Environmental Study Report

Regional Municipality of Peel

Lakeview and Port Credit Community Sanitary Sewer Improvements
Class Environmental Assessment

August 2007

Associated Engineering | GLOBAL PERSPECTIVE. LOCAL FOCUS.

Region of Peel
Working for you

Executive Summary

The sanitary sewerage system in the Lakeview and Port Credit communities has a history of infiltration and inflow during heavy rainfall events. Over the years considerable work has been completed in the area to provide relief. This work has included upgrading area sewage pump stations and twinning the Port Credit Relief Sewer.

In 2004, the Region retained Associated Engineering **(AE)** to complete a Schedule 'C' Class Environmental Assessment to determine how to best address the problem.

Public Information Centre (PIC) # 1, presenting alternative solutions, was held on September 14, 2006 and two comments were received both in favour of Solution 3 or 4. Based on the comprehensive rating, solution 3 was selected. Solution 3 consists of:

- Construct a new pump station on Lakeshore Road East across from Beechwood Avenue;
- Construct new sanitary trunk sewer westerly along Lakeshore Road East;
- Construct new gravity sewer on Beechwood Avenue which will allow the decommissioning of the existing syphon under Cooksville Creek; and
- Construct new forcemain from the new pump station easterly to the existing 1650 mm sanitary sewer located on Lakeshore Road East near Alexandria Avenue.

The project team investigated several locations for the new pump station and at PIC #2 these locations and their rating were presented to the public, along with some conceptual designs. PIC # 2 was held April 25, 2007.

The preferred location, as determined by public comment and the comprehensive rating, is 501 Lakeshore Road East, on the eastern part of the property. Recognizing that this requires the acquisition of private lands, the Region has initiated negotiations with the property owner.

The Region received several comments with respect to the selection of a preferred location. While all comments were reviewed and taken into consideration in preparation of this report, two comments carry special significance.

The Mississaugas of Scugog First Nation forwarded a comment stating that the area in which the work is proposed is subject to an unresolved land claim. The project team has attempted contact to try to resolve the issue and to find a way to allow the project to proceed. Our attempt has been unsuccessful to date and this issue is still outstanding.

The owner of the property of the preferred pump station location submitted written comments with respect to the work raising two concerns:

- Impact to their property; and
- Potential conflict with the existing floodplain for Cooksville Creek.

The response is attached in Appendix “B”. Summarized we note that the City of Mississauga is reconstructing the bridge on Lakeshore Road East over Cooksville Creek. The new bridge, once completed will allow more flow and reduce the upstream floodplain. The preferred pump station location will no longer be in the flood plain once completed. As for the impact to the property, the Region will negotiate suitable compensation with the landowner.

AE on behalf of the Region will be publishing this report for a public review period. The Class EA process entitles members of the public, interest groups and review agencies to review the ESR for thirty (30) days. During this time, any person, interest group or agency that has outstanding concerns which cannot be resolved by discussion with the Region may request a Part II Order by submitting a written request to the Ministry of the Environment at the following address:

Minister of the Environment
135 St. Clair Avenue West, 12th Floor
Toronto, Ontario
M4V 1P5

If no Part II Order requests are received within the thirty (30) day review period, the Region will proceed with the next phase to determine how to implement the design of the preferred solution. It is the ultimate aim of the Region to proceed to construction.

The screening report issued at the end of Stage 2, dealing with the selection of a preferred alternative is attached as Appendix “I”. All notices, comments and boards associated with the study commencement and PIC #1 are contained within that report.

Table of Contents

1 Introduction and Background

The Lakeview and Port Credit communities have a history of sanitary sewer surcharging during heavy rainfall events due to inflow and infiltration of storm water into the system. Over the years considerable work has been completed in the area to provide relief. This work has included upgrading area sanitary sewage pump stations and sanitary sewer capacity.

To address the problem, the Region of Peel **(Region)** retained Thompson Flow Investigations Inc. to investigate the problem and to recommend a course of action. In October 2001 a report was completed which recommended isolating the homes from the Hydraulic Grade Line **(HGL)** as a temporary solution and ultimately lowering the HGL to effect a more permanent solution by eliminating infiltration and inflow.

