

# WELCOME

## Public Information Center No. 2

City of North Bay  
Premier Road Sewage Pumping Station,  
Forcemain and Sanitary Sewer

### Municipal Class Environmental Assessment

May 21, 2024





# OBJECTIVES OF THE PREMIER ROAD SEWAGE PUMPING STATION, FORCEMAIN AND SANITARY SEWER MUNICIPAL CLASS EA PUBLIC INFORMATION CENTER No. 2

- To introduce the study to the public and to provide interested and/or potentially affected stakeholders with an opportunity to participate in the planning and decision making process.
- To present and receive input on the following:
  - Existing conditions within the study area;
  - Existing and future considerations;
  - Need and justification for improvements to the Premier Road Sewage Pumping Station and Forcemain (SPS);
  - Alternative solutions being evaluated;
  - Recommended evaluation criteria for the alternative solutions;
  - Recommended preliminary preferred planning alternatives;
  - Update the recommend preliminary preferred options and
  - Next steps in the process.



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# **PROBLEM/OPPORTUNITY STATEMENT**

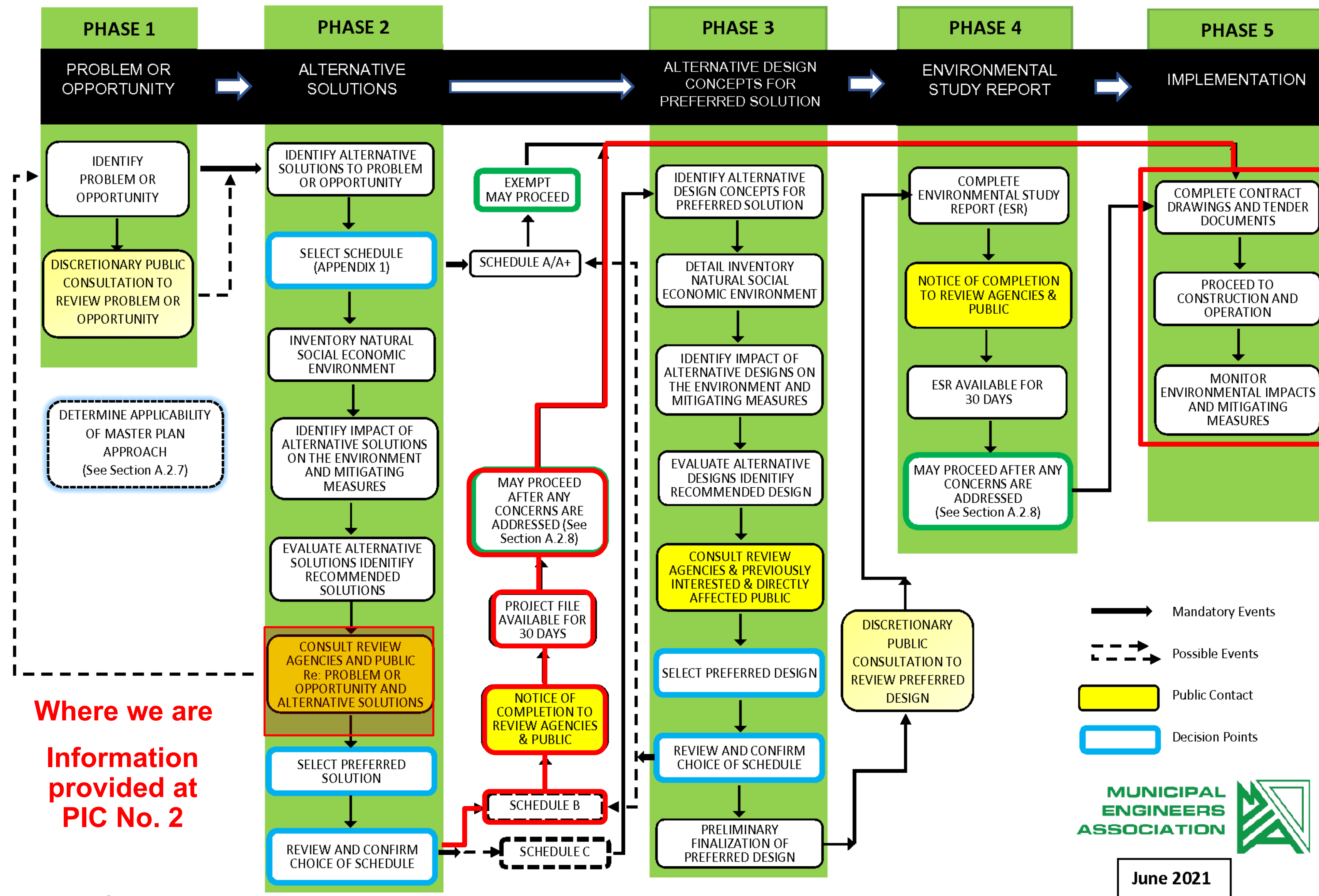
**The Corporation of the City of North Bay has initiated a Municipal Class Environmental Assessment Study to evaluate the Premier Road Sewage Pumping Station and Forcemain (SPS) located on the east side of Premier Road right-of-way, located in front of 904 Premier Road, across from the Hollywood Street intersection.**

**The existing Premier Road SPS has reached the end of its useful life. Due to close proximity to the road, the dry well housing the pumps is in an advanced stage of deterioration. Winter salt has caused significant corrosion to the dry well, generator housing and control panel cabinet. The pumps and wells are inadequately sized causing the pumps to run frequently, which creates maintenance problems for the Operational Department. Also, due to the existing road location, the City has concerns for their personnel's safety and for conflicts with the structure from collisions with passing vehicles.**

# MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

Due to the options being reviewed by this project, it is considered a Schedule B activity as established by the Municipal Class Environmental Assessment.

**MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS** NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA





# EXISTING ENVIRONMENTAL INVENTORY

## Technical Environment

- The Premier Road Sewage Pumping Station and Forcemain (SPS) is located within the municipal right of way east of Premier Road located in front of 904 Premier Road, on the east side of the right-of-way across from the Hollywood Street intersection in the West Ferris Community of the City of North Bay. The location of the Premier Road SPS and drainage area are shown on Figure 1. The SPS services approximately 214 residential properties, one townhouse complex and a seasonal trailer park . The service area is largely on either side of Premier Road and includes development on Hollywood Street. The existing SPS, control cabinet and standby diesel generator are mostly located in the road right of way between the existing property line and the paved road
- The existing pumping station is comprised of a prefabricated dry well ((2.13m dia.) housing a duplex pump system and a separate concrete wet well (1.22m dia.). See slide 10 for a cross section of the existing Premier Road SPS. The estimated average day inflow rate is 2.93 L/s and the firm pumping capacity is 10.61 L/s, which were measured during a draw down test. The forcemain is approximately 40 m long and is a 100 mm diameter cast iron pipe which outlets to a 200 mm diameter sanitary manhole south of Birch Street intersection; after that the effluent flows through a 200 mm gravity sewer on Premier to a 250 mm sanitary sewer on Lakeshore Drive. As it reaches its useful life expectancy, the City's Public Works Department has noted the pumps within the wet well running constantly and more frequently to keep up with the inflow from the upstream drainage area. The road salt has caused corrosion of the above ground metallic structures and the condition of the existing pump control panel is approaching violation of the electrical code. Since there is no overflow pipe provided in the wet well, the extreme high infiltration and inflow from the aging sanitary sewer poses a potential hazard for flooding of the station.
- The electrical controls are located in a weather proof cabinet adjacent to the pumping station and are easily accessible by Public Works personnel. The diesel generator is a 41.25 KVA unit that is automatically started during power outages to provide constant pumping at the station and during monthly engine testing.

# FIGURE 1: PREMIER SPS CATCHMENT AREA



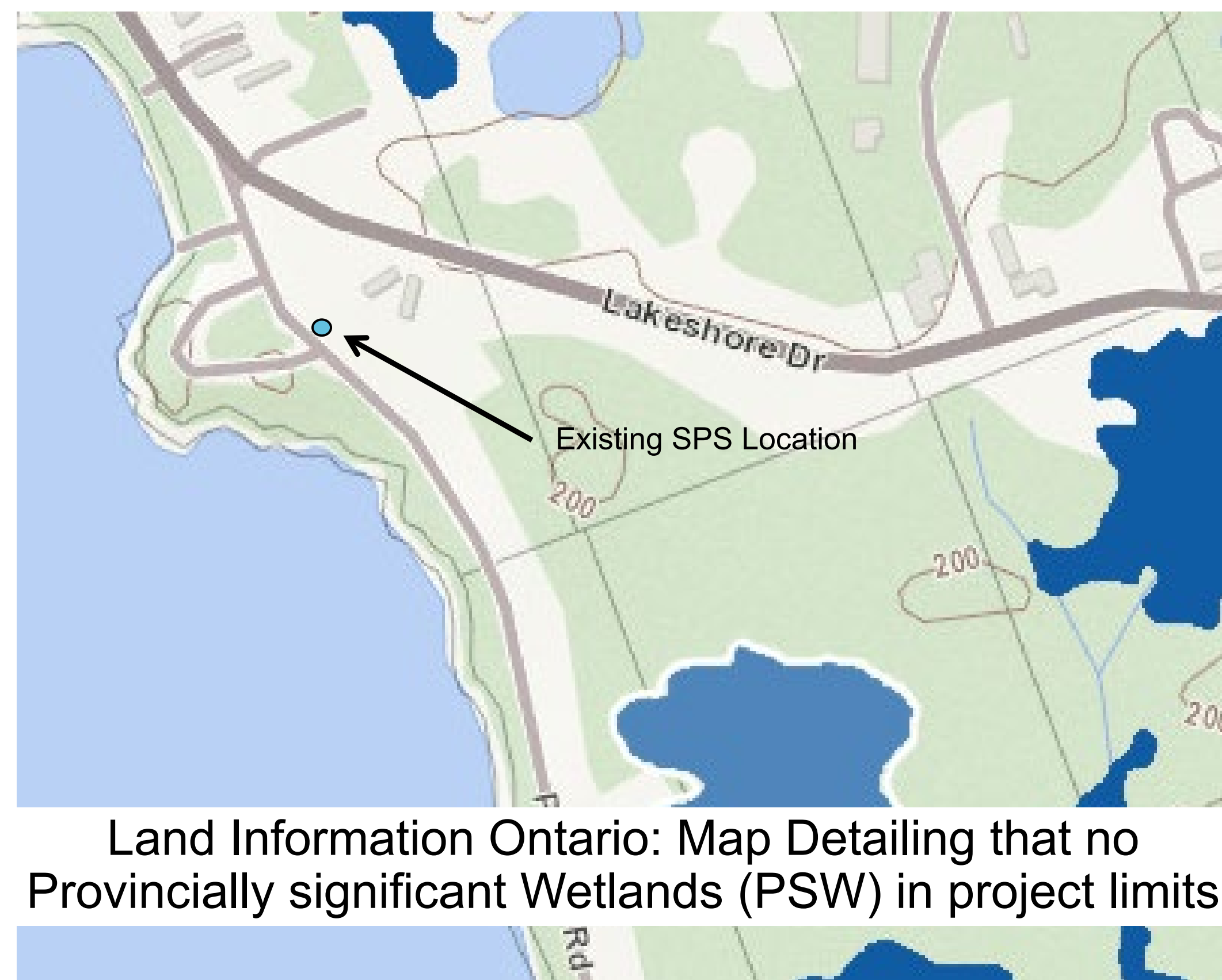
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# EXISTING ENVIRONMENTAL INVENTORY

## Natural Environment

- The Premier Road Sewage Pumping Station and Forcemain (SPS) was constructed in the early 70s and is located in the north end of the residential neighborhood. The area around the SPS has been disturbed over several decades due to the installation of municipal servicing and home construction. The road side drainage ditches along the Premier Road corridor is not habitat for any Species at Risk or warm and cold water fisheries.
- The existing site for the SPS is located adjacent to Premier Road which is one lot length up from and parallel to the shore of Lake Nipissing. The existing SPS site does not have an overflow that would outlet into the lake. The existing site is located above the 100 year flood limit.
- The Study Area along Premier Road is comprised of mostly residential houses including a townhouse complex and a seasonal trailer park and the area does not have any Area of Natural Scientific Interest (ANSI). The nearest Provincially Significant Wetlands, which are considered seasonal swamps are located east, south and north of the proposed SPS and has no link to the station and is outside the station's contributing area.





