

WELCOME

New Innisfil Heights Sewage Pumping Station 2



Schedule B Class Environmental Assessment



Purpose of Today's Public Information Centre

- To provide residents, rightsholders and other agency stakeholders with information related to proposed locations and design aspects of a proposed new sewage pumping station that will be located on 5th Sideroad between Innisfil Beach Road and 7th Line, servicing the Innisfil Heights economic district.
- To outline the Municipal Class Environmental Assessment (Class EA) Process
- To present the study area, purpose and objectives of the Class EA
- To present the problem/opportunity statement for the project along with the alternative solutions
- To receive feedback on the evaluation of alternatives and recommended preliminary preferred solution
- To outline the project's next steps and proposed schedule

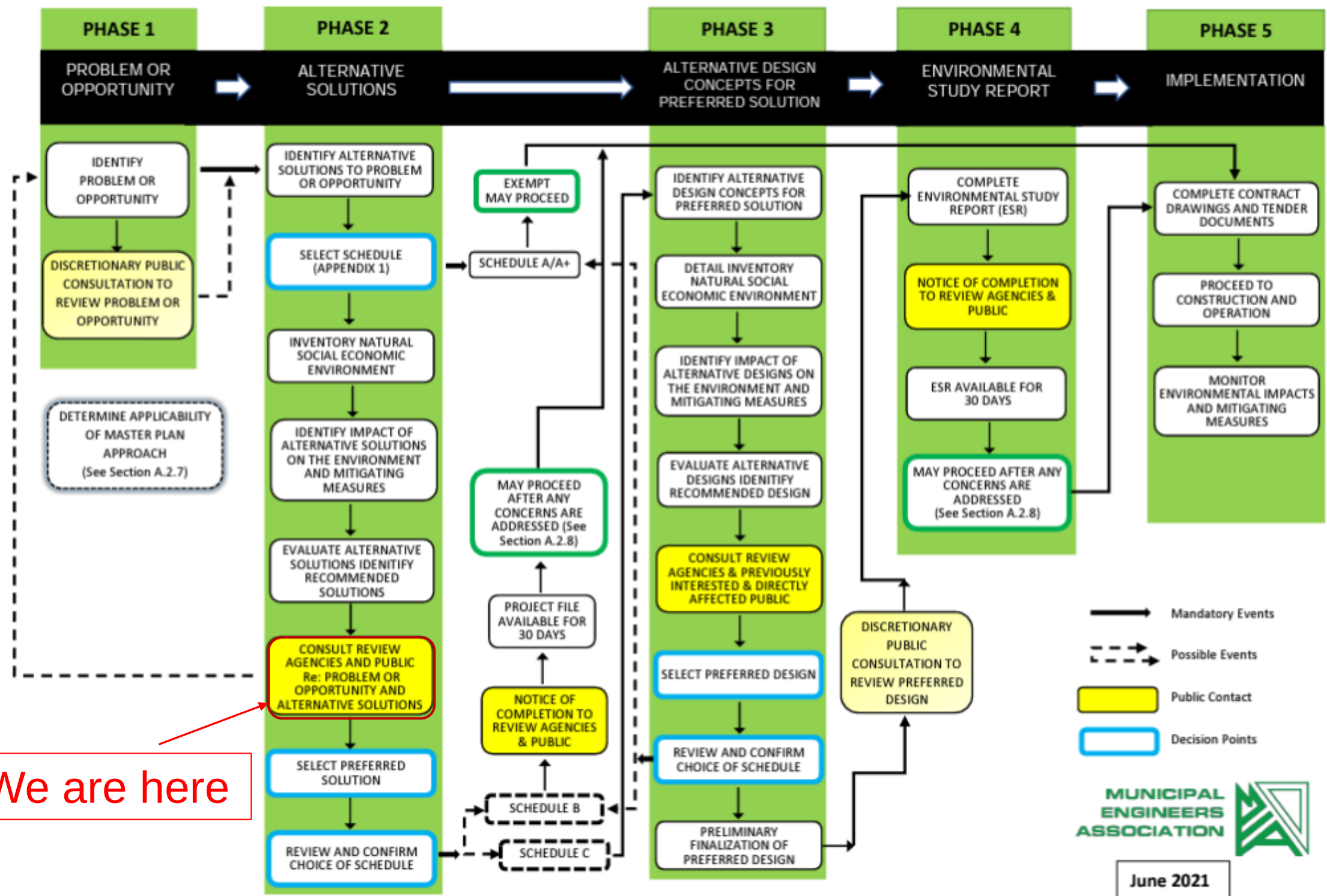


Background of the Class EA Process

- A municipality is required to conduct a Municipal Class EA before this type of infrastructure improvement project can proceed to construction. A Municipal Class EA follows an approved planning process designed to protect the environment and to ensure compliance with the Environmental Assessment Act.
- The purpose of the Environmental Assessment Act (EA Act) is to provide for “...the betterment of the people of the whole or any part of Ontario by providing for the protection, conservation and wise management in Ontario of the environment.” The term “environment” is broadly defined and includes the built, natural, socio-economic and cultural environments.
- The process requires the evaluation of potential solutions and design concepts so as to select a suitable approach that will address the problem/opportunity, but also keep impacts to a minimum.
- Based on the scope of this project, the new Innisfil Heights Sewage Pumping Station 2 (IH SPS 2) is being planned as a Schedule ‘B’ Municipal Class EA Project, which will complete Phases 1 to 2 of the Class EA process.