Secondly, the Region initiated a study process to develop a long-term system wide solution. KMK Consultants Limited prepared a report (Capacity Analysis Study – Beach Street SPS and Trunk Sewers) in January 2002 that outlined some alternatives to lower the HGL and reduce the potential for infiltration and inflow . The study proposed a wide range of options from constructing new pump stations to rebuilding the existing Beach Street Pump Station and associated trunk sewers. These alternatives are subject to the Class Environmental Assessment Process **(Class EA)** and therefore could not be implemented until the Class EA was completed.

In addition, the Province of Ontario has legislated intensification within existing urban areas. The increase in base sanitary flows due to development increases the urgency to eliminate inflow and infiltration from the sanitary sewerage system.

In 2004 the Region retained Associated Engineering **(AE)** to complete a Schedule C Class EA to move this project along to construction. This study incorporates and builds on the work previously completed.

The study area is the catchment for the Beach Street pump station however; the project has concentrated more on the area within the Lakeview Community that experienced high inflow and infiltration (See Figure 1 below).

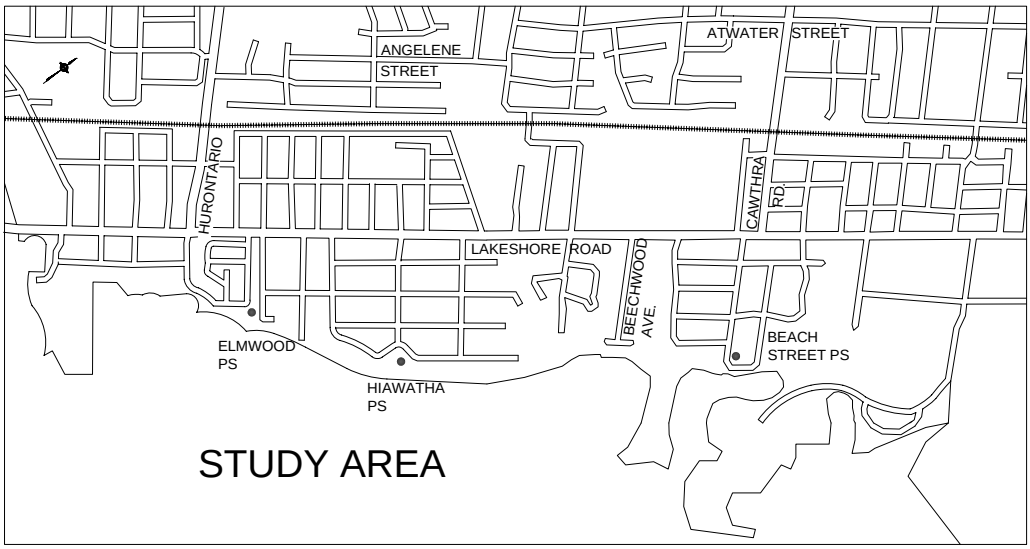


Figure 1 – Study Area

The Region determined to provide an extra level of public input into this process and issued a report at the end of Stage 2 dealing with the preferred solution similar to preparing a Master Plan. The project team wanted to ensure the public was aware of the course of action and was accepting of the preferred solution. There were no comments or objections received.

The preferred solution as determined in Stage 2 includes:

- Construction of a new trunk sewer west of Cooksville Creek to intercept the flows from drainage area north of Lakeshore Road;
- Construct a new pump station west of Cooksville Creek in the vicinity of Lakeshore Road; and
- Construct a new forcemain along Lakeshore Road to the receiving sewer at Lakeshore Road and Alexandria Avenue.

The Region then commenced Stage 3, preparing design concepts for implementation of the preferred solution. This report concentrates mainly on the design concepts but will reference the previous report (Stage 2 Report is attached in Appendix “I”.

2 Class Environmental Process

The need to involve the public directly in the decision making process for capital works projects has been recognized by the Environmental Assessment Act **(EAA)**, established in 1975. The EAA provides for input from the public and interested agencies to ensure the elimination or mitigation of adverse impacts on the environment.

The EAA recognizes that certain frequently occurring municipal undertakings are small in scale and have a predictable range of effects or have minor environmental significance. To ensure that a degree of standardization in the planning process is followed province wide, the EAA permits the use of the "Class Environmental Assessment" procedure for municipal infrastructure projects which display the following common characteristics:

- Recurring
- Usually similar in nature
- Usually limited in scale
- Have a predictable range of environmental effects
- Responsive to mitigating measures.

