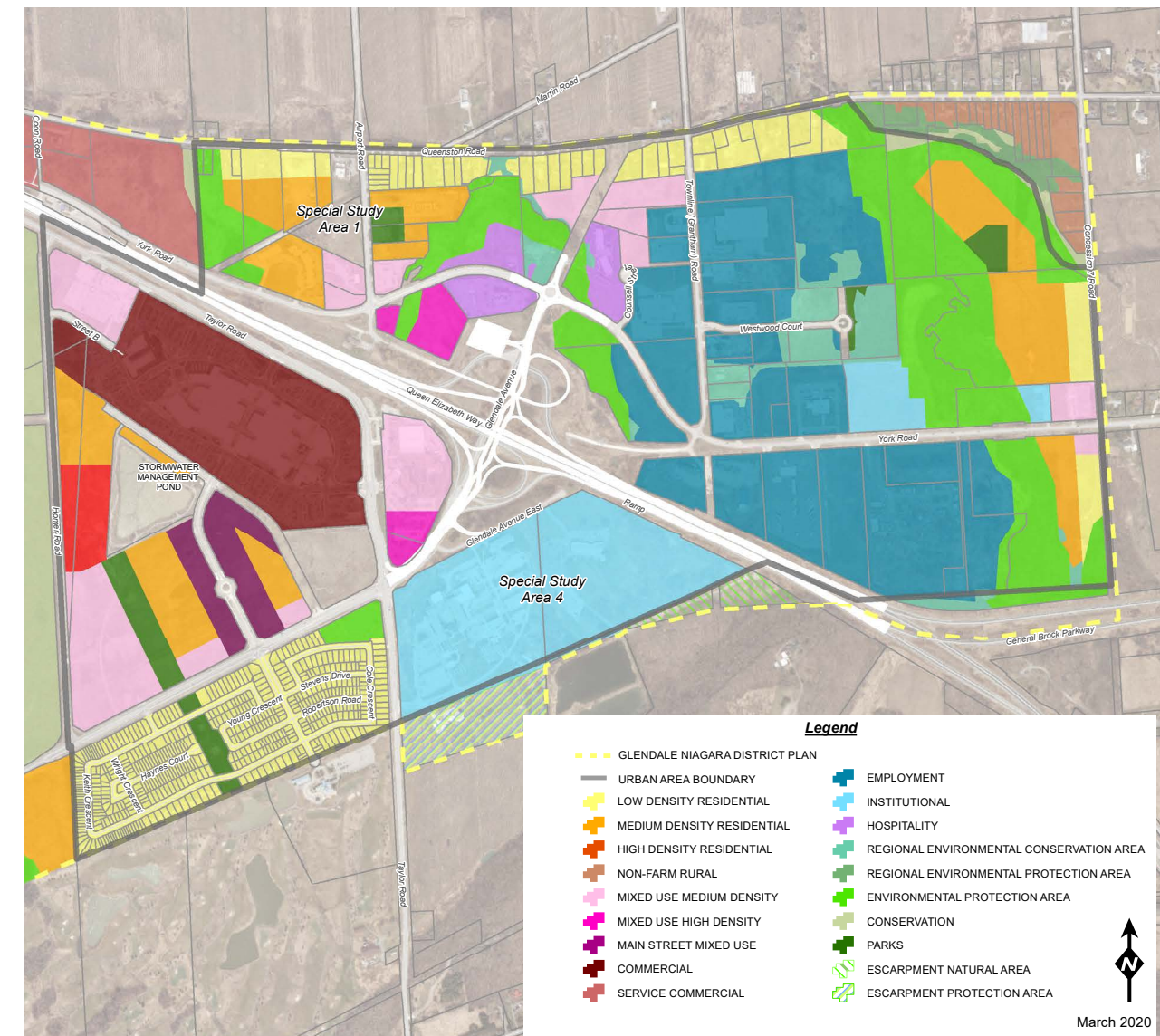
Schedule B - Regional Structure



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Employment & Commercial - Summary & Key Directions

- Strive to achieve **greater internal connectivity**, particularly between the major uses on the south side of the QEW.
- Provide for **additional uses to accommodate day-to-day and weekly shopping** once the residential components have been built out.
- A new supermarket should be developed in line with market growth in the area. A minimum population of 10,000 residents should be achieved prior to the development of a full supermarket.
- Niagara-on-the-Green Boulevard is an opportunity for **additional local serving commercial space** and assist in connecting the land uses south of the QEW.



Employment & Commercial - Summary & Key Directions

- The suitability of **commercial uses on Glendale Avenue** will be reviewed as additional information is available (i.e., transportation review, surrounding population etc.). **Local serving retail and service uses** could also be concentrated along Niagara-on-the-Green Boulevard.
- In general, **lands designated for employment uses should be preserved.** Glendale's employment district is an economic hub of the Town of NOTL and helps to diversify the local economy beyond tourist and agricultural activities.
- The lands at the at Concession 7 Road - North of York Road **are appropriate for the conversion for residential and mixed-use development.**
- Other properties **may be suitable for conversion** depending on their ability to accommodate future employment uses but should be evaluated on a site-by-site basis.
- Although the Region's Land Needs Assessment lists a surplus of 10 hectares of employment land in NOTL, this surplus is insufficient to justify major conversions that would significantly reduce the overall availability of employment lands. **There is minimal room for growth of the employment area beyond the existing designated zones.** Major conversions of the designated employment lands limit the potential prospects for employment uses as part of Glendale's economic growth.

Subwatershed Study - Summary & Key Directions

Process Overview

- The Subwatershed Study (SWS) characterizes and assesses the natural features and systems within the study area (flora and fauna, wetlands and woodlands, watercourses and fisheries, surface water and groundwater).
- The Subwatershed Study Team includes specialists from each environmental study discipline working in an coordinated and integrated manner.
- The conclusions and recommendations from the Subwatershed Study establish the water resources and natural heritage system for the development area, guidance for planning adjacent lands, and recommendations for managing impacts from proposed development.