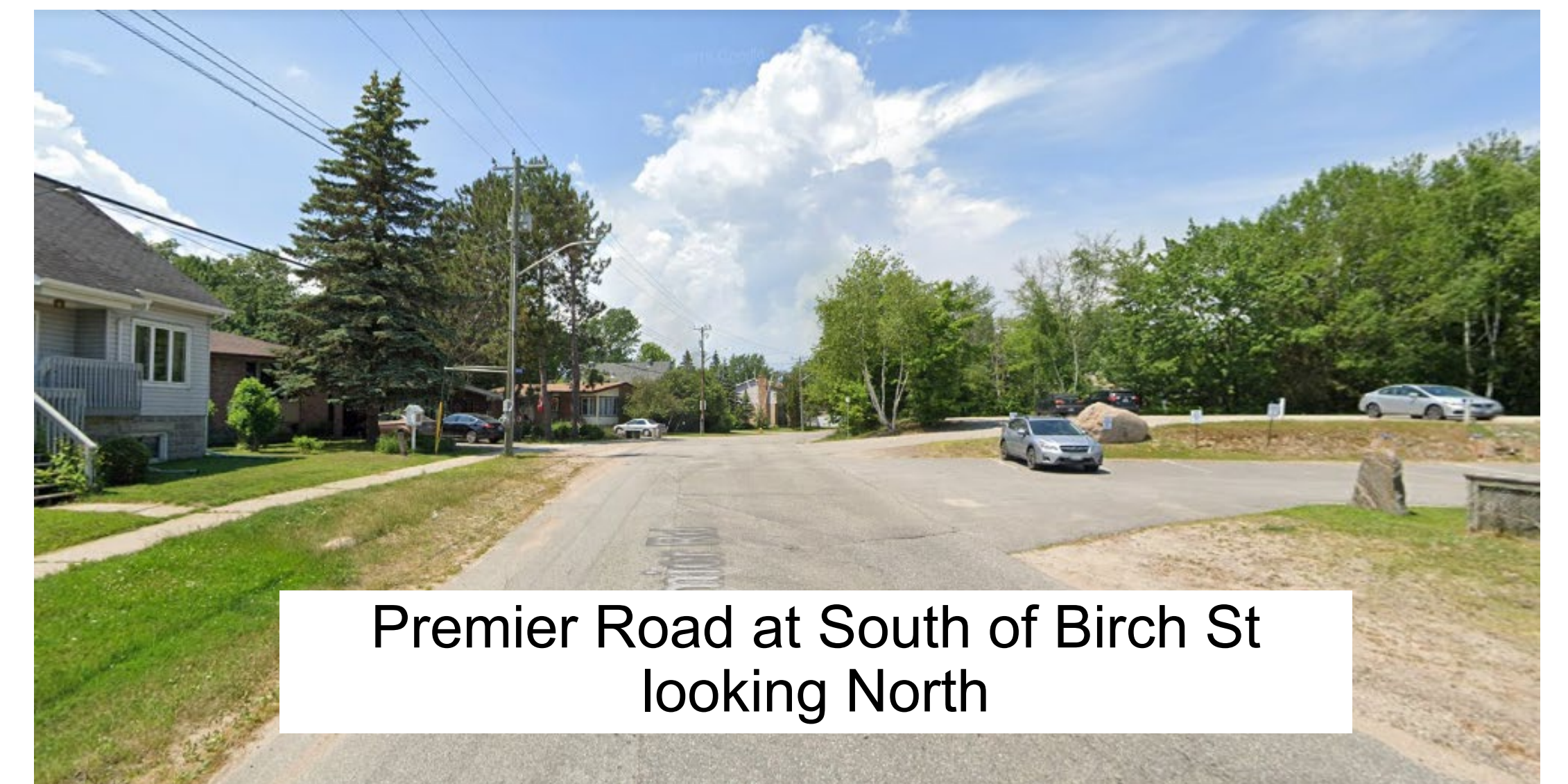
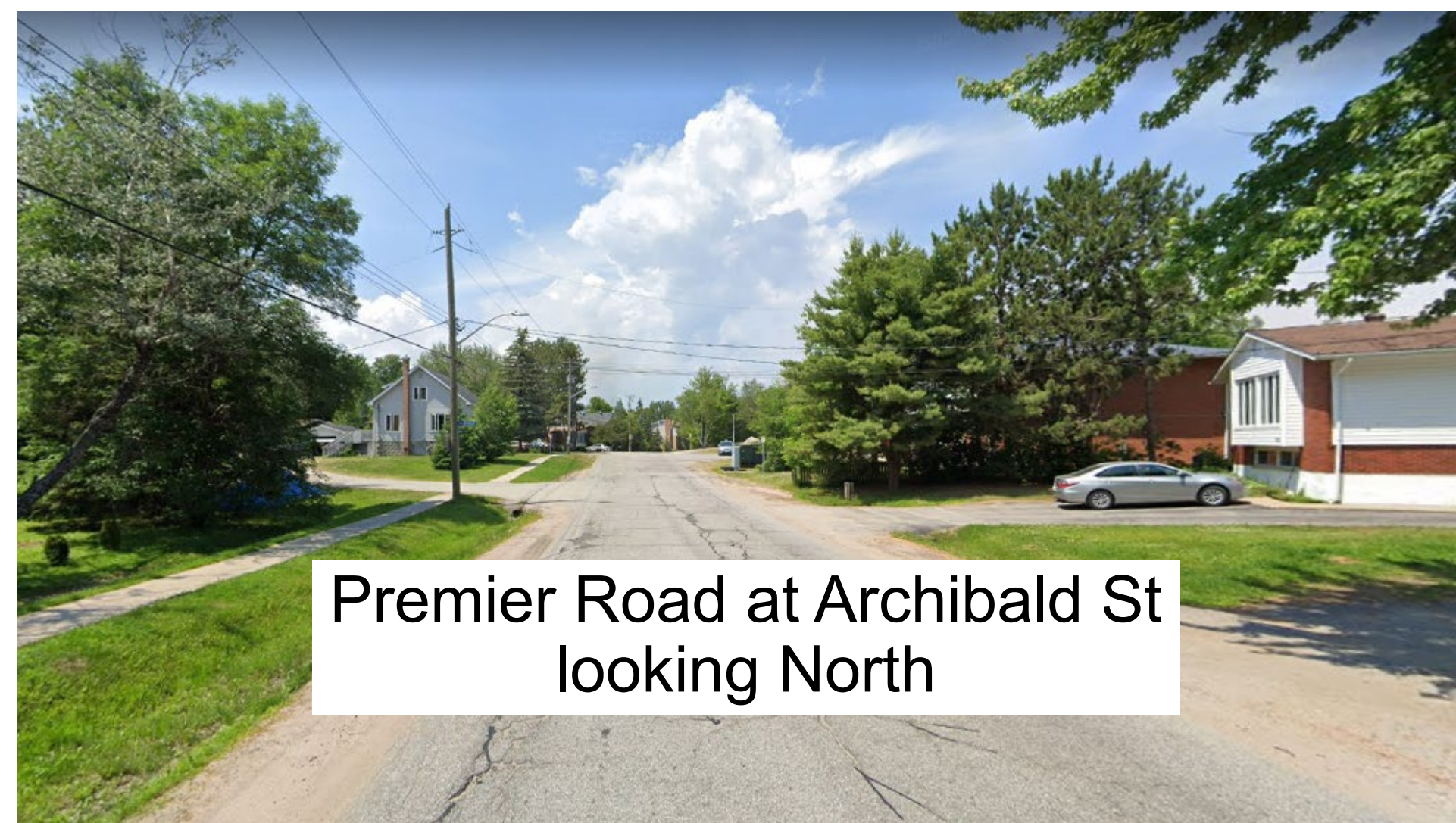
# EXISTING CULTURAL ENVIRONMENT