Projects that do not display these characteristics would not be able to use the planning process of the Class EA, but must undergo an Individual Environmental Assessment.

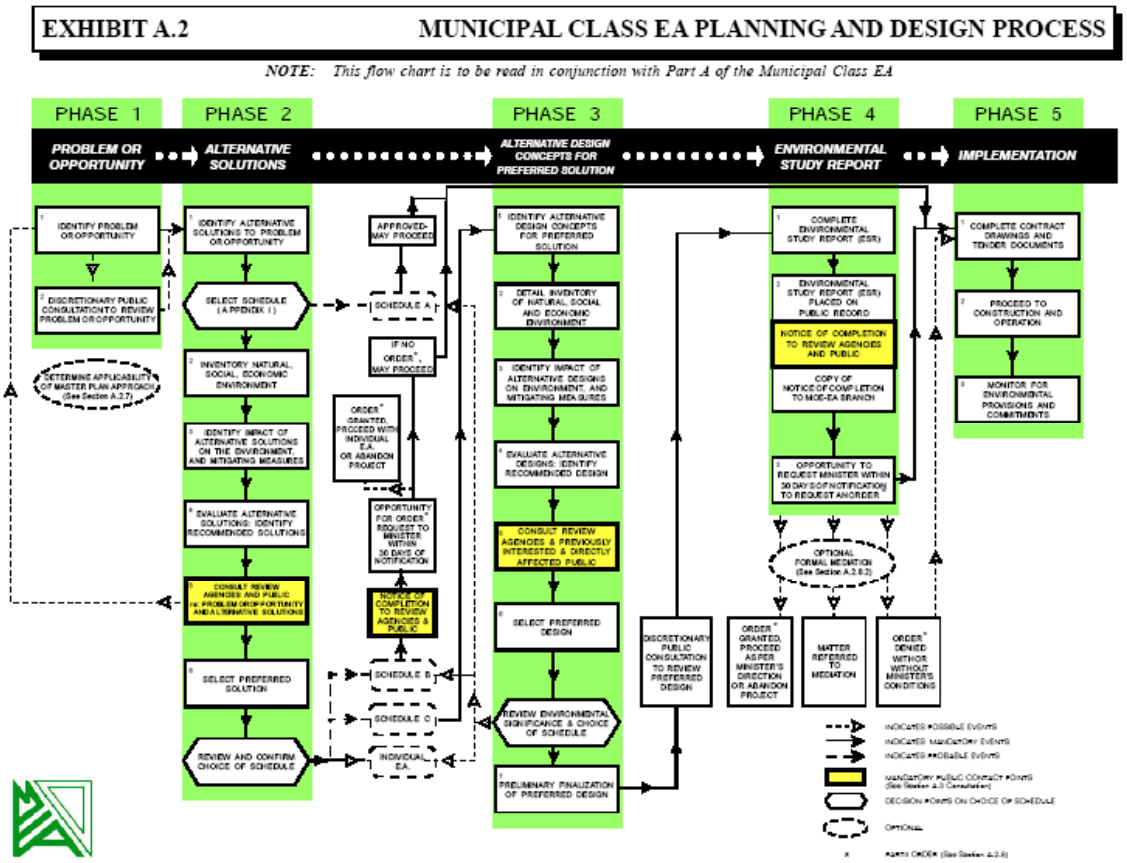
Provided the Class EA planning process is followed, a proponent does not have to apply for additional approvals under the EAA since formal approval is gained through the Class EA process. The Class EA process ensures that an adequate environmental planning process is followed and places emphasis on project assessment and public involvement rather than on review and approvals.

The Class EA process reflects the following five key principles of successful planning under the EAA:

- Consultation with affected parties early on, such that the planning process is a co-operative venture.
- Consideration of a reasonable range of alternatives to accomplish the solution.
- Identification and consideration of the effects of each alternative on all aspects of the environment, i.e. the impact on natural, social, cultural, technical and economic/ financial environments.
- Systematic evaluation of alternatives in terms of their advantages and disadvantages to determine their net environmental effects.
- Provision of clear and complete documentation of the planning process followed

Given that the scope of the proposed works is an expansion to the existing sanitary sewage collection system and the potential construction or reconstruction of a pump station, this project falls under the Municipal Class EA Schedule C.