Subwatershed Study - Summary & Key Directions

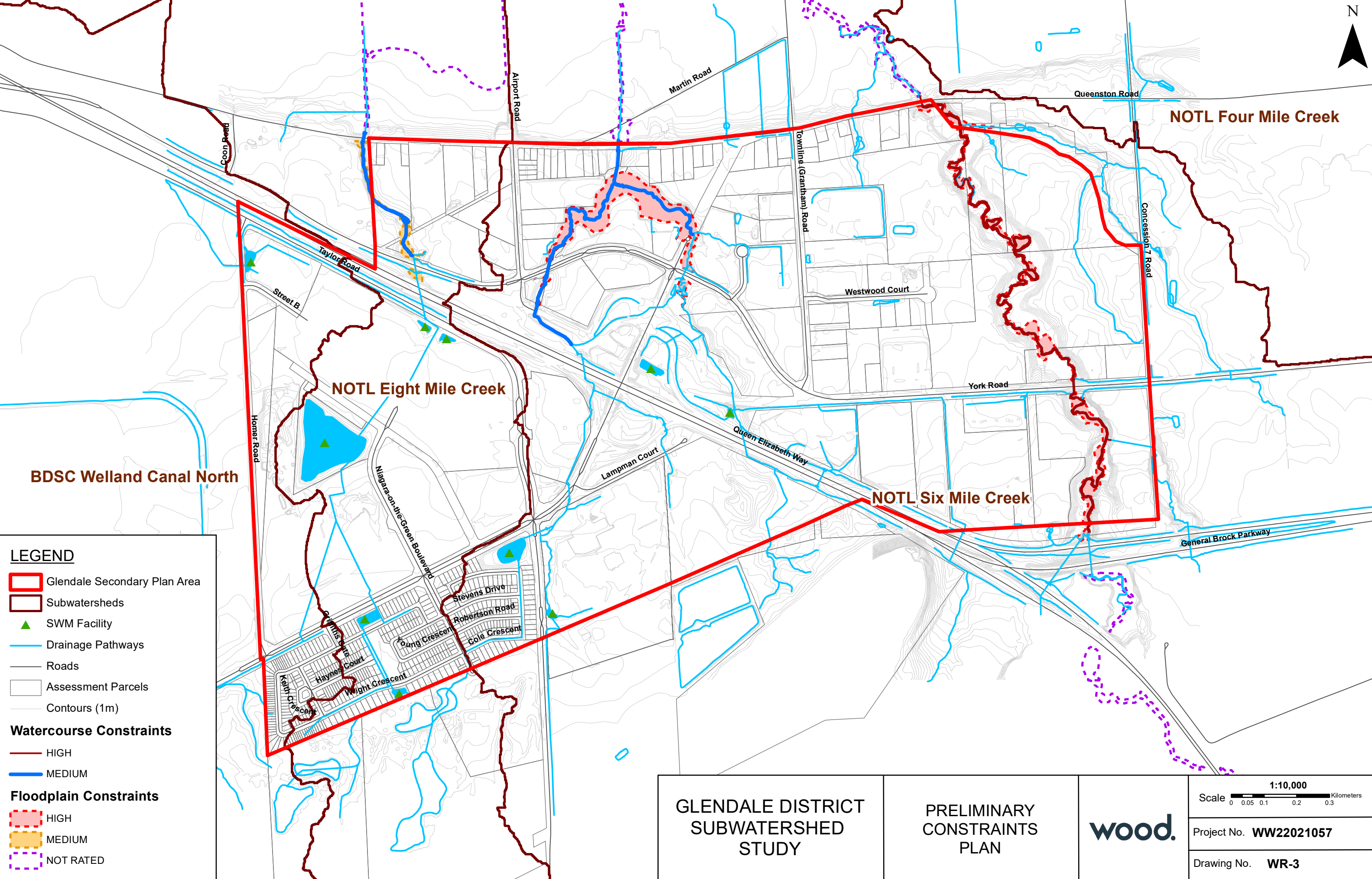
Process Overview

- The Subwatershed Study is being completed in three (3) phases:
 - Phase 1: Subwatershed Characterization
 - Phase 2: Impact Assessment and Management
 - Phase 3: Implementation and Monitoring Plan
- Phase 1 is underway with fieldwork and monitoring to assess and characterize the environmental features and systems within the study area.
- A preliminary characterization and constraint assessment has been completed to identify key components of the Natural Heritage System and Water Resources System.
- The findings from this preliminary characterization will be updated based upon the conclusions and recommendations presented in the Phase 1 Subwatershed Characterization Report.

Subwatershed Study - Summary & Key Directions

Groundwater and Surface Water

- Soils are primarily silt and clay, which exhibit low infiltration
- Depth of silt and clay over bedrock ranges from 14.6 m thick to 51.8 m thick
- Groundwater movement is primarily within the fractures in the upper 3 m to 6 m of the overburden
- Horizontal movement of groundwater is primarily from south to north (toward Lake Ontario)
- Groundwater discharge may occur within waterbodies
- Portions of the study area are currently urbanized with sewers and stormwater management facilities
- Floodlines have been delineated for the Six Mile Creek with no defined floodplain for Eight Mile Creek



LEGEND

- Glendale Secondary Plan Area
- Subwatersheds
- ▲ SWM Facility
- Drainage Pathways
- Roads
- Assessment Parcels
- Contours (1m)

Watercourse Constraints

- HIGH
- MEDIUM

Floodplain Constraints

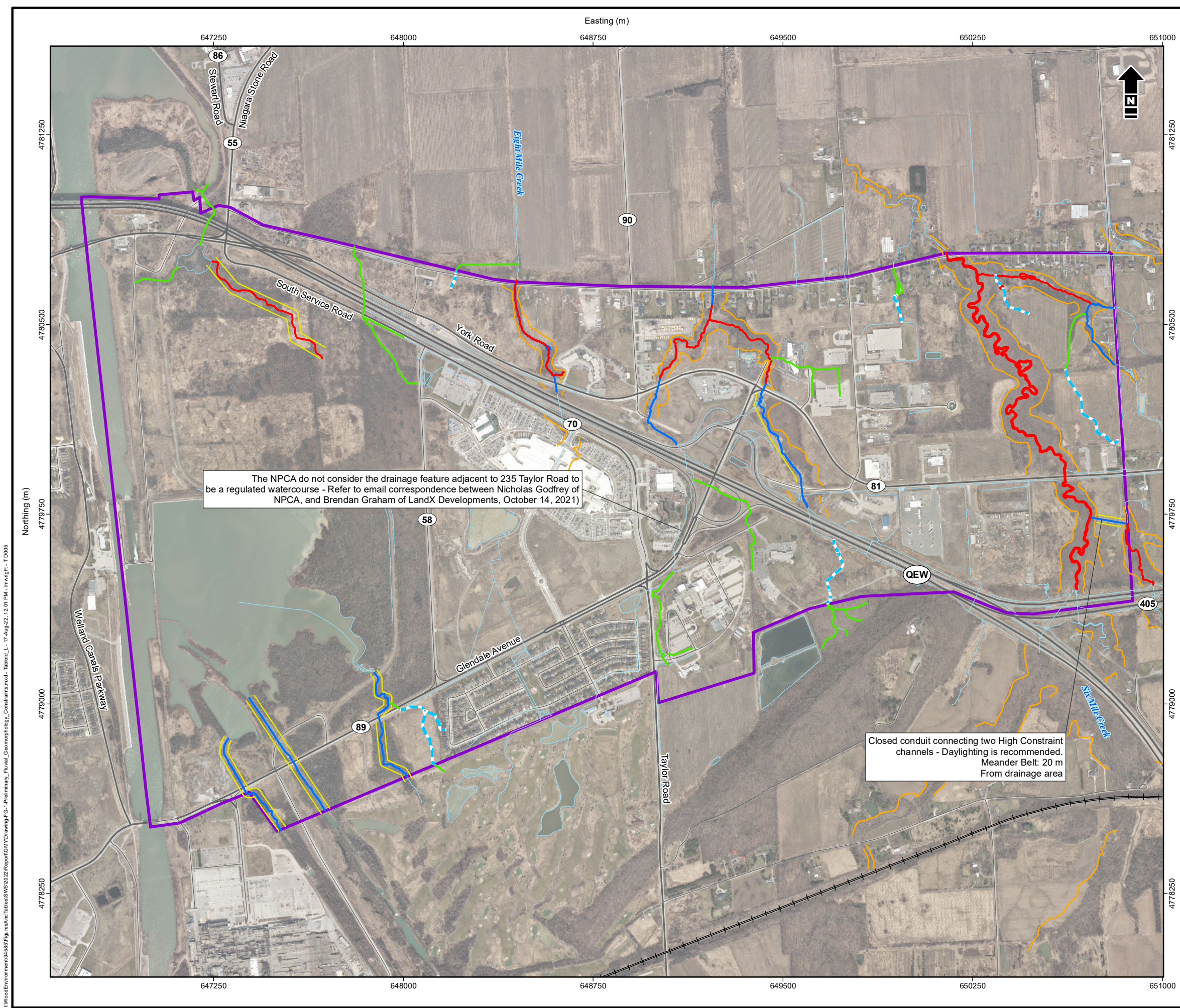
- HIGH
- MEDIUM
- NOT RATED

GLENDALE DISTRICT SUBWATERSHED STUDY	PRELIMINARY CONSTRAINTS PLAN	wood.	Scale 1:10,000
			0 0.05 0.1 0.2 0.3 Kilometers
			Project No. WW22021057
			Drawing No. WR-3

Subwatershed Study - Summary & Key Directions

Watercourses and Fisheries

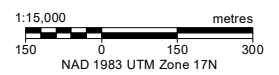
- Drainage features within the study area consist of confined watercourses within well-defined valley, unconfined watercourses, headwater drainage features, and municipal drains
- Erosion hazard limits for watercourses and stable top of slope limits for confined watercourses have been delineated
- Six Mile Creek has been identified as “Important” fish habitat containing warm and cool water species
- Portions of Eight Mile Creek have been classified as a municipal drain with limited fish habitat
- No aquatic Species At Risk have been identified within the study area



The NPCA do not consider the drainage feature adjacent to 235 Taylor Road to be a regulated watercourse - Refer to email correspondence between Nicholas Godfrey of NPCA, and Brendan Graham of LandX Developments, October 14, 2021)

Closed conduit connecting two High Constraint channels - Daylighting is recommended. Meander Belt: 20 m From drainage area

- District Plan Area
 - Water Body
 - Watercourse
 - Preliminary Meander Belt Limits (including 6m erosion access allowance)
 - Preliminary Stable Top of Slope (including 6m erosion access allowance)
 - Highway
 - Road
- Reaches | Potential Constraint Ranking**
- High
 - Medium
 - Low
 - Potential HDF
- Note: preliminary erosion hazard limits are subject to refinement as more detailed information is collected. Medium constraint features may be subject to realignment. Should these reaches be relocated, the corridor width (meander belt width/erosion hazard corridor) associated with each reach must, at a minimum, be maintained.