## BUILT HERITAGE

- The properties adjacent to the Premier Road SPS right of way were estimated to be constructed around 1972. The majority of residential properties within the catchment area appear to have been constructed after 1972 with some new development and upgrades to numerous buildings completed in the last 10 years. A review of existing properties does not indicate that a heritage building is within the study area.

## ARCHAEOLOGY

- At the end of Premier Road is where the La Vase River outlets to Lake Nipissing. The historic La Vase provides portage route for voyageurs travelling from the St. Lawrence to the interior of North America. The 11 km La Vase Portages are a series of three portages comprised of 8km of waterway and 3km of pathway between Trout Lake and Lake Nipissing. The route was used thousands of years ago by First Nations and then by European explorers, becoming a major transportation route.
- The residential developments for this section of Premier Road corridor were estimated to be mostly started after 1972 and the existing right of way was extensively disturbed over this period indicating that uncovering any significant archaeological potential within the corridor indicated is not expected. The area where the SPS is located is outside any known archaeological sites.





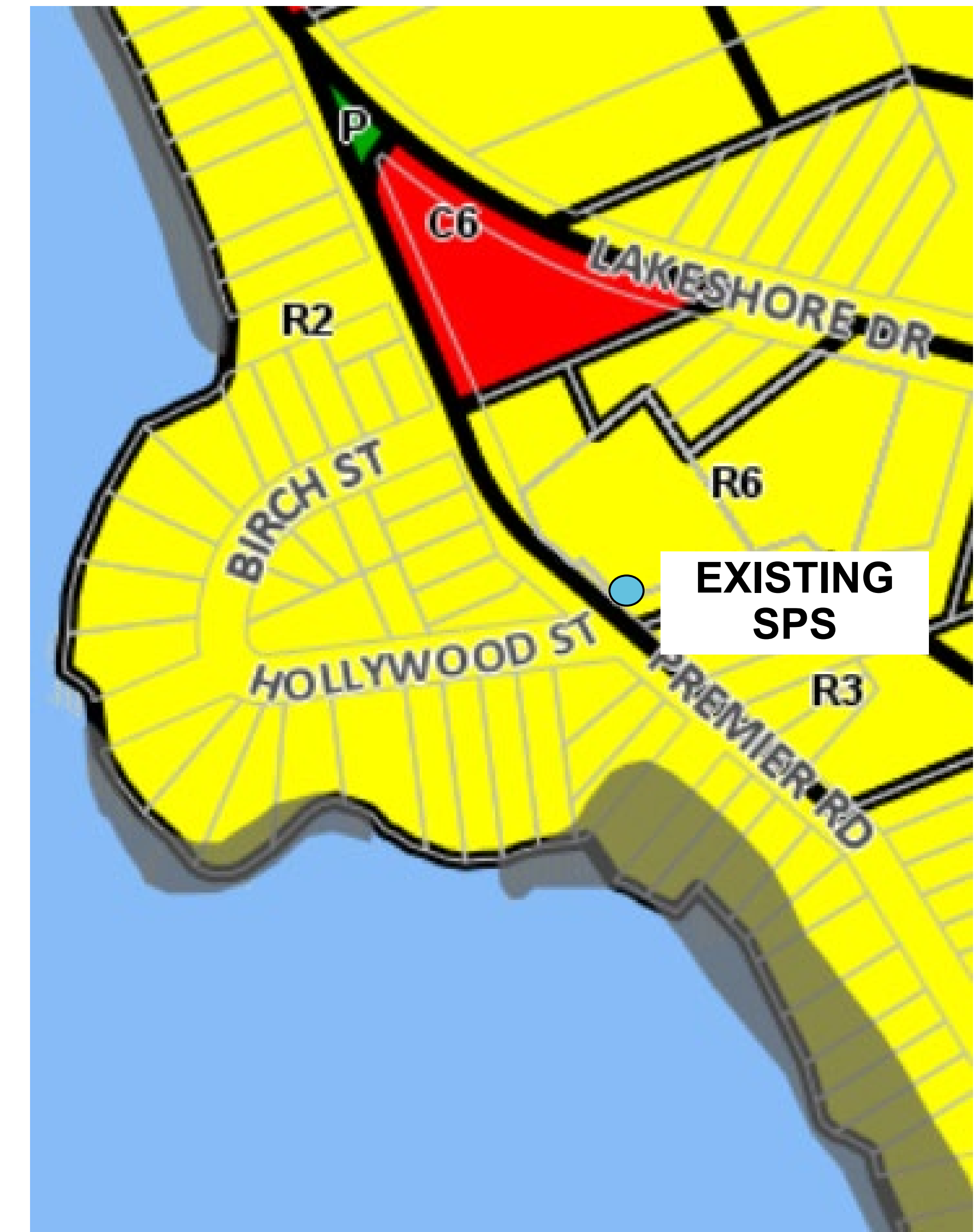