The Municipal Class Environmental Assessment Process is shown on the following chart.



In February, the Region issued a report on Phase 2, the selection of a preferred solution for public input and comment. There were no comments received and that report is attached as Appendix “I”.

3 Methodology

In completing a Class EA many factors must be considered and reviewed at an appropriate point in the study. In addition to the technical engineering data, the setting of the project must also be considered. This includes the natural and socio-economic environment as well as the existing and expected land use. This section briefly outlines the many factors involved as well as the methodology and approach to completing the study.

3.1 FEDERAL AND PROVINCIAL LEGISLATION

All works resultant from this study must conform to all applicable Federal and Provincial Legislation, Acts and Regulations. The following is a partial list applicable to this study:

Federal

- Fisheries Act
- Navigable Waters Protection Act
- Workplace Hazardous Material Information System

Provincial

- Ontario Water Resources Act
- Ontario Environmental Assessment Act
- Ontario Environmental Protection Act
- Sustainable Water and Sewage Systems Act
- MOE Design Guidelines

3.2 STUDY AREA DESCRIPTION

3.2.1 General

The study area is bounded by Lake Ontario to the south, Atwater Avenue to the north, Westmount Avenue to the east and Hurontario Street to the west. However, in considering the flows, the entire Beach Street Pumping Station sewer shed was considered.

3.2.2 Land Use

The study area is contained within Ward 1 of Mississauga known as Lakeview Community and Port Credit. The area is predominately diverse residential with some commercial, institutional and industrial uses. There is an ongoing trend of replacing period homes in the Lakeview Community with new dwellings maximizing lot coverage. Commercial uses tend to be adjacent to Lakeshore Road East.

3.2.3 Natural Environment

The study area contains significant natural environment features including the Credit River, Cooksville Creek and Lake Ontario. The existing sewer system crosses Cooksville Creek by means of a syphon. A force main is used to cross the Credit River. Sewer overflows from the Beach Street Pump Station can impact Lake Ontario.

3.2.4 Heritage and Historical Environment

The most prominent heritage feature in the study area is the Adamson Estate, located on land that was originally granted to Joseph Cawthra on November 8th, 1809. The preferred solution and design concept will not impact this area in anyway.

3.2.5 Archaeological Environment

Archeoworks Inc. completed a background review and stage 1 assessment. A full copy of the assessment is attached in Appendix “G”.

Background research determined that 11 archaeological sites have been found within a two-kilometre radius of the study area limits. The Ministry of Tourism, Culture and Recreation (now the Ministry of Culture) primer on archaeology, land use planning and development in Ontario stipulates that undisturbed lands within 300 metres of a primary water source, and undisturbed lands within 200 metres of a secondary water source, are considered to be of high archaeological potential (1997: pp. 12-13). As such, with the study area bisected by Cooksville Creek and located immediately adjacent to the north shores of Lake Ontario, combined with the already encountered 11 sites established significant potential for the locating Aboriginal archaeological resources within undisturbed portions of the entire study area.

A review of the study area within the 1877 Illustrated Historical Atlas of Peel County indicates that six historic homesteads once stood within the study area limits. Taking into account all of this information, high potential for encountering significant historical remains can be established within 100 metres to these former historic structures, in undisturbed locations.

Following the collection of background research, a Stage 1 windshield survey revealed that the study area is comprised mostly of residential neighbourhoods along with some commercial/industrial areas. Disturbances included paved roads, driveways, sidewalks, residences, parking lots, graded properties, commercial/industrial buildings, utilities and the CNR tracks. Due to the low archaeological potential these areas represent, further archaeological concern within these parts of the study area is unwarranted. The only areas of further concern, warranting further Stage 2 investigations, would be the embankment on either side of Cooksville Creek, a small woodlot and park area located at the north central end of the study area, immediately east of Cooksville Creek, and the parklands at the south end of the study area on Richey Crescent. However, it is understood that no construction or construction disturbance will be occurring in these areas, and therefore, no

Stage 2 investigations will be required for this project as presented. If, however, during the detailed design phase, it is found necessary to disturb any of these areas then Archeoworks Inc. will be contacted immediately to determine the extent of the disturbance and the necessity for a Stage 2 evaluation.