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Wood Environment
Glendale District Subwatershed Study - Preliminary Characterization and Constraint Assessment

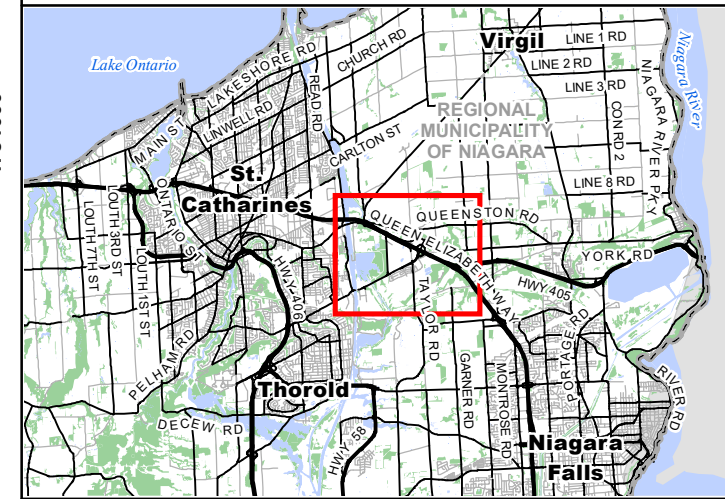
Potential Fluvial Geomorphology Constraints

Date:	August 2022	Project:	34585	Submitter:	A. Nicoll	Reviewer:	J. McDonald
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Disclaimer: The information contained herein may be compiled from numerous third party materials that are subject to periodic change without prior notification. While every effort has been made by Matrix Solutions Inc. to ensure the accuracy of the information presented at the time of publication, Matrix Solutions Inc. assumes no liability for any errors, omissions, or inaccuracies in the third party material.

Drawing
FG-1

Glendale Secondary Plan Update and SWS Fish Habitat Classifications

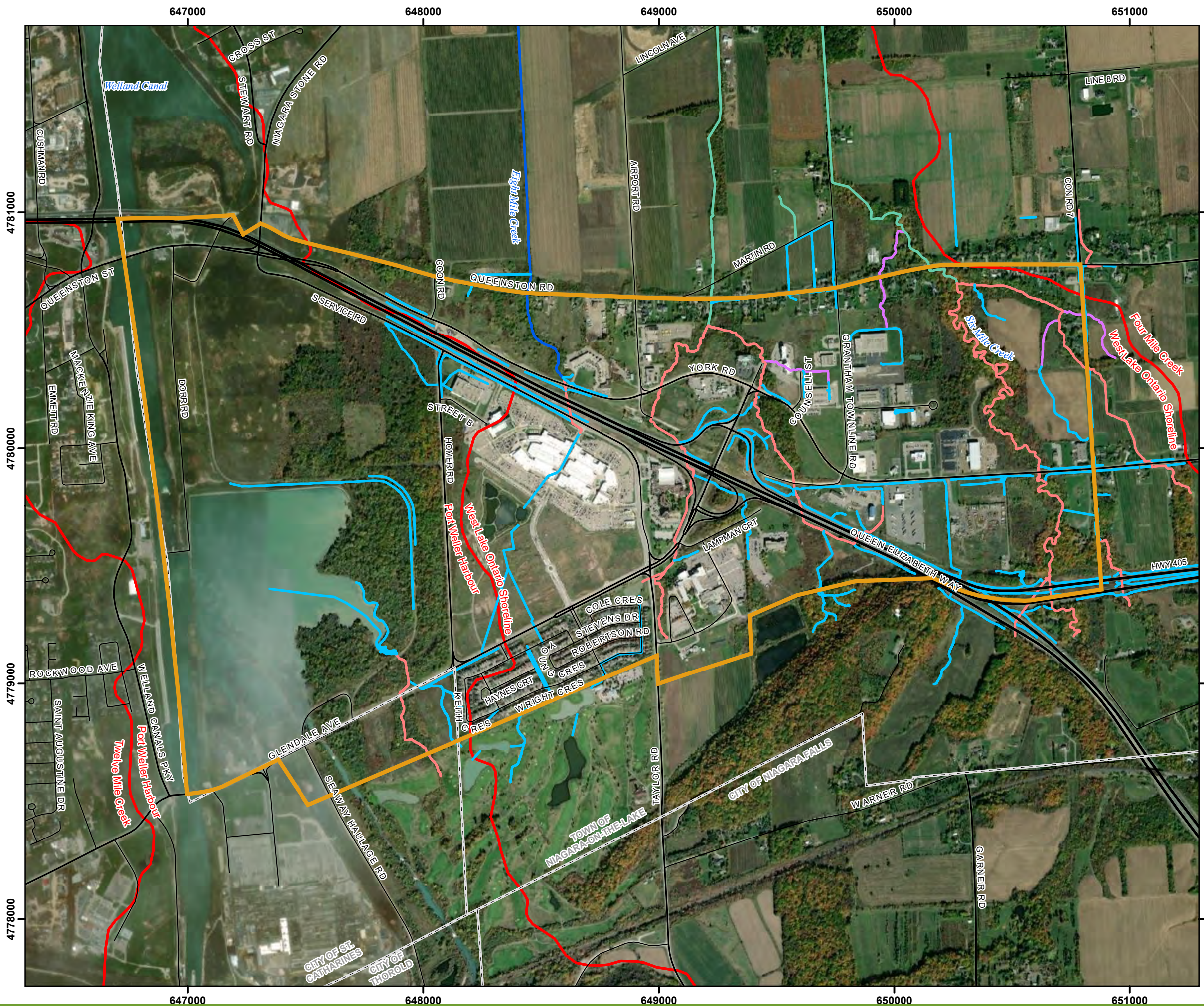
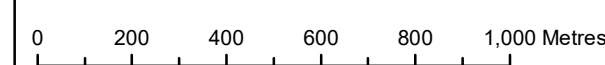


- Legend**
- Study Area
 - Lower Tier Municipality
 - Subwatershed Boundary
 - Highway
 - Primary Road
 - Secondary Road
- MNRF Watercourse Classifications**
- Type 2 ("Important") Fish Habitat
 - Unclassified (No Data)
- Municipal Drain Classification**
- Class A Drain
 - Class D Drain
 - Class E Drain



Map Produced by Natural Resource Solutions Inc. This map is proprietary and confidential and must not be duplicated or distributed by any means without express written permission of NRSI. Data provided by MNRF © Copyright: Queen's Printer Ontario. Imagery: ESRI (2021).