# EXISTING SOCIO-ECONOMIC ENVIRONMENT

## LAND USE

- Premier Road runs approximately north – south from Lakeshore Drive and is a dead end residential corridor, functioning as an important link to residents living within the neighborhood and Champlain Park. The land use within the study area consists of a mixture of residential uses, and a trailer park adjacent to Champlain Park. Property on the west side of Premier Road has access to Lake Nipissing while the east side properties are very deep (~275m).
- Hollywood Street Properties, which are serviced by the Premier Road SPS, are all residentially zoned.
- Birch Street is a residential neighborhood, which forms part of the Crescent with Hollywood Street, and has gravity sewer which flows to Lakeshore Drive without impacting the Premier Road SPS

## NOISE

- Noise from the sewage pumping station is minimal as it is located below the ground. The diesel generator which runs during hydro outages has a sound reducing acoustic enclosure installed around it, and may increase the sound levels to the adjacent receptors but occurs mostly during bad weather and it is not anticipated to be at a level that is above the acceptable criterion set by the Ministry of the Environment, Conservation and Parks.



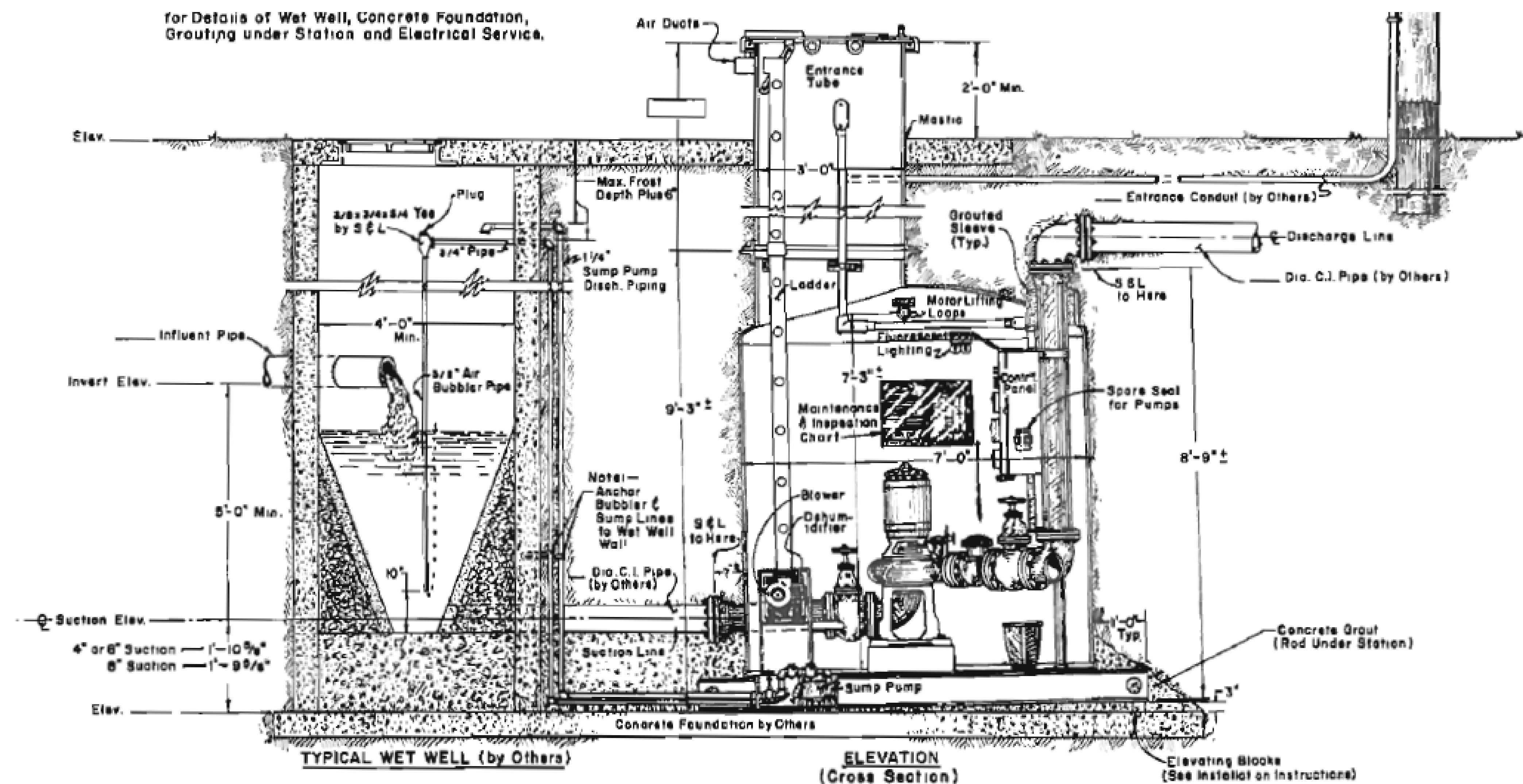
Land Use Map

- |   |                                     |
|---|-------------------------------------|
| ■ Rural Zone                              | ■ Institutional Zone                |
| ■ Commercial Zone                         | ■ Open Space or Park Zone           |
| ■ Industrial Zone                         | ■ Residential Multiple Density Zone |
| ■ Industrial Bus Park / Airport Bus. Park | ■ Residential Zone                  |
| ■ Industrial Holding                      | ■ Unclassified Zone                 |