3.3 STUDY METHODOLOGY

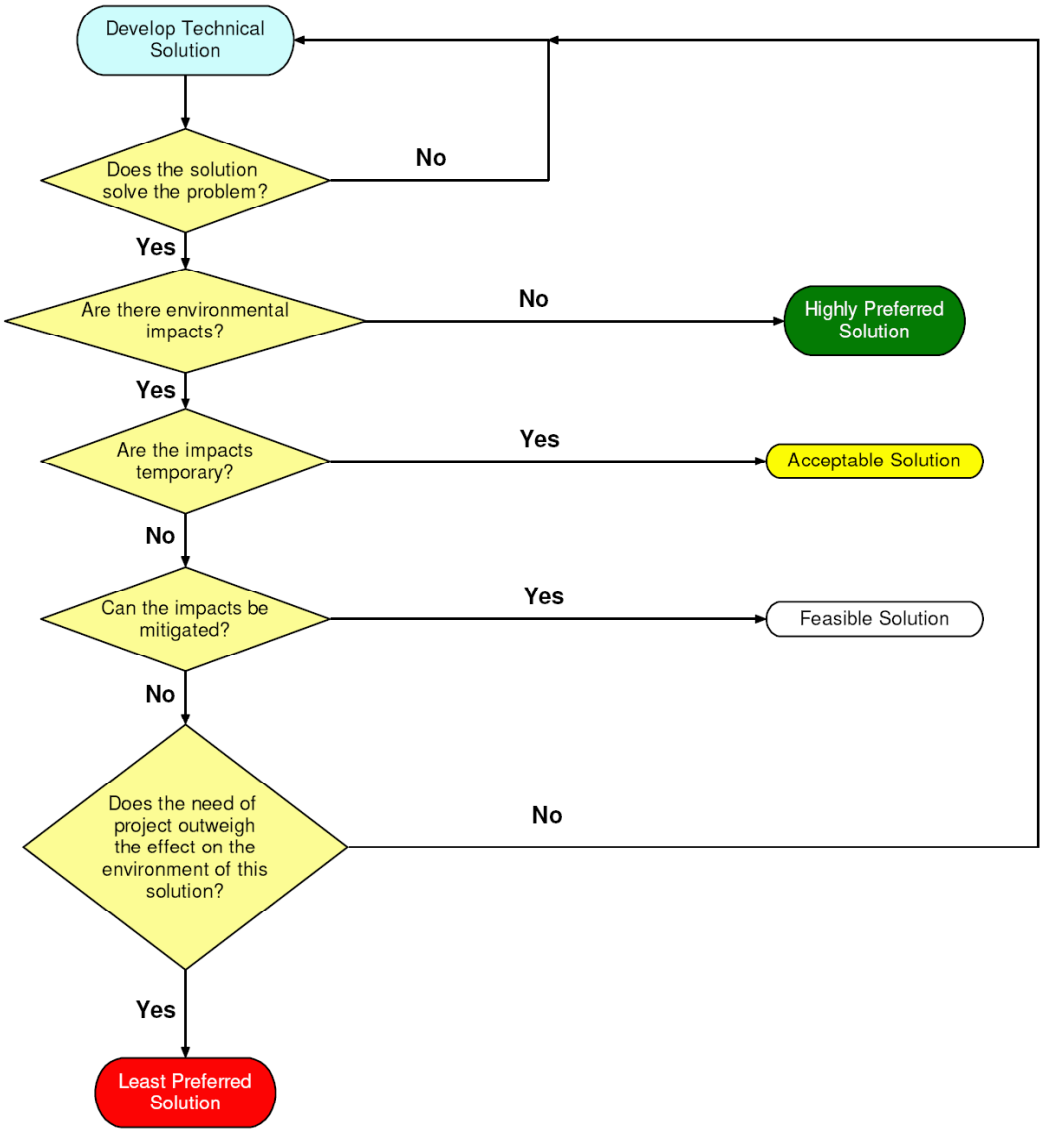
The goal of the Environmental Assessment process is to determine the best technical solution which has the minimum impact on the environment, being defined not only as the natural environment, but also the socio-economic environment. Though not required under the act, the construction and operating costs are often evaluated as well.