Project: 2884 Date: August 16, 2022	NAD83 - UTM Zone 17 Size: 11x17" 1:16,000
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Subwatershed Study - Summary & Key Directions

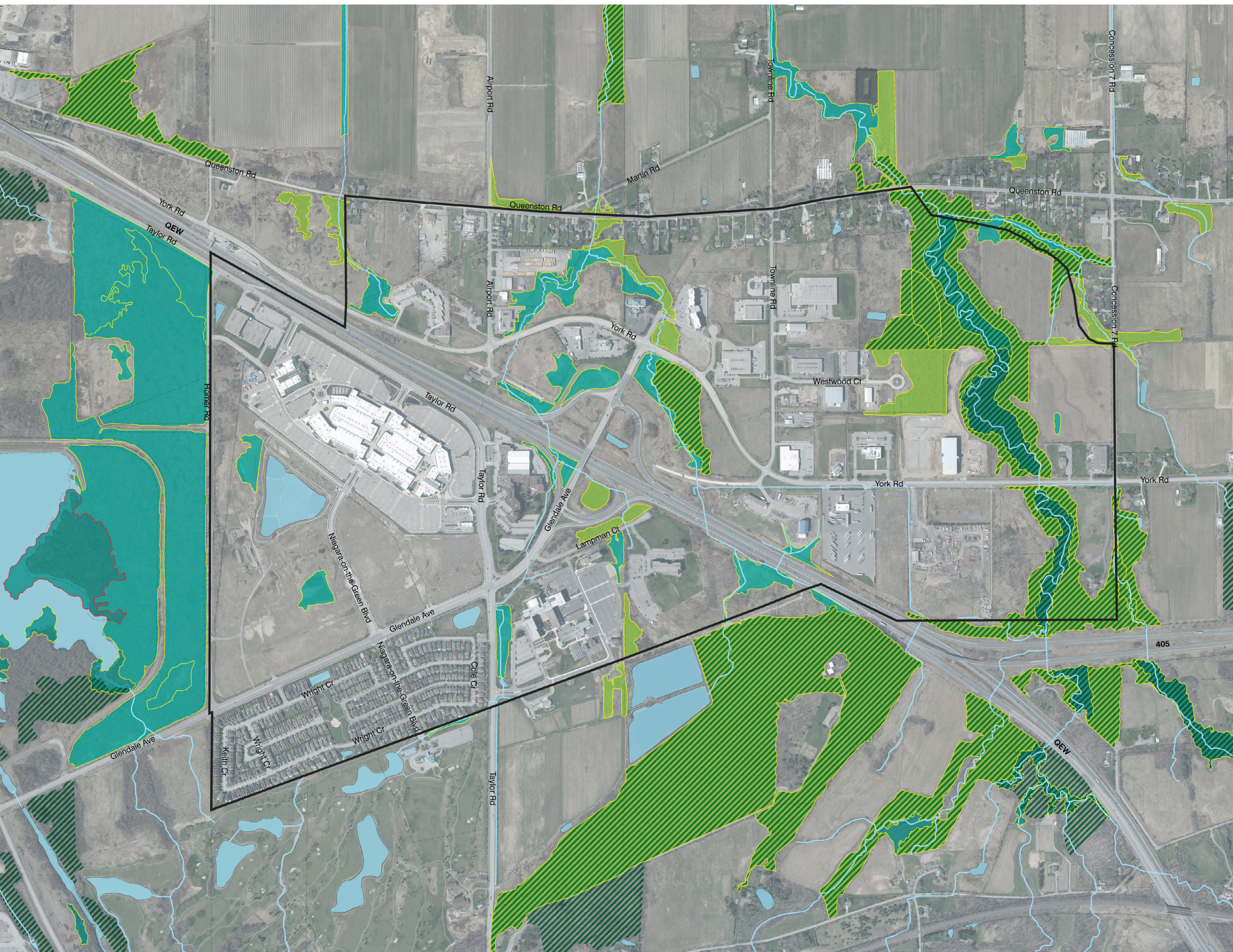
Terrestrial System and NHS

- Natural features include wetlands, small woodland and wetland communities, hedgerows and cultural meadows
- Species At Risk (SAR) have been noted as occurring within the study area
- One Provincially Significant Wetland complex has been identified (Welland Canal North Turn Basin Wetland Complex)
- One Significant Wildlife Habitat Type has been confirmed in the study area
- Several Species of Concern have been identified as present in the study area
- Significant Natural Features Mapping has been prepared based upon background information provided

Subwatershed Study - Summary & Key Directions

Map of Significant Natural Heritage

- Legend**
- Watercourse
 - Water body
 - Provincially Significant Wetland
 - Evaluated Non-PSW Wetland
 - Other Wetland (ELC)
 - Terrestrial Woodland (ELC)
 - Significant Woodland



Subwatershed Study - Summary & Key Directions

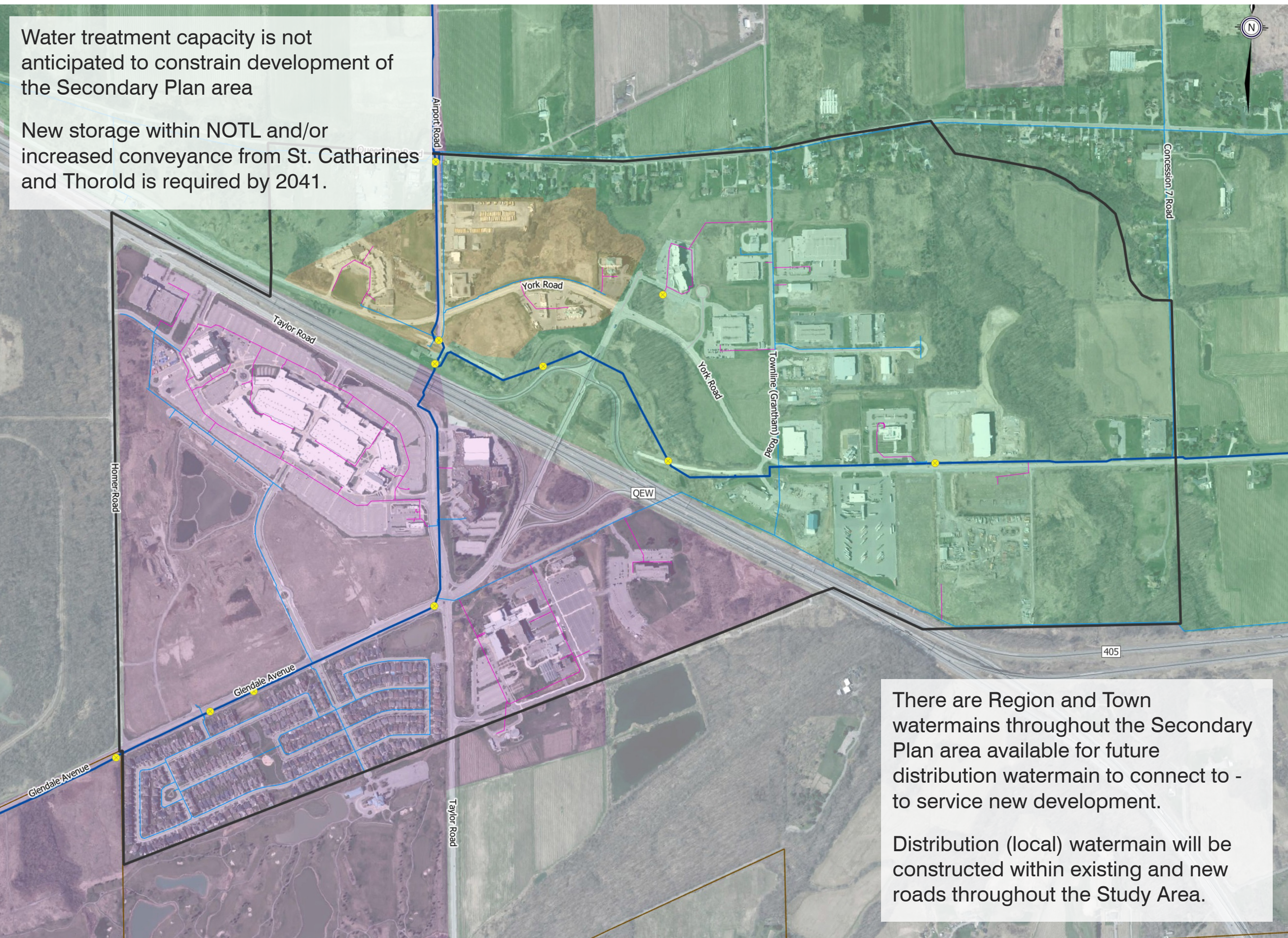
Next Steps

- Complete fieldwork and monitoring for 2022
- Prepare Phase 1 Characterization Report
- Integrate findings with Land Use Plan

Servicing - Summary & Key Directions

Water treatment capacity is not anticipated to constrain development of the Secondary Plan area

New storage within NOTL and/or increased conveyance from St. Catharines and Thorold is required by 2041.



There are Region and Town watermains throughout the Secondary Plan area available for future distribution watermain to connect to - to service new development.

Distribution (local) watermain will be constructed within existing and new roads throughout the Study Area.