Municipal Class Environmental Assessment Process



Study Purpose & Objectives

Purpose

InnServices Utilities Inc. completed a Master Servicing Plan (MSP) update in 2018 which identified wastewater servicing strategies to accommodate the population and employment growth outlined in the Innisfil Official Plan (2018).

The purpose of this Class EA is to identify a suitable location for the proposed new Innisfil Heights Sewage Pumping Station 2 (IH SPS 2) to be located on 5th Sideroad between Innisfil Beach Road and 7th Line in the Town of Innisfil. The sewage pumping station will receive flows from the Innisfil Heights economic area and direct it to the Lakeshore Wastewater Treatment Plant.

Objectives

- 1. Satisfy the Schedule B Municipal Class Environmental Assessment Process.**
- 2. Provide infrastructure capacity and flexibility to meet future capacity demands identified in InnServices Master Servicing Plan Update (MSP), 2018.**
- 3. Minimize environmental impacts, and other impacts including natural and socio-economic.**

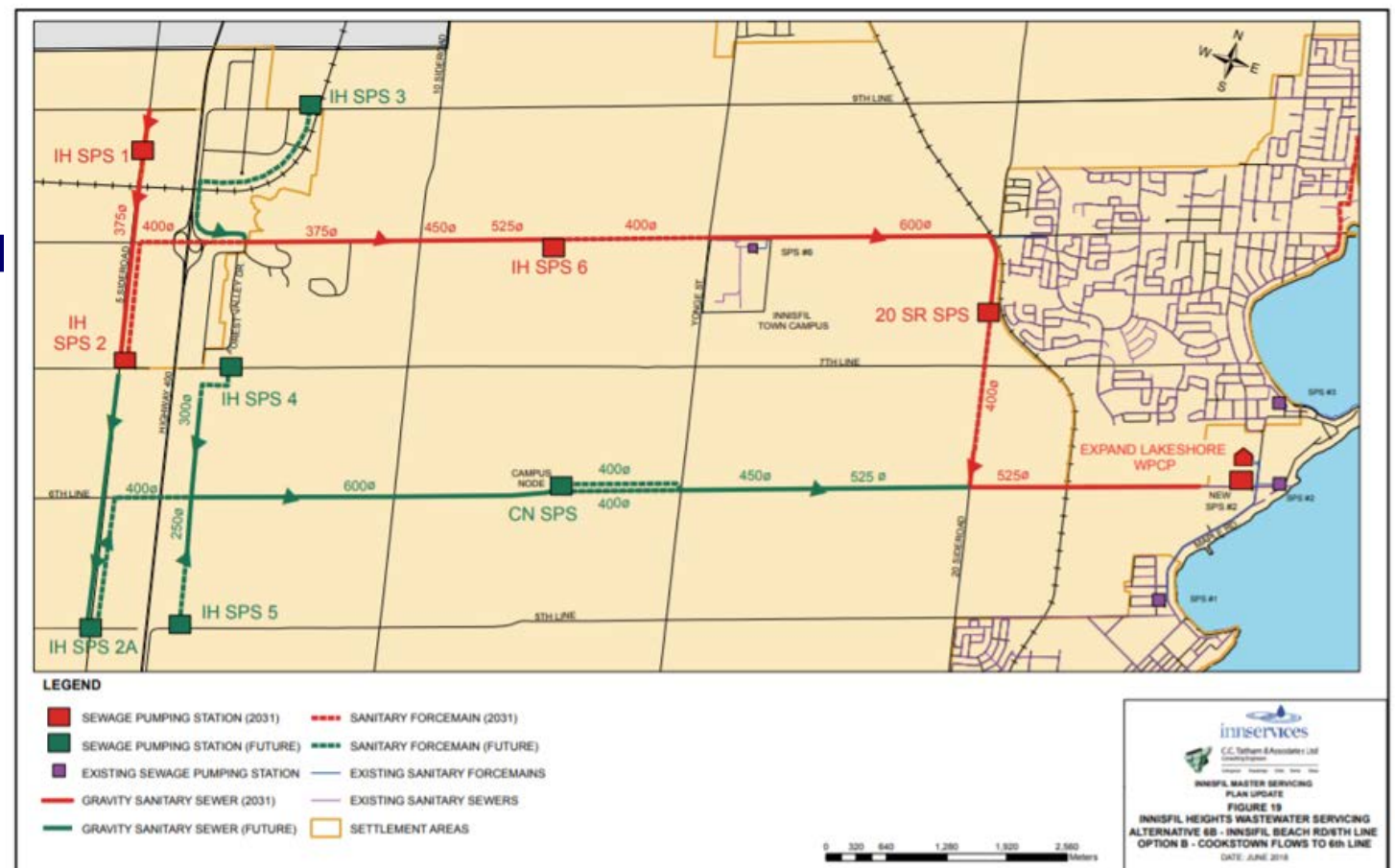


Study Background

As part of the MSP various alternatives were examined in order to provide servicing for the the first phase of the Innisfil Heights economic district expansion, an area designated as a Strategic Settlement Employment Area. In order to promote, facilitate and maximize the planned expansion of this area, the MSP identified that a municipal sanitary sewage collection system is required. The MSP identified “Alternative 6, Option B’ as the preferred option.