In general, impacts to the environment are defined as:

- Temporary – those impacts that last for a set period of time and which the environment is expected to fully recover. An example of this type of impact would be a lane closure during construction. It would have a definite impact for the duration, but once the construction is complete, operations would return to normal.
- Effects that can be mitigated – those impacts that will have a permanent effect on the environment but for which steps can be taken to eliminate or reduce the impact to an acceptable level. An example of this type of impact would be noise from a new highway. The noise will never go away, but sound barriers can be used to reduce the impact.
- Permanent – those impacts that will have a permanent effect on the environment. An example of a permanent impact is the construction of a new bridge with support piers. The piers have a permanent effect to the ecosystem by destroying fish habitat. The environment may adjust, but the effect is always there.

The following diagram illustrates the decision making process involved in evaluating alternatives.

Decision Making in the Environmental Assessment Process



Where there are several solutions which address the problem, the impacts on the natural and socio-economic environments are considered. The solutions with the least impacts are rated higher and are therefore more preferred. If two or more rank equally high, other factors such as cost or operator preferences may be used to determine the best solution.

4 Public Consultation

A comprehensive public consultation plan was completed as part of this project. The following is a brief outline of key contacts. Copies of the letters, the mail out list, and any correspondence received are attached in Appendix 'C'.

4.1 REVIEW AGENCIES

In concert with the Public Consultation Program, appropriate agencies, First Nation Communities and interested and affected parties were contacted during the EA process. This was accomplished by establishing a contact mailing list, sending out a number of contact letters, and undertaking follow-up efforts where appropriate. Input received from the contacted agencies and interested and affected parties were tracked through a consultation record database. Comments were considered in the preparation of the alternatives presented to the public.

4.1.1 Mississaugas of Scugog

The Mississaugas of Scugog First Nation forwarded a comment stating that the area in which the work is proposed is subject to an unresolved land claim. The project team has attempted contact to try to resolve the issue and to find a way to allow the project to proceed. Our attempt has been unsuccessful to date and this issue is still outstanding.

4.2 PUBLIC CONSULTATION PROGRAM

Citizens at large including residents, business owners, property owners, etc. had a variety of opportunities for learning, sharing, and responding during the Class EA process with the following points of public contact:

- Notice of Study Commencement
- Public Information Centre #1 **(PIC)**
- Notice of Selection of Preferred Solution
- PIC # 2

Presented at the PIC # 2 were outlines of the history of the project, the environmental assessment process, preferred location selection, architectural design guidelines and possible construction methods. Fifteen people attended the PIC and there were several questions with respect to clarifying information, however, only one submission was received and is discussed below.

Copies of the PIC materials, sign in sheet and comments are contained in Appendix 'B'.

4.2.1 KingSett Capital

The owner of the property of the preferred pump station location submitted written comments with respect to the work raising two concerns:

- Impact to their property; and
- Potential conflict with the existing floodplain for Cooksville Creek.

The response is attached in Appendix “B”. Summarized we note that the City of Mississauga is reconstructing the bridge on Lakeshore Road East over Cooksville Creek. The new bridge, once completed will allow more flow and reduce the upstream floodplain. The preferred pump station location will no longer be in the flood plain once completed. As for the impact to the property, the Region will negotiate suitable compensation with the landowner.

5 Design Concepts

The project team developed 8 (eight) alternative pump station locations for presentation to the public. The locations are shown below.

Each site was evaluated for Technical Merit, Natural Environment, Social Environment and Financial Impact. The factors considered for each category are listed below. Detailed ranking sheets are included in Appendix “D”.

5.1 TECHNICAL MERIT

The following factors were considered in evaluating the technical merit of each location:

- Constructability
- Degree of difficulty of design
- Noise
- Air quality
- Operational access
- Disruption during construction

- Gravity Sewer construction to new pump station
- Forcemain construction from new pump station
- Does the location meet the intent of the preferred solution

5.2 NATURAL ENVIRONMENT

The following factors were considered in evaluating the natural environmental impacts of each location:

- Impact to aquatic habitat
- Impact to terrestrial environment
- Impact on open spaces / parks / recreational areas
- Impacts to woodlots
- Impacts to Environmental Sensitive Areas **(ESA)** and Areas of Natural Scientific Interest **(ANSI)**
- Proximity to hazard lands

5.3 SOCIAL ENVIRONMENT

The following factors were considered in evaluating the social environmental impacts of each location:

- Construction impacts to surrounding lands
- Construction impacts to traffic
- Operational impacts to surrounding residential properties
- Operational impacts to surrounding commercial properties
- Impacts to archaeological areas
- Impacts on First Nation's Land
- Availability of land
- City of Mississauga urban design standards
- Perceived impact on property values

5.4 FINANCIAL

The following factors were considered in evaluating the financial impacts of each location:

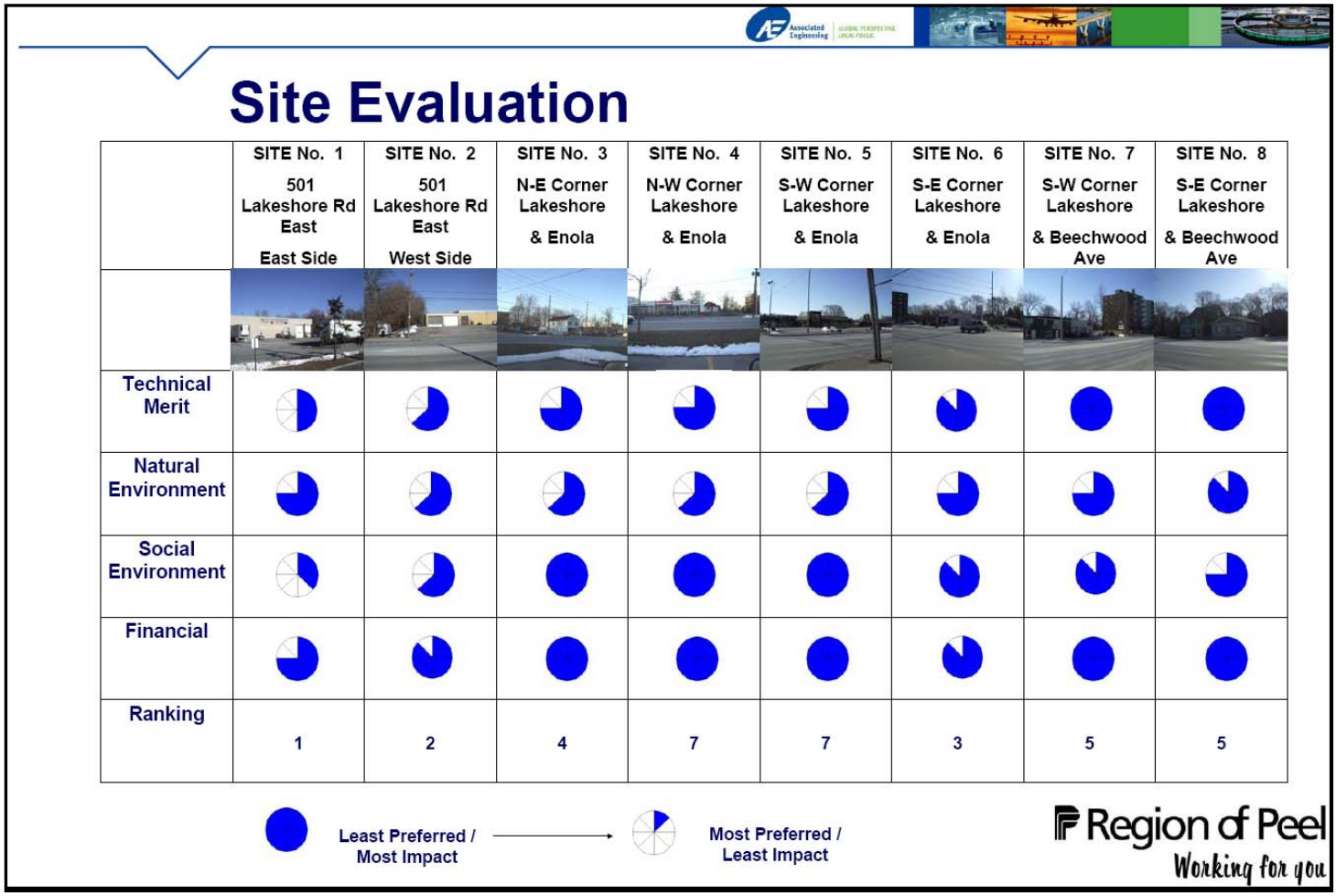
- Cost of land including compensation for loss of land use
- Construction costs
- Operational costs

5.5 REVIEW OF ALTERNATIVE LOCATIONS

The following is a brief discussion of the review of each of the potential sites. Detailed rating sheets are contained within Appendix "D" and the following graphical rating was presented at PIC # 2.