# ALTERNATIVE SOLUTIONS UNDER CONSIDERATION

- Do Nothing
- Upgrade/Retrofit at the Existing SPS and Forcemain on Premier Road
- New Sewage Pumping Station on a New Site including new forcemain along the existing alignment outletting to sanitary sewer.



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Existing Premier Road SPS



# HOW ARE THE ALTERNATIVE SOLUTIONS EVALUATED?

The assessment criteria will be used to evaluate alternative solutions as follows:

- **Technical Considerations:** implementation; compatibility with existing operations; compatibility with existing utilities and buildings; provide long term solution; construction staging
- **Natural Environment :** Vegetation and Wildlife, Water Resources and Fisheries, Air Quality/Odour
- **Cultural Environment:** archaeological resources, cultural heritage and built heritage
- **Socio-Economic Environment:** visual aesthetics, Noise impacts, construction cost, operations & maintenance cost



# EVALUATION SUMMARY

Evaluation Criteria and Sub-Factors	EVALUATION OF ALTERNATIVE SOLUTIONS		
	Do Nothing	Upgrade/Retrofit the Existing Premier Street SPS	New Sewage Pumping Station on a New Site and outlet the Forcemain to an existing structure
<p>Least Preferred</p> <p>Less Preferred</p> <p>Most Preferred</p>			
<b>TECHNICAL CONSIDERATIONS</b>			
<b>Implementation: Constructability and disruption to station operation</b>	No opportunity to address existing SPS deficiencies	Difficult to construct. Construction of upgraded SPS would be difficult to by-pass wet well during construction. Existing sewer would need to be upsized to Lakeshore Drive	Difficult to Construct due to high ground water near the lake and rock in the higher part of Premier. Will require land at the Premier/Lakeshore intersection. Existing SPS would remain in service until new SPS constructed
<b>Compatibility with Existing Operations: Similar to other facilities in the City of North Bay</b>	Equipment is old and requires replacement. Any replaced equipment will be compatible with existing SPS within the City.	Upgraded/Retrofit SPS would be compatible with other existing SPS within the City	New SPS and forcemain would be compatible with all other facilities to ensure equipment is re-usable across all City facilities.
<b>Compatibility with existing Utilities and Buildings: Relocation of other utilities and proximity to adjacent buildings</b>	No opportunity to adjust existing SPS to be compatible with existing utilities or adjacent buildings	Upgrade/Retrofit to existing SPS would be difficult due to overhead power lines and minimal space within the existing boulevard.	New SPS and forcemain will require new sewer to connect to existing system and hydro service. Landscaping will be provided to help blend to existing adjacent buildings
<b>Provide Long Term Solution: Address issues related to equipment and infrastructure deficiencies, end of life cycle</b>	Replace / upgrade equipment and infrastructure as needed	Upgraded/Retrofit SPS may not have the correct wet well size causing operation problems. Repair of existing wet and dry well will provide a limited life cycle requiring additional resources at a later date	SPS and forcemain will be constructed with new and updated equipment and technology and should last beyond 75 years
<b>Construction Staging: maintain service to residents during reconstruction /rehabilitation</b>	No opportunity to address existing SPS deficiencies	Difficult to provide temporary pumping station and service to residents during construction. Will require a temporary by-pass pumping system while upgrading/retrofitting	Existing SPS will be used while the new SPS and forcemain are constructed minimizing the effects to residents services. Sewer installation within the right-of-way will temporarily affect all property owners on Premier Road
<b>NATURAL ENVIRONMENT</b>			
<b>Vegetation and Wildlife: removal of vegetation and disruption to wildlife</b>	No impact on existing vegetation or wildlife	Boulevard vegetation would be disturbed, no wildlife impact	Existing vegetation along Premier may be disrupted installing sewers and/or forcemain. no impact to wildlife
<b>Water Resources and Fish: impact to streams or lakes and associated fish</b>	By-pass pumping to ditches during high flow periods may disrupt Lake Nipissing	by-passing would be minimized, sewer back-ups may still occur disrupting Lake Nipissing	no impact to Water resources or fish
<b>Air Quality/Odour: impact to residence from odours originating from the wet well</b>	No opportunity to address Air Quality/Odour that may exist	minimal air quality/odour as a result of a upgraded/retrofit SPS and new sanitary sewer	minimal air quality/odour as a result of a new SPS and forcemain
<b>CULTURAL ENVIRONMENT</b>			
<b>Archaeological Resources: impact to Indigenous sites</b>	All infrastructure upgrades are within existing municipal right of way which has been disturbed previously. No anticipated impact to undisturbed land	All infrastructure upgrades are within existing municipal right of way which has been disturbed previously. No anticipated impact to undisturbed land	All infrastructure upgrades are within existing municipal right of way which has been disturbed previously. No anticipated impact to undisturbed land
<b>Cultural Heritage: impact to people living in the community</b>	No impact to cultural heritage features	No impact to cultural heritage features	No impact to cultural heritage features
<b>Built Heritage: impact to the buildings existing within the project area</b>	No impact to known built heritage resources	No impact to known built heritage resources	No impact to known built heritage resources
<b>SOCIO-ECONOMIC ENVIRONMENT</b>			
<b>Planning Polices: compliance with land use</b>	SPS built within ROW does not comply with planning policies	Complies with land use policy	Depending on location chosen, land use would need to be adjusted once parcel of land purchased for SPS completed
<b>Noise Impacts: noise created by the existing or proposed system</b>	Nosie impact is not expected to increase from existing SPS but will continue to be an annoyance to local receptors	Nosie impact is not expected to increase from existing SPS but will continue to be an annoyance to local receptors	Nosie impact is not expected to increase due to new SPS and forcemain.
<b>Property Impacts: residential values associated with the location of the SPS</b>	Local residents would still have a SPS and associated equipment located within the boulevard adjacent to their property	Local residents would still have a SPS and associated equipment located within the boulevard adjacent to their property	Location of SPS would be off the right of way and located away from residents. Landscaping would be used to block out the SPS and equipment
<b>Financial Consideration: Cost of construction; operating and maintenance</b>	no construction cost but a high yearly O & M cost. Potential for emergency repairs to equipment as SPS gets older	Cost of Upgraded/Retrofit SPS, forcemain and sanitary sewer estimated at \$3.5 million. Would require devoping a temporary SPS while the existing SPS was upgraded. O & M would reduce due to modern equipment except for wet and dry wells which may need upgrade earlier in the SPS life cycle	Construction cost of the new SPS and forcemain is estimated at \$3.5 million and would be completed on a new site. O & M would reduce due to modern equipment and elimination of sewage back-ups
<b>OVERALL SUMMARY AND CONCLUSIONS</b>	<b>NOT PREFERRED DOES NOT ADDRESS NEEDS AND OPPORTUNITIES</b>	<b>NOT PREFERRED DOES NOT ADDRESS NEEDS AND OPPORTUNITIES</b>	<b>ADDRESSES MOST OF THE NEEDS AND OPPURTUNITIES - CARRIED FORWARD</b>