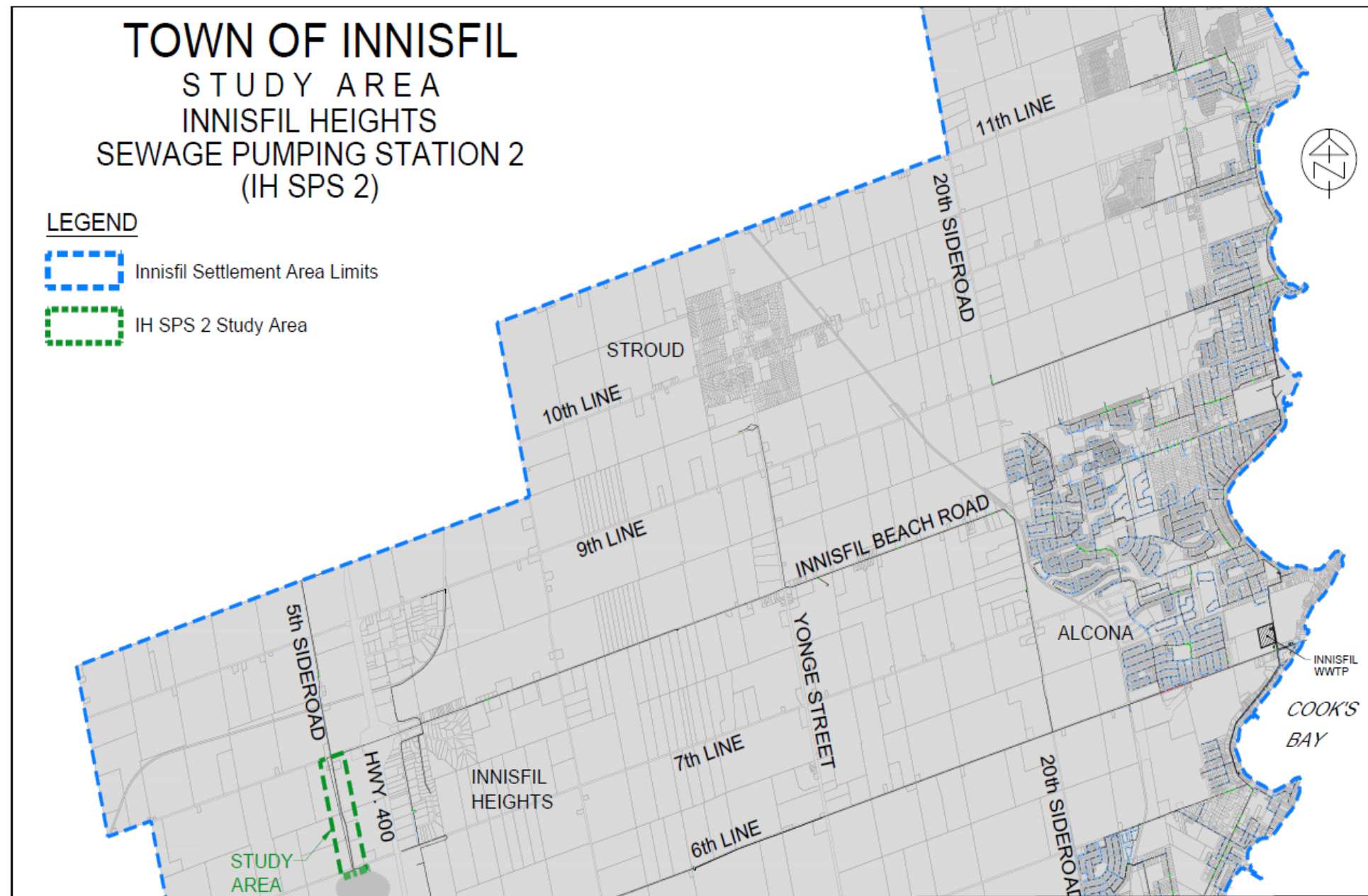
Alternative 6 establishes a sanitary collection system connected to the Lakeshore wastewater system via Innisfil Beach Road and 20th Sideroad for the first phase of development up to year 2031.

As part of this alternative several sewage pumping stations were identified along the sewer route including the new IH SPS 2.



Study Area

The Study Area is defined as the overall area bounded by the east and west side of 5th Sideroad between Innisfil Beach Road and 7th Line on which a new sewage pumping station can be located to best service the Strategic Settlement Employment Area.