Existing Water System

Existing Water Infrastructure

- Pressure Regulation Valve
- Region Mains
- Local Mains
- Private

Water Pressure Zones (HGL)

- DeCew Falls WTP-161
- DeCew Falls WTP-168
- DeCew Falls WTP-180

Other Features

- Glendale Secondary Plan Area
- Municipal Boundaries
- Urban Area Boundary

Servicing - Summary & Key Directions

Wastewater treatment capacity is not anticipated to constrain development of the Secondary Plan area

The existing downstream trunk sewer has sufficient capacity to convey sanitary flows from the Secondary Plan Study Area.

Existing Wastewater System

Existing Wastewater Infrastructure

- Sanitary Force Main
- Regional Gravity Main
- Local Gravity Main
- Private

Sewer Catchment

- Port Weller WWTP

Other Features

- Glendale Secondary Plan Area
- Municipal Boundaries
- Urban Area Boundary

There are Region and Town sanitary sewers throughout the Secondary Plan area available for future sewers to connect to.

Local sewers will be constructed within existing and new roads throughout the Study Area.

Servicing - Summary & Key Directions

Proposed storm sewers will be coordinated with the recommendations from the Subwatershed Study.

Existing Stormwater System

Existing Stormwater Infrastructure

- Regional**
 - Catchbasins
 - Maintenance Holes
 - ➔ Stormwater Main
 - Stormwater Lead
- Municipal**
 - Catchbasins
 - Maintenance Holes
 - Stormwater Pond
 - ➔ Stormwater Main
 - Stormwater Lead
- Other Features**
 - ▭ Glendale Secondary Plan Area
 - ▭ Municipal Boundaries
 - ▭ Urban Area Boundary
 - Watercourse

There are Region and Town storm sewers and stormwater management facilities throughout the Secondary Plan area that will continue to be utilized to service development.

Storm sewers will be constructed within existing and new roads throughout the Study Area.

Transportation Assessment - Summary & Key Directions

Existing Road Network – Road Classification



- **Provincial Highway (QEW) intersects the study area**
- **5 Regional Roadways**
 - 1 Taylor Road (Arterial)
 - 2 York Road (Arterial)
 - 3 Glendale Avenue (Arterial)
 - 4 Airport Road (Arterial)
 - 5 Homer Road (Collector)
- **5 Municipal Roadways**
 - 1 Queenston Road (Collector)
 - 2 Niagara-on-the-Green Boulevard (local)
 - 3 Townline Road (local)
 - 4 Concession 7 Road (Local)
 - 5 Lampman Court (Local)

Transportation Assessment - Summary & Key Directions

Diverging Diamond Interchange and Glendale Avenue/York Road Roundabout



Diverging Diamond Interchange

- Reduces vehicle conflict points and allows unrestricted turning movements
- Accommodates active transportation uses within a separated facility
- Traffic assessment of the DDI was not conducted due to ongoing construction at the time of preparing the traffic study

Glendale Avenue/York Road Roundabout

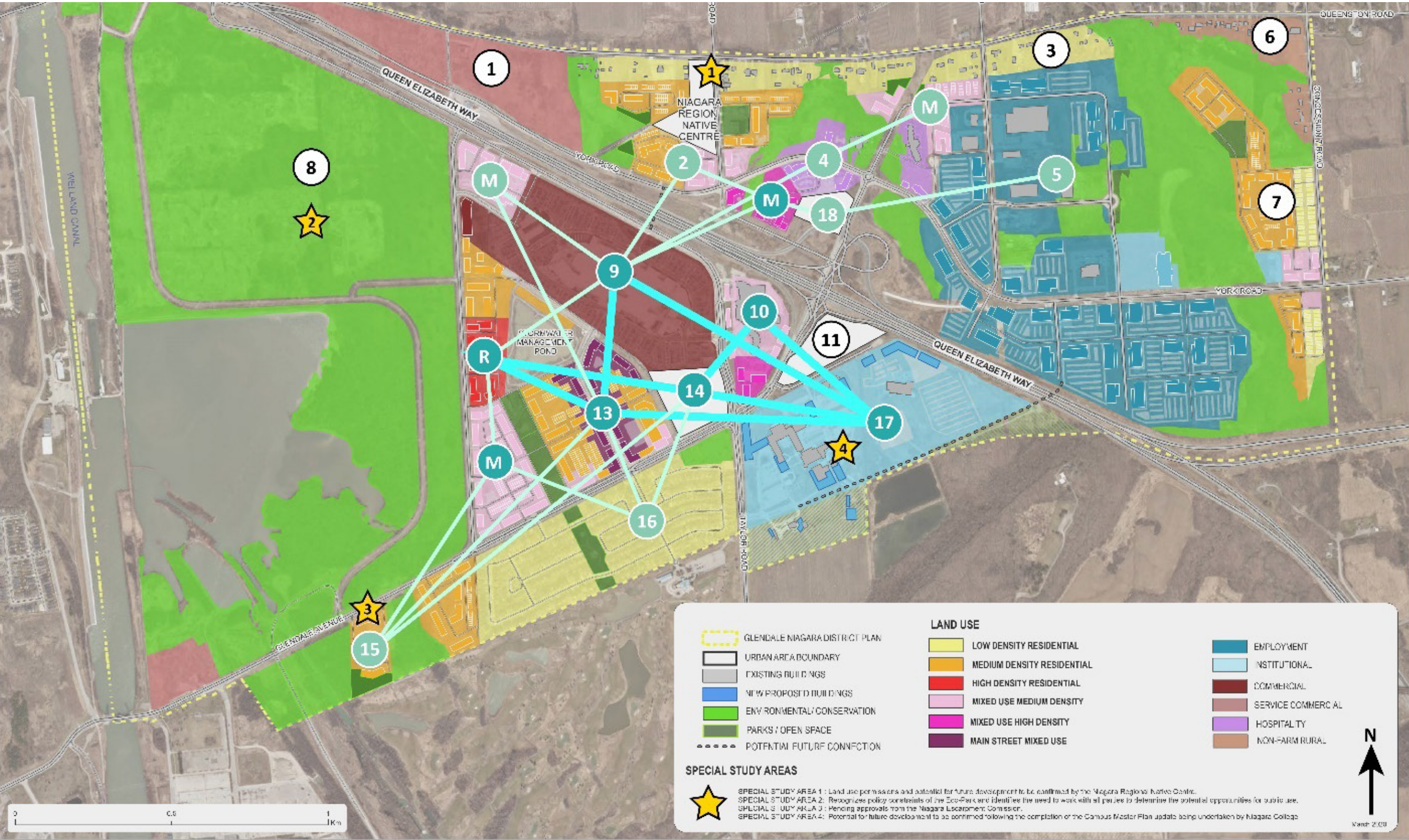
- Single-lane roundabout with channelization in the southwest and southeast quadrants
- Reduces westbound and southbound queues through free flowing movements

Glendale Avenue and Airport Road Connection

- Direct route between Glendale Avenue and Airport Road
- Alleviates traffic from Glendale Avenue & York Road