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# UPDATED PRELIMINARY PREFERRED ALTERNATIVES: SEWAGE PUMPING STATION LOCATION OPTIONS



**OPTION A  
CORNER OF  
ARCHIBALD STREET and PREMIER ROAD**



**OPTION B  
CORNER OF  
RHEAUME STREET and PREMIER ROAD**





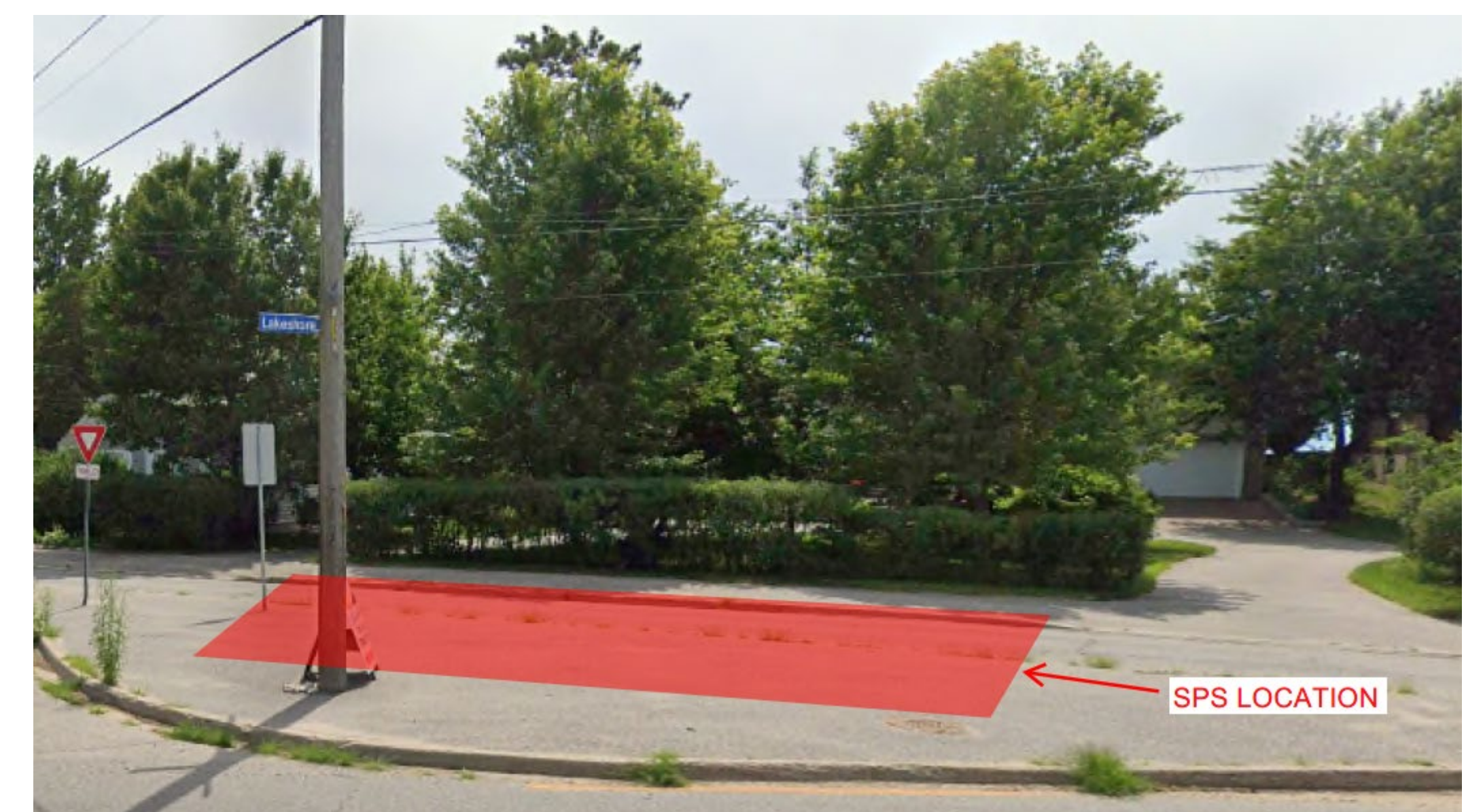
# UPDATED PRELIMINARY PREFERRED ALTERNATIVES: SEWAGE PUMPING STATION LOCATION OPTIONS