Problem / Opportunity Statement

“Identify and develop a preferred solution (location) for the new Innisfil Heights Sewage Pumping Station 2 on 5th Sideroad to meet the future capacity requirements of the Strategic Settlement Employment Area.



Existing Environmental Conditions

Various studies have been completed to determine existing environmental conditions as well as to identify any potential impacts the alternative solutions pose to the environment within the Study Area.

Natural Environment

- The study area includes several natural heritage components including woodlands, wetlands and watercourses that are intermixed with agricultural, rural residential and commercial lands. Excluding the agricultural and/or maintained lands, a total of six vegetation communities were identified. The right of way (ROW) is typically composed of open 'field' habitat composed of opportunistic herbaceous/grass species. Riparian vegetation typically exists in proximity to two mapped watercourses within the study area. The study area includes the Lawson Drain (in the Nottawasaga Valley Conservation Authority watershed) and Tributary of Lover's Creek (in the Lake Simcoe Region Conservation Authority watershed), both of which are considered drainage features with potential fish habitat functions.

Cultural Environment

- A Stage 1 Archaeological Assessment determined that there is one previously registered archaeological site located within one kilometer of the Study Area, but not within 50 metres. Parts of the Study Area exhibit archaeological potential and will require Stage 2 assessment.
- Cultural Heritage Report background research revealed that there are four potential cultural heritage landscapes (CHL's) within the study area. No additional potential heritage features were identified during the fieldwork.

Social Environment

- Land Use within the study area is designated as agricultural and employment area under the Town of Innisfil Official Plan. The Zoning bylaw refers to the employment area as Industrial Business Complex.



Alternative Solutions



The Master Servicing Plan identified that a municipal sewage collection system is required and therefore a 'Do Nothing' Alternative is not considered.

Three properties have been considered in the review of site alternatives with a total of six (6) alternative locations being considered for the SPS location. Only properties currently zoned as 'Industrial Business Park' and considered to be a part of the Innisfil Heights Strategic Settlement Employment Area were considered as a site alternative. The site alternatives consider an area larger than the actual footprint of the future SPS site. This allows consideration to determine the best location for the footprint based on preliminary design aspects including soil, property owner considerations and the specific elevation of the site footprint.

- Alternative 1 – 3575 Innisfil Beach Road, Innisfil
- Alternative 2A – 7131 5th Sideroad, Innisfil
- Alternative 2B – 7131 5th Sideroad, Innisfil
- Alternative 2C – 7131 5th Sideroad, Innisfil
- Alternative 2D – 7131 5th Sideroad, Innisfil
- Alternative 3 – 3560 7th Line, Innisfil



Alternative 1

Site Characteristics and Potential Constraints

3575 Innisfil Beach Road, Innisfil



Site Alternative Limit

Alternative 1 is located between 5th Sideroad, Innisfil Beach Road and Highway 400. The elevation of the site ranges from 305 meters above sea level (m.a.s.l.) on the north side to 302 m.a.s.l. on the south west side. The site review looked at the frontage of the property along 5th Sideroad.

The location of this site is situated on relatively high ground compared to the lowest point within the proposed catchment area. Capital cost for construction at this location will be higher than alternatives, as this site will require the deepest wetwell and deep sewers. Among the alternatives, this location is most proximate to the proposed discharge location.

The site is currently used for agricultural purposes and is zoned as Industrial Business Park. The property is within the Nottawasaga Valley Conservation Authority (NVCA) watershed where the Lawson drain traverses the property.

The soil type is classified as 'Sandy Silt to Silty Sand Glacial Till' and 'Glaciolacustrine Deposits of Cohesionless Sands'. Both soil types are competent for the support of structures and construction, however, higher groundwater flow rates are expected for excavations made into the cohesionless sands requiring a more robust dewatering system. This site is within an area classified as a 'Highly Vulnerable Aquifer'.

The site has been previously assessed for archaeological potential. A cultural heritage landscape of a farmstead property was identified adjacent to the site at 7267 5th Sideroad.



Alternative 2A

7131 5th Sideroad, Innisfil



Site Characteristics and Potential Constraints

Alternative 2A is located on the north west frontage of agricultural property slated for future development located between 5th Sideroad, 7th Line and Highway 400. The site is zoned as Industrial Business Park. The elevation of the site ranges from 304 m.a.s.l on the south side to 302 m.a.s.l. on the north side. The location of this site is situated on relatively high ground compared to the lowest point within the proposed catchment area. Capital cost for construction at this location will be higher than alternatives, as this site will require a deep wetwell and deep sewers.

There is a hedgerow along the northerly property line. The site is in the NVCA watershed, however, the site area is not within regulated lands. The southern edge of the property is vegetated by a mixed forest and a poplar mineral deciduous swamp wetland community. The frontage along 5th Sideroad is considered a dry-fresh mixed meadow ecosite.

The site's soil types are classified as 'Sandy Silt to Silty Sand Glacial Till' with the possibility for organics which is not favorable for construction. The site is in an area classified as a 'Highly Vulnerable Aquifer'.