Transportation Assessment - Summary & Key Directions

Primary and Secondary Pedestrian Trip Generators



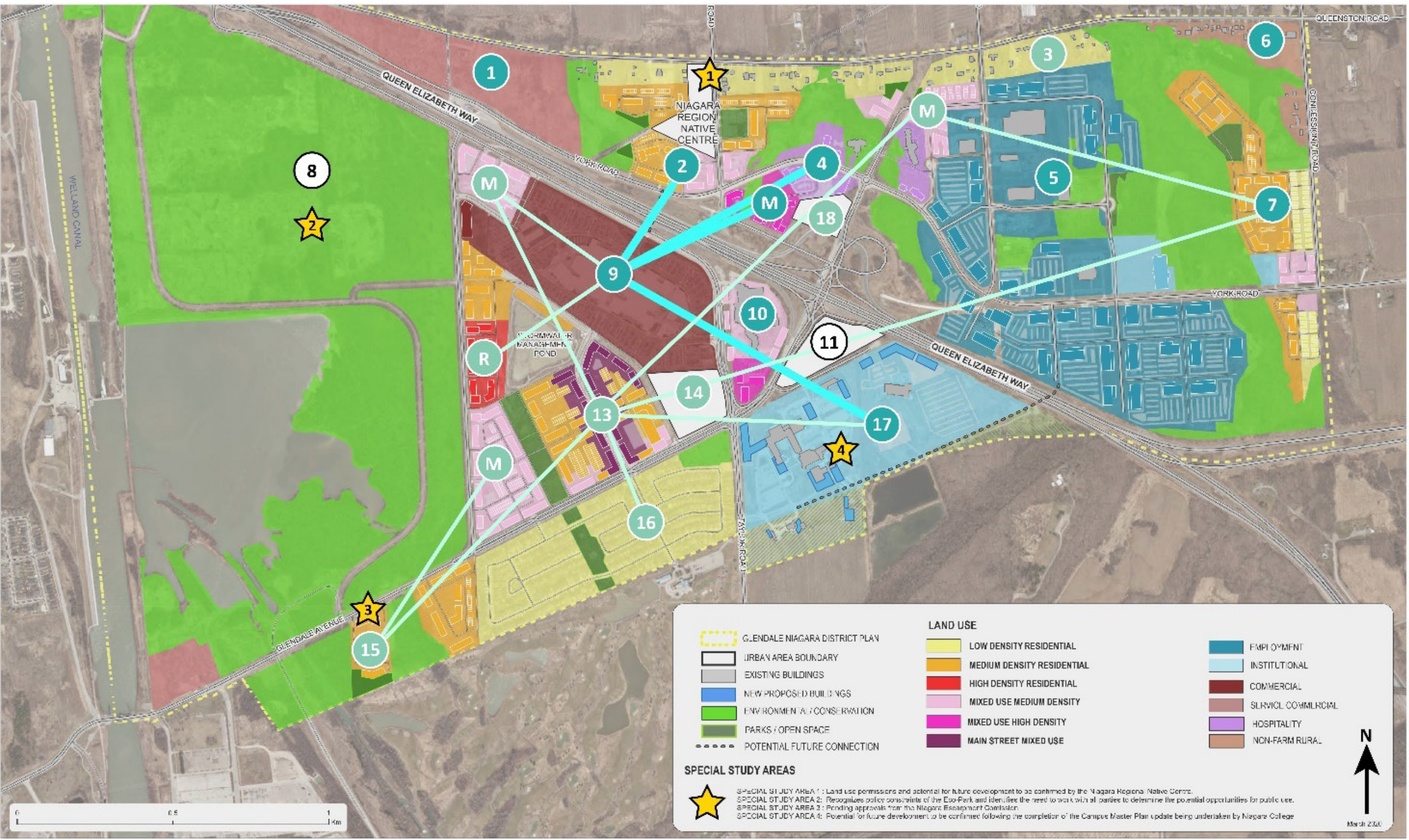
Origin-Destination Key

1. Northwest Glendale
2. North Glendale
3. Queenston Road
4. Hospitality District
5. Employment Area
6. Northeast Glendale
7. East Glendale
8. Potential Eco Park
9. Outlet Collection Niagara
10. White Oaks
11. MTO Lands
12. West Glendale
13. Glendale Crossing
14. Transit & Community Hub
15. Southwest Glendale
16. Niagara On The Green
17. Niagara College
18. MTO Commuter Lot
- R. Residential Generator
- M. Mixed-Use Generator

- Primary Trip Generator
- Secondary Trip Generator
- Minimal Trip Generator
- Primary Connection
- Secondary Connection

Transportation Assessment - Summary & Key Directions

Primary and Secondary Vehicle Trip Generators



Origin-Destination Key

- 1. Northwest Glendale
- 2. North Glendale
- 3. Queenston Road
- 4. Hospitality District
- 5. Employment Area
- 6. Northeast Glendale
- 7. East Glendale
- 8. Potential Eco Park
- 9. Outlet Collection Niagara
- 10. White Oaks
- 11. MTO Lands
- 12. West Glendale
- 13. Glendale Crossing
- 14. Transit & Community Hub
- 15. Southwest Glendale
- 16. Niagara On The Green
- 17. Niagara College
- 18. MTO Commuter Lot
- R. Residential Generator
- M. Mixed-Use Generator

Generator Type

- Primary Trip Generator
- Secondary Trip Generator
- Minimal Trip Generator
- Primary Connection
- Secondary Connection

<p>GLENDALE NIAGARA DISTRICT PLAN</p> <ul style="list-style-type: none"> GLENDALE NIAGARA DISTRICT PLAN URBAN AREA BOUNDARY EXISTING BUILDINGS NEW PROPOSED BUILDINGS ENVIRONMENTAL / CONSERVATION PARKS / OPEN SPACE POTENTIAL FUTURE CONNECTION <p>SPECIAL STUDY AREAS</p> <ul style="list-style-type: none"> ★ SPECIAL STUDY AREA 1: Land use permissions and potential for future development to be confirmed by the Niagara Regional Native Centre. ★ SPECIAL STUDY AREA 2: Recognizes policy constraints of the Eco-Park and identifies the need to work with all parties to determine the potential opportunities for public use. ★ SPECIAL STUDY AREA 3: Pending approvals from the Niagara Esplanaut Commission. ★ SPECIAL STUDY AREA 4: Potential for future development to be confirmed following the completion of the Campus Master Plan update being undertaken by Niagara College. 	<p>LAND USE</p> <table border="0"> <tr> <td> LOW DENSITY RESIDENTIAL</td> <td> EMPLOYMENT</td> </tr> <tr> <td> MEDIUM DENSITY RESIDENTIAL</td> <td> INSTITUTIONAL</td> </tr> <tr> <td> HIGH DENSITY RESIDENTIAL</td> <td> COMMERCIAL</td> </tr> <tr> <td> MIXED USE MEDIUM DENSITY</td> <td> SERVICE COMMERCIAL</td> </tr> <tr> <td> MIXED USE HIGH DENSITY</td> <td> HOSPITALITY</td> </tr> <tr> <td> MAIN STREET MIXED USE</td> <td> NON-FARM RURAL</td> </tr> </table>	 LOW DENSITY RESIDENTIAL	 EMPLOYMENT	 MEDIUM DENSITY RESIDENTIAL	 INSTITUTIONAL	 HIGH DENSITY RESIDENTIAL	 COMMERCIAL	 MIXED USE MEDIUM DENSITY	 SERVICE COMMERCIAL	 MIXED USE HIGH DENSITY	 HOSPITALITY	 MAIN STREET MIXED USE	 NON-FARM RURAL
 LOW DENSITY RESIDENTIAL	 EMPLOYMENT												
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 MIXED USE MEDIUM DENSITY	 SERVICE COMMERCIAL												
 MIXED USE HIGH DENSITY	 HOSPITALITY												
 MAIN STREET MIXED USE	 NON-FARM RURAL												

Transportation Assessment - Summary & Key Directions

Safety Assessment

- Reviewed historical collision data over a 5-year period for intersections and segments
- **Glendale Avenue & Taylor Road**
 - Busiest intersection with the most collisions reported
 - Potential safety concerns with weaving along the north leg of the intersection and skewed intersection design
 - Concerns will be further analyzed as part of future road network improvements
- **Glendale Avenue, west of Taylor Road**
 - Safety concerns due to high speeds and narrow bike lanes adjacent to the travel lanes
 - Recommendation as part of the future road network improvements to increase separation between bicycle and vehicles, and reduce vehicle speeds