**OPTION C  
CORNER OF  
LAKESHORE ROAD and PREMIER ROAD**



**OPTION D  
ISLAND AT THE CORNER OF  
LAKESHORE DRIVE and PREMIER ROAD**





# PRELIMINARY PREFERRED ALTERNATIVE: TYPICAL SEWAGE PUMPING STATION LAYOUT



EMERGENCY POWER  
SOUND ATTENUATED  
DIESEL GENERATOR SET

ELECTRICAL POWER AND  
SCADA CONTROL PANELS  
INCLUDING PUMP DISCONNECT

WET WELL STRUCTURE  
INCLUDING SUBMERSIBLE PUMPS



# PRELIMINARY PERFERRED ALTERNATIVES: SEWAGE PUMPING STATION, FORCEMAIN & SANITARY SEWER OPTION A



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# PRELIMINARY PERFERRED ALTERNATIVES: SEWAGE PUMPING STATION, FORCEMAIN & SANITARY SEWER OPTION B



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# PRELIMINARY PERFERRED ALTERNATIVES: SEWAGE PUMPING STATION, FORCEMAIN & SANITARY SEWER OPTION C



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# PRELIMINARY PERFERRED ALTERNATIVES: SEWAGE PUMPING STATION, FORCEMAIN & SANITARY SEWER OPTION D



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# OPTIONS EVALUATION SUMMARY

OPTION LOCATIONS	PROS	CONS	EVALUATION
<b>OPTION A</b> <b>Archibald Street Right of Way - Public Access to Lake Nipissing</b>	Deep installation of sanitary sewer is minimal Location is closest to the existing SPS decreasing the amount of sanitary sewer to be installed to reroute sewage flows Public access to Lake Nipissing is maintained and Public Works will have continued access to the underground sewer system Proposed infrastructure is located on municipal right of ways and will not require land purchase	Forcemain is lengthy, increasing the Total Dynamic Head (TDH) on the system Additional traffic control will be required to be in place from Hollywood to Archibald due to the longer limit of construction SPS site is located on a right of way between two existing homes requiring aesthetical improvements and landscaping. Additional road reconstruction is required due to longer limit of construction Existing sanitary sewer on Archibald will require relocation to provide space for wet well installation. Temporary sewer or pumping system will need to be installed during construction until SPS commissioned. Special dewatering construction due to location of adjacent Lake Nipissing Extended dewatering of wet well and sanitary sewer will be required due to adjacent location of Lake Nipissing. Outlet would be pumped to Lake Nipissing and would require additional permits Maneuverability of construction equipment, storage of onsite construction materials & equipment will create concerns during infrastructure installation. Electrical Pad and top of wet well must be constructed above the 100 year flood level of Lake Nipissing	<b>NOT PREFERRED</b>
<b>OPTION B</b> <b>Rheume Street Right of Way - Access to Lake Nipissing</b>	Limit of construction is from hollywood to Lakeshore (shorter than Option A) Public access to Lake Nipissing is maintained and Public Works will have continued access to the underground sewer system Forcemain is shorter reducing the Total Dynamic Head on the system	SPS site is located on a right of way between two existing homes requiring aesthetical improvements and landscaping. Sanitary sewer is deep from the existing SPS to the new wet well location requiring a deeper wet well Existing large diameter storm sewer on Rheume would need to be relocated to avoid SPS wet well and sanitary sewer Requires adjusting the alignment of the existing shallow sanitary sewer (220m) closer to the watermain alignment to permit installation of the deep sanitary sewer Remove large branches from adjacent tree located in neighbouring property and may require a working easement from the adjacent property owner Two property owners will have access to their properties disrupted for an extended period during construction Traffic control will require temporary traffic signals and one way traffic to prevent access to Birch and Hollywood. Maneuverability of construction equipment, storage of onsite construction materials & equipment will create concerns during infrastructure installation. Existing extensive underground and above ground utilities would create extra caution for installing dewatering and shoring for wet well structure	<b>NOT PREFERRED</b>
<b>OPTION C</b> <b>Corner of Lakeshore Drive and Premier Road - Vacant Land</b>	Limit of construction is from Hollywood to Lakeshore (shorter than Option A) Less impact to existing property owners than Option A or B Forcemain is shorter reducing the Total Dynamic Head on the system Maneuverability of construction equipment, storage of onsite construction materials & equipment is available during infrastructure installation.	SPS site is located on private property and will require purchasing land (need agreement with land owner) Sanitary sewer is deep from the existing SPS to the new wet well location requiring a deeper wet well Deep Sanitary sewer will require deep services Above ground Bell crosses property and may result in some construction problems (installing shoring, wet well, etc.) Traffic control will require temporary traffic signals and one way traffic to prevent access to Birch and Hollywood.	<b>PREFERRED No. 1</b> Alternative dropped after not being able to negotiate land purchase
<b>OPTION D</b> <b>Corner of Lakeshore Drive and Premier Road - Intersection Island</b>	Limit of construction is from Hollywood to Lakeshore (shorter than Option A) Less impact to existing property owners than Option A or B Forcemain is shorter reducing the Total Dynamic Head on the system Maneuverability of construction equipment, storage of onsite construction materials & equipment is available during infrastructure installation. Removal of ramp will slow traffic entering premier (traffic calming)	Traffic control will require temporary traffic signals and one way traffic to prevent access to Birch and Hollywood. Sanitary sewer is deep from the existing SPS to the new wet well location requiring a deeper wet well Deep sanitary sewer will require deep services Above ground Bell crosses island may require replacement depending on final location of wet well structure Driveways to adjacent properties will be extended to access Lakeshore Drive	<b>PREFERRED No. 2</b> New alternative developed with construction on City right-of-way



# WHATS NEXT?

- Review all comments received from the public, stakeholders and agencies, before, during and following this PIC;
- Document Study in Project File;
- 30-Day Public Review Period. Consider and Address Comments Received;
- 30-Day review by the Ministry of the Environment, Conservation & Parks; and
- Complete Detailed Design, Tender and Award Construction Contract



# QUESTIONS?

- The Corporation of the City of North Bay

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