The site has previously been assessed for archeological potential and it was concluded that no further archaeological assessment was required. The area may be considered clear of archaeological concern once this report is accepted into the MHSTCI provincial register. The site is approximate 150m away from the a cultural heritage landscape.



Site Alternative Limit

Alternative 2B

7131 5th Sideroad, Innisfil



Site Characteristics and Potential Constraints

Alternative 2B is located on the center west frontage of agricultural property slated for future development located between 5th Sideroad, 7th Line and Highway 400. The site is zoned as Industrial Business Park. The elevation of the site ranges from 298 m.a.s.l on the south side to 304 m.a.s.l. on the north side. The topographic location of this site starts to slope down towards to the lowest point within the proposed catchment area. Capital cost for construction at this location will be less than the alternatives at a higher elevation.

The site is in the Lake Simcoe Region Conservation Authority (LSRCA) watershed, however, only the south border is within regulated lands where a watercourse traverses the site.

The site's soil types are classified as 'Sandy Silt to Silty Sand Glacial Till' and 'Glaciolacustrine Deposits of Cohesionless Sands' which are acceptable for construction, however, higher groundwater flow rates are expected for excavations made into the cohesionless sands requiring a more robust dewatering system. The site is in an area classified as a 'Highly Vulnerable Aquifer'.

The site has previously been assessed for archeological potential and it was concluded that no further archaeological assessment was required. The area may be considered clear of archaeological concern once this report is accepted into the MHSTCI provincial register. The site is approximate 150m away from the a cultural heritage landscape.



Site Limit

Alternative 2C

7131 5th Sideroad, Innisfil



Site Limit

Site Characteristics and Potential Constraints

Alternative 2C is located on the south west frontage of agricultural property slated for future development located between 5th Sideroad, 7th Line and Highway 400. The site is zoned as Industrial Business Park. The elevation of the site ranges from 298 m.a.s.l to 300 m.a.s.l. Capital cost for construction at this location will be less than the alternatives at a higher elevation.

The site is in the LSRCA watershed, however, only the north border is within regulated lands where a watercourse traverses the site that is a tributary of Lover's Creek. It is expected to provide indirect fish habitat and is protected under the Federal Fisheries Act. There are no records of aquatic Species at Risk (SAR) in the sub-watershed.

The site's soil types are classified as 'Ice-Contact Stratified Deposits of Sand, Silt, Clay, and Glacial Till' which are acceptable for construction. The site is in an area classified as a 'Highly Vulnerable Aquifer'.

The site has previously been assessed for archeological potential and it was concluded that no further archaeological assessment was required. The area may be considered clear of archaeological concern once this report is accepted into the MHSTCI provincial register.



Alternative 2D

7131 5th Sideroad, Innisfil



Site Limit

Site Characteristics and Potential Constraints

This site is located on 7th Line on the south end of the study area. The elevation of the site is approximately 296m to 294 m.a.s.l which is the lowest point in the catchment area. This site provides the best topography for a SPS location. Future sewer systems along 5th Sideroad and/or on the future development site can travel downwards to the SPS with the slope of the land.

The agricultural land is zoned Business Industrial Park and is situated in the LSRCA watershed. Both the north and south sides of the site are in regulated lands where two watercourses traverse the site. The northern watercourse is a tributary of Lover's Creek. It is expected to provide indirect fish habitat and is protected under the Federal Fisheries Act. There are no records of aquatic SAR in the sub-watershed.

The sites soil type is classified 'Glaciolacsutrine Deposits of Cohesionless Sands' which is acceptable for construction, however, higher groundwater flow rates are expected for excavations made into the cohesionless sands requiring a more robust dewatering system. The site is in an area classified as a ' Highly Vulnerable Aquifer'. As well, this site is in an area of 'Significant Groundwater Recharge'.

This portion of the site was not assessed for archeological potential. A Stage 2 Assessment is required.



Alternative 3

3560 7th Line, Innisfil



Site Limit

Site Characteristics and Potential Constraints

This site is located on 7th Line on the south end of the project area. The elevation of the site is approximately 301m to 297 m.a.s.l which is a relatively low point. Pumping can follow a consistent upwards path ideal for forcemain design.

The site is currently the commercial business of IHL Canada. A radio tower is situated on the south west corner of the property. The site is zoned Business Industrial Park and is situated in the LSRCA watershed. Both the north and portions of the south sides of the site are in regulated lands where two watercourses traverse the site. The northern watercourse is a tributary of Lover's Creek. It is expected to provide indirect fish habitat and is protected under the Federal Fisheries Act. There are no records of aquatic SAR in the sub-watershed.