Transportation Assessment - Summary & Key Directions

Site Visit

Site visit: Thursday, October 13th, 2022



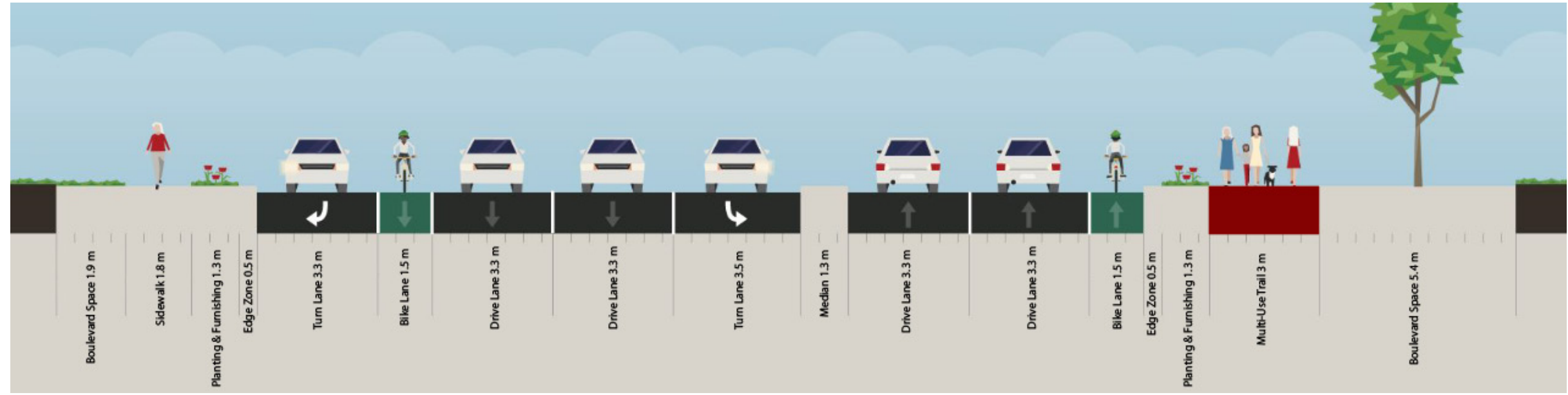
- Paved connections that abruptly end

- “Crosswalk to nowhere”
- Inappropriately placed tactile strip

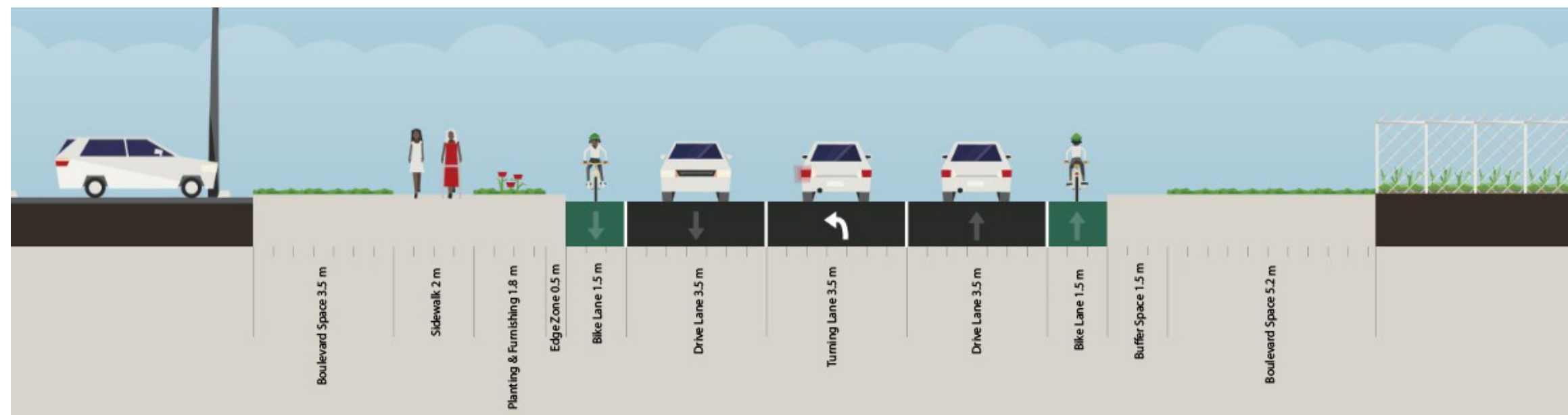
- Faded / discontinuous pedestrian crosswalk markings