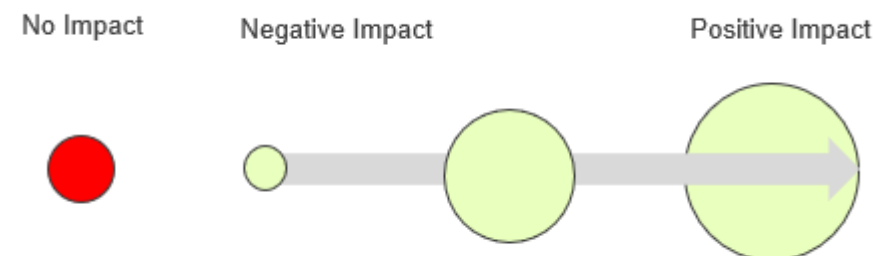
The site's soil type is classified as glacial till and deposits of cohesionless sands which is acceptable for construction, however, higher groundwater flow rates are expected for excavations made into the cohesionless sands requiring a more robust dewatering system. The site is in an area classified as a 'Highly Vulnerable Aquifer'. As well, this site is in an area of 'Significant Groundwater Recharge'.

The site has previously been assessed for archeological potential and it was concluded that no further archaeological assessment was required. The area may be considered clear of archaeological concern once this report is accepted into the MHSTCI provincial register.



Evaluation

- Each of the alternatives were evaluated based on their potential impact to the study area environment (physical, natural, cultural, and socio-economic).
- The evaluation is presented in a table or matrix to provide a simplified, visual comparison.



- An increased number of larger circles indicates that an alternative has increasing positive impacts and fewer negative impacts.



Evaluation of Alternatives

EVALUATION CRITERIA	ALT 1	ALT 2A	ALT 2B	ALT 2C	ALT 2D	ALT 3	DESCRIPTION OF EFFECTS
PHYSICAL ENVIRONMENT							
Suitability of Elevation and Topography	○	○	●	●	●	●	Alternative 1 and 2A pose more of a technical disadvantage due to topography. Preliminary layout indicates that there is adequate space for station footprint within each Alternative site.
Geotechnical Suitability	●	○	●	●	●	●	Preliminary review suggests that Alternatives 1, 2B and 2D have a likelihood of being cohesionless sands which are not as beneficial for construction. Alternative 2A has higher likelihood of organics due to proximity of wetland. Alternative 2C and 3 have a higher likelihood of being glacial till which better supports construction.
Hydrogeological Suitability	●	●	○	●	○	●	Hydrogeological conditions to be confirmed. Alternatives 2B and 2D show a disadvantage due to likelihood of higher groundwater flow rates requiring more robust dewatering system. Depending on the location of the SPS on each site, dewatering in close proximity to the watercourse may have impacts on Alternatives 2B, 2C, 2D and 3. As well, dewatering near 2A could impact the wetland. Depending on the location of the SPS on the site of Alternative 1, there could be impacts on the watercourse. It is recommended to situate the SPS away from watercourses and wetlands.
Hydraulics	○	○	●	●	●	●	Alternative 2D is at the lowest location in the catchment providing opportunity for the lowest capital cost expenditure on gravity sewers to the site and minimizing wetwell depth requirements. This site requires the longest pumping distance of all alternatives however headlosses related to pumping distance can be mitigated through forcemain design. Site alternatives become less preferable towards the north end of the study area, with Alternative 1 being the least preferable option.
NATURAL ENVIRONMENT							
Proximity to Key Natural Heritage Features	●	●	●	●	○	●	All alternatives are within close proximity to a Key Natural Heritage Feature (KNHF) such as a watercourse, wetland, or potential habitat for Species at Risk. Detailed studies are required to confirm the presence or absence of significant wildlife habitat. Alternative 1 provides the most flexibility for the footprint of the SPS to be the furthest distance from any identified KNHF.
Terrestrial Vegetation/Wildlife (Including SAR)	●	●	●	●	●	●	There is potential SAR habitat within the agricultural fields and forest habitat within the study area. The alternatives are within agricultural land. The preferred alternative will be studied further to consider site specific impacts.
Surface Water and Fisheries	●	●	●	●	○	●	Alternatives 1, 2B, 2C, and 3 are bordered on one side by watercourses protected under the Federal Fisheries Act. Alternative 2D is bordered on both sides (north and south) by a watercourse. The size of the site of Alternative 1 provides flexibility in the footprint of the SPS and it could potentially be placed further away from the identified watercourse. Any proposal to alter site conditions in water or within lands regulated by the NVCA or LSRCA requires site specific fisheries evaluation of project activities to confirm potential impacts, and mitigation requirements prior to development. Alternative 2A is in close proximity to an unevaluated wetland.
Groundwater	●	●	●	●	○	○	Sites 2D and 3 are within areas of 'Significant Groundwater Recharge'. All alternatives are within an area classified as a 'Highly Vulnerable Aquifer'.
Climate Change /Air Quality	●	●	●	●	●	●	All alternatives are similar in air quality and climate change impacts.

Evaluation of Alternatives (Continued)

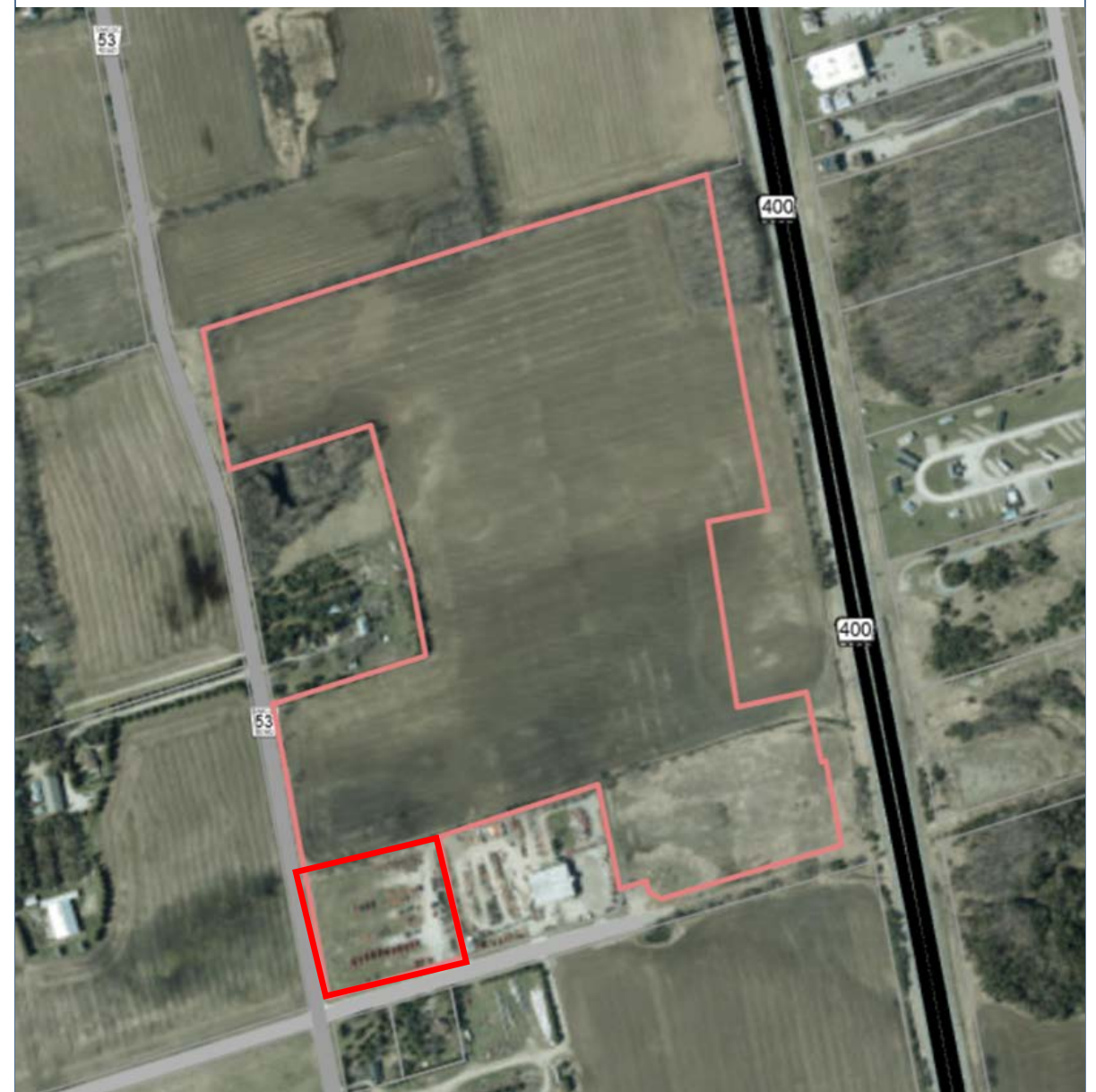
EVALUATION CRITERIA	ALT 1	ALT 2A	ALT 2B	ALT 2C	ALT 2D	ALT 3	DESCRIPTION OF EFFECTS
CULTURAL AND SOCIAL ENVIRONMENT							
Archeological	○	○	○	○	○	○	All Alternative site locations (with the exception of Alternative 2D) have been previously assessed and require no further work. An archaeological assessment of alternative 2D will be required
Cultural Heritage Resources	○	○	○	●	●	●	The northern portion of Alternative 1 is in close proximity to a cultural heritage landscape. As well Alternatives 2A and 2B surround a cultural heritage landscape. The remaining three alternatives have no cultural heritage resources.
Aesthetics (noise, odour, visibility)	○	○	○	○	○	◻	All of the sites with the exception of Alternative 3 are all situated on agricultural land zoned as Industrial Business Park and there is a minimized proximity to the public. A SPS on the site of Alternative 3, which operates as a commercial business, would have the most impacts.
Impacts to Property Owners	○	○	○	○	○	○	Alternatives 1, 2BA and 2C are closest to a residential home. The sites are large enough to situate the SPS further from the houses to minimize impacts and therefore all ratings are similar.
Impacts to Business/Commercial Properties	●	●	●	●	●	◻	A commercial business is currently in operation on the site of Alternative 3. Construction of the SPS would be disruptive to business activities. The outdoor space is currently fully in use; therefore, a pumping station may not be welcomed. Future development on remaining properties will benefit from the SPS which will be built to service the future development on the properties.
ECONOMIC ENVIRONMENT							
Operating and Maintenance Costs	●	○	○	○	◻	○	In general operation and maintenance costs escalate as pumping distance increases due to the increase in dynamic headlosses and resulting increase in pump size requirements. In addition, longer forcemains can result in odour issues if retention time is too long. However, dynamic headlosses can be mitigated with proper forcemain sizing and retention time can be reduced through design alternatives such as dual forcemains.
Capital Costs	◻	◻	○	○	●	●	The capital costs for the SPS's will increase northwards due to the topography of the land, increasing the depth of the wet well and depth of the future sewer system.
Land Acquisition Costs	○	○	○	○	○	○	All site locations are within the Strategic Settlement Area and zoned as Industrial Business Park. The sites will require private property acquisition.
TOTAL SCORE							
	○	◻	○	●	○	○	