Transportation Assessment - Summary & Key Directions

Existing Roadway Cross-Sections



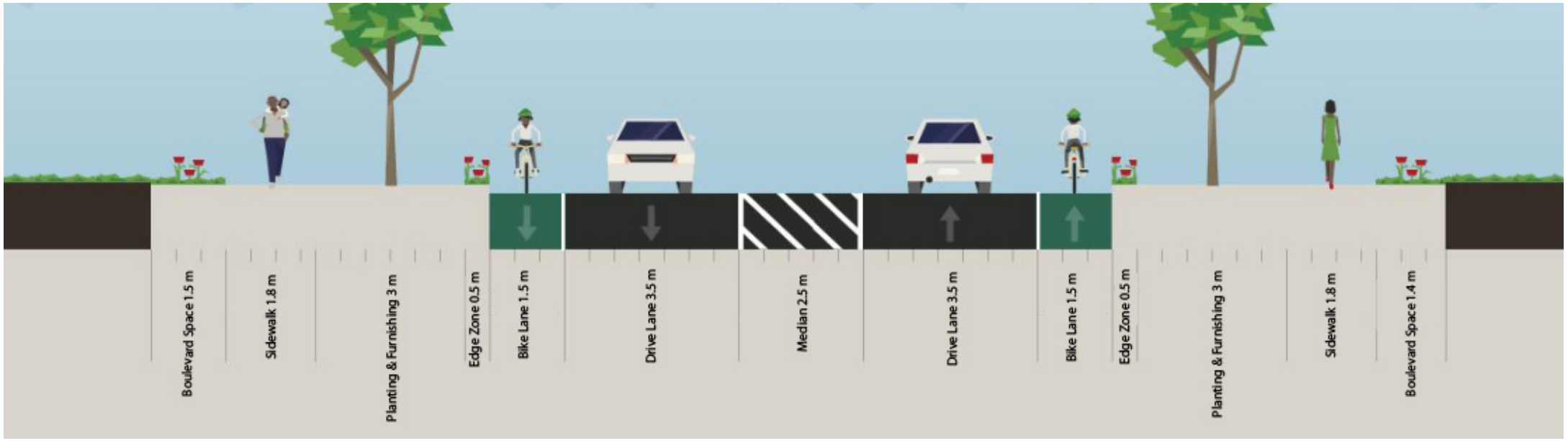
Glendale Ave



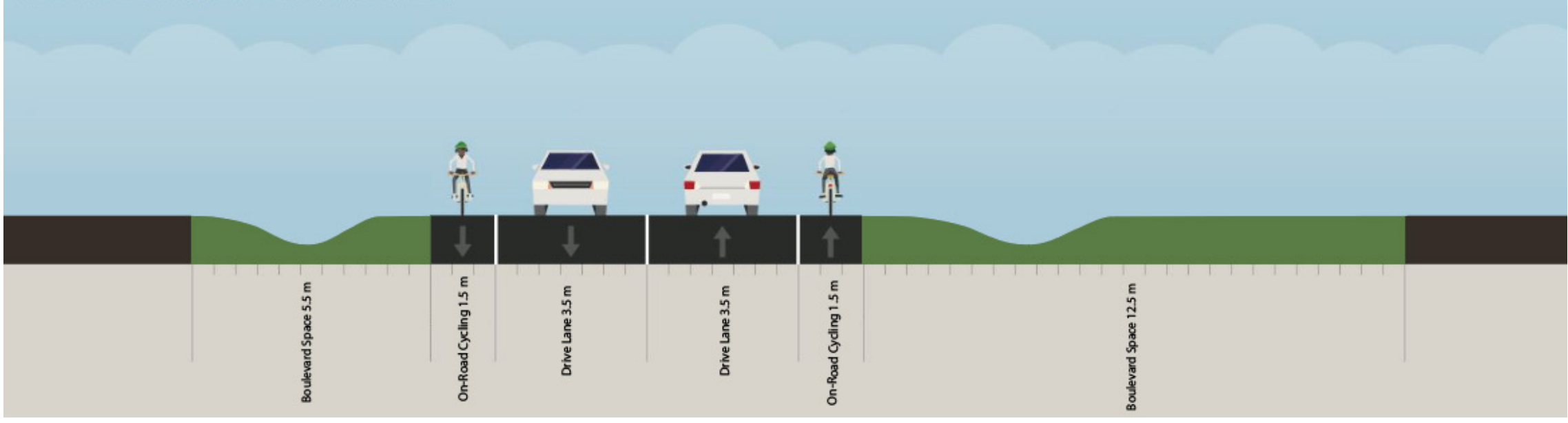
Taylor Rd

Transportation Assessment - Summary & Key Directions

Existing Roadway Cross-Sections



Niagara-on-the-Green Blvd



Queenston Rd

Transportation Assessment - Summary & Key Directions

Existing Roadway Cross-Sections

Roadways with Existing Cycling Facilities

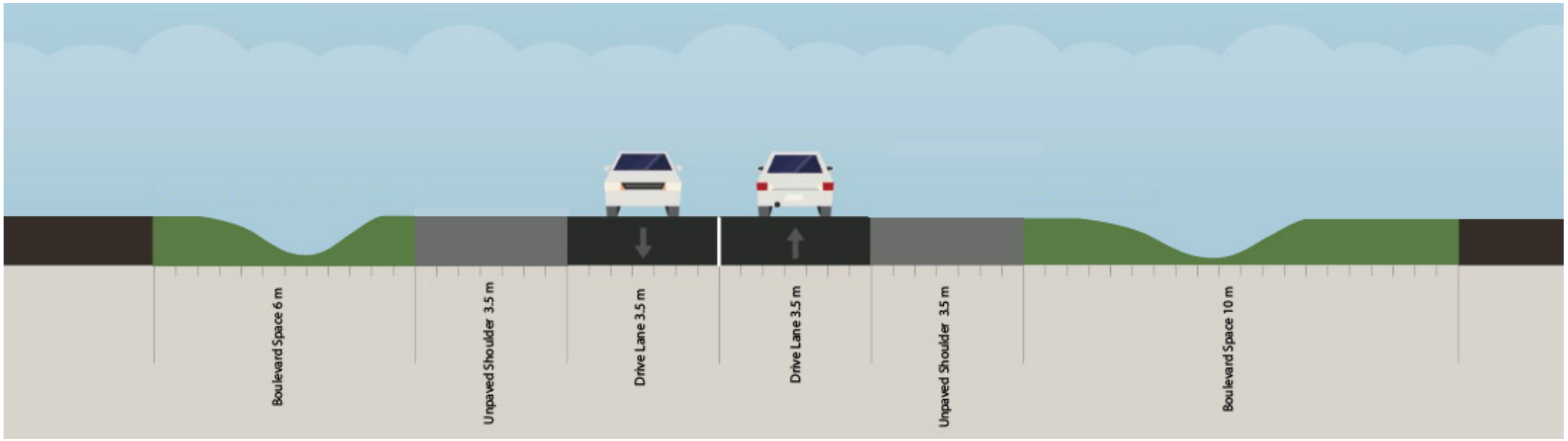
- Includes segments of Glendale Ave, Taylor Rd, Niagara-on-the-Green Blvd, and Queenston Rd
- Sidewalks provided on at least one side of the roadway (exception: Queenston Rd)
- Narrow bike lanes and unprotected cycling facilities, which create undesirable cycling conditions

Opportunities for Improvement

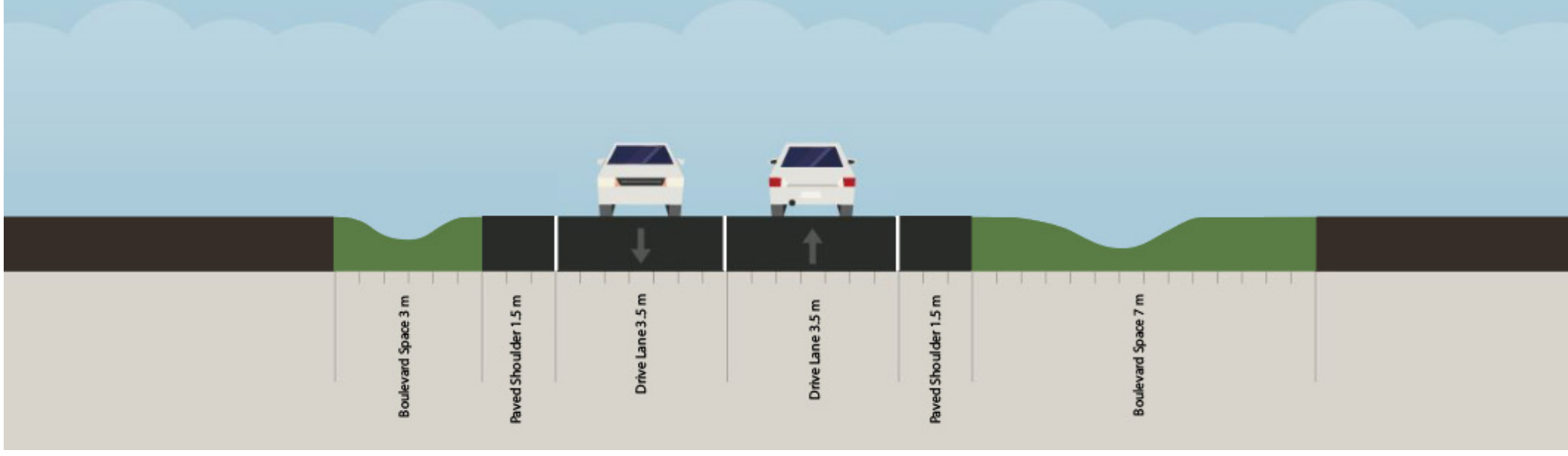
- Provision of buffered or protected cycle tracks and pedestrian-scale street furniture and planting to be considered for future roadway improvements

Transportation Assessment - Summary & Key Directions

Existing Roadway Cross-Sections



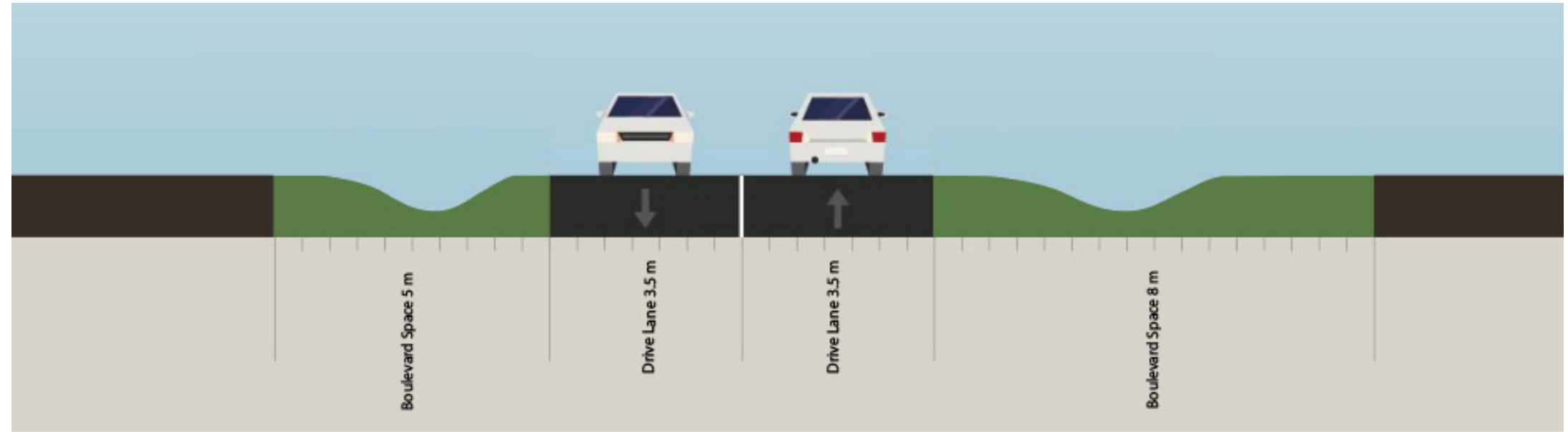
York Rd



Airport Rd

Transportation Assessment - Summary & Key Directions

Existing Roadway Cross-Sections



Townline Rd and Concession 7 Rd

Transportation Assessment - Summary & Key Directions

Existing Roadway Cross-Sections

Roadways Without Pedestrian Facilities

- Includes York Rd, Homer Rd, Airport Rd, Queenston Rd, Townline Rd, and Concession 7 Rd
- Lack of sidewalks and pedestrian space
- Where it exists, narrow, undesignated bike cycling facilities create undesirable conditions

Opportunities for Improvement

- Provision of sidewalks on both sides of the roadway and buffered or protected cycle tracks to be considered for future roadway improvements

Next Steps

Determine the changes in land use and density based on the inputs from the team, discussions with landowners and the public

Develop the road, servicing and natural heritage frameworks

Update urban design guidelines

Continued consultation including:

Presentations to Niagara-on-the-lake Council in late 2022 and mid 2023

Second Public Information Centre in early 2023

Public Open House in the Spring 2023,

Statutory Public Meeting in the Summer 2023