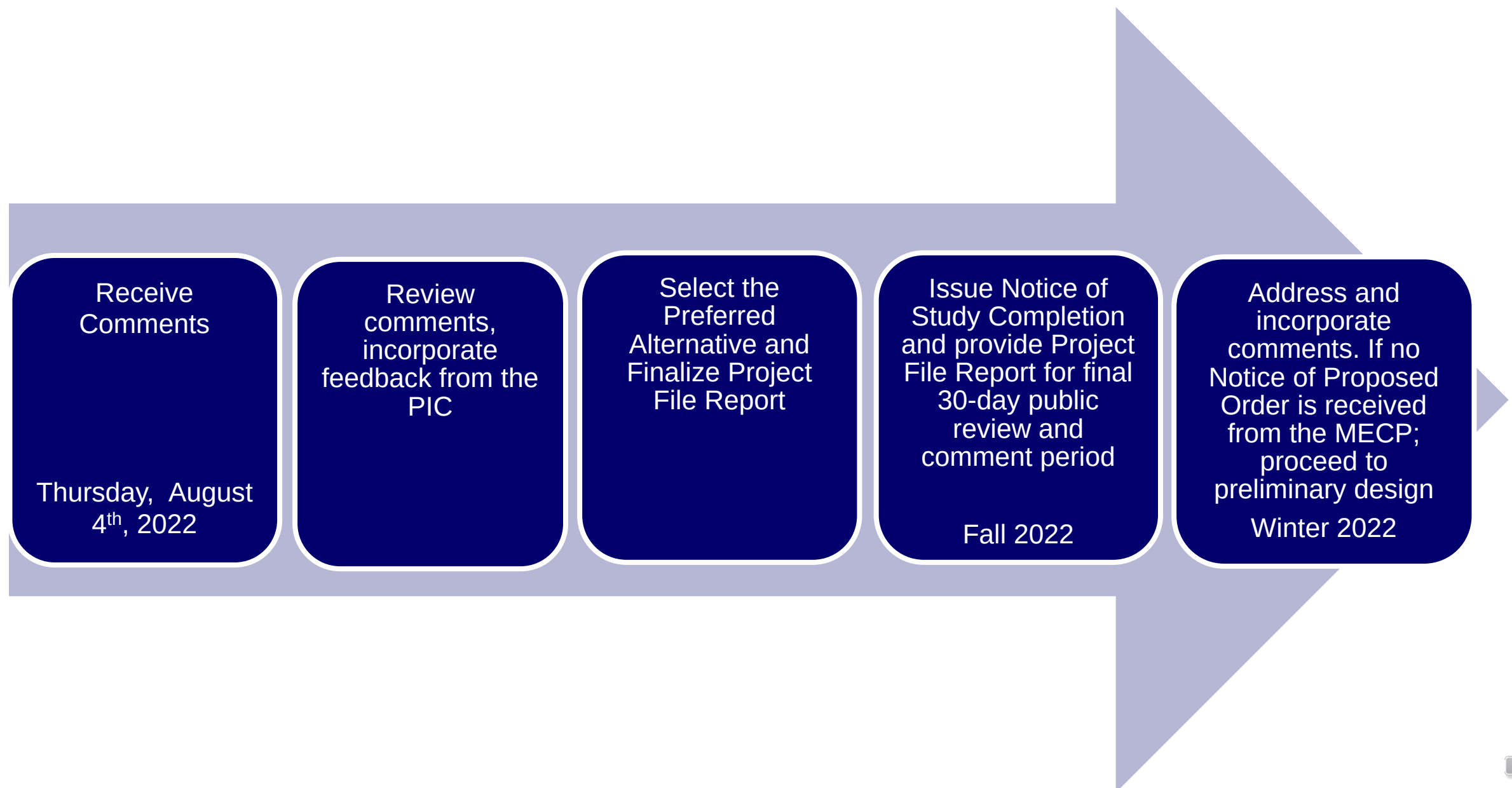
Preliminary Recommended Solution

Given the results of the preliminary evaluation, it is proposed that **Alternative 2C** located at 7131 5th Sideroad be selected as the Recommended Solution.

7131 5th Sideroad, Innisfil



Next Steps and Proposed Schedule



Your Comments are Important to Us

Comments may be sent to the study team by email or regular mail. Public input is encouraged throughout this process and will be given consideration during the planning and design of this project.

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The deadline for comments is Thursday August 4th, 2022