In general Site 1 best meets the technical requirements of the preferred solution. Although at present within a floodplain, when the Lakeshore Road Bridge is replaced it will be located adjacent to the hazard lands. Due to the current land use and Cooksville Creek there is a large buffer area from residential properties.

Future plans for the adjacent property include a residential development, but the pump station and the site plan can be designed to minimize impacts.



Sites 4, 5, 6, 7 and 8 are adjacent to existing residential properties and therefore scored poorly in the Social Environment which tended to remove them from consideration.

Site 3 has an approved development plan for residential development. Since the plans are well advanced, there is no opportunity to change the development to mitigate the impacts of the proposed station.

Site 2 while scoring high in Technical and Natural Environment is located adjacent to a property with an approved development site plan. Although similar to site 1, since the site plan is well advanced, there is no opportunity to change the development to mitigate the impacts of the proposed station.

5.6 PUMP STATION DESIGN

The design of the pump station will conform to the Region of Peel Design and Technical Specifications Manual (July 2003) and the City of Mississauga Urban Design Guidelines. Three alternative layouts were presented to the public at PIC # 2. These concentrated on placement of the stand by generator and visual buffers which tend to be, other than location, issues of major concern to the public.

5.6.1 Architectural Design Guidelines

The following architectural design guidelines will be used in designing the new sewage pump station.

- Pump station will primarily be an underground structure with the above grade structure to be minimized.
- The design of the urban space will be compatible with the context presented by the selected site.
- The grade level structure would be sculptural in nature and will compliment the urban space it is situated in.
- Envelope materials will respond to the general theme of the urban space and the sculptural quality of the building.
- Appropriate outdoor lighting will be incorporated as an essential part of the project.

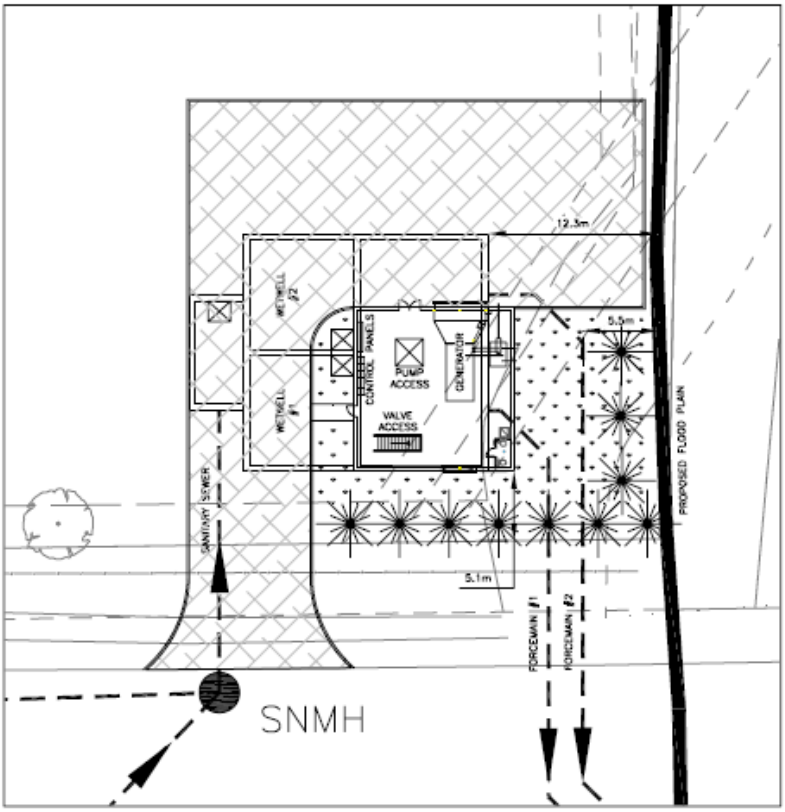
5.6.2 Natural Buffer

In addition to designing the pump station to fit into the neighbourhood, the site will also include significant vegetation to limit the visual impact on the surrounding area.

5.6.3 Public Input

The Region will work with the adjacent property owner to ensure there is a minimal impact to their property as a result of the construction.

A concept plan is shown below.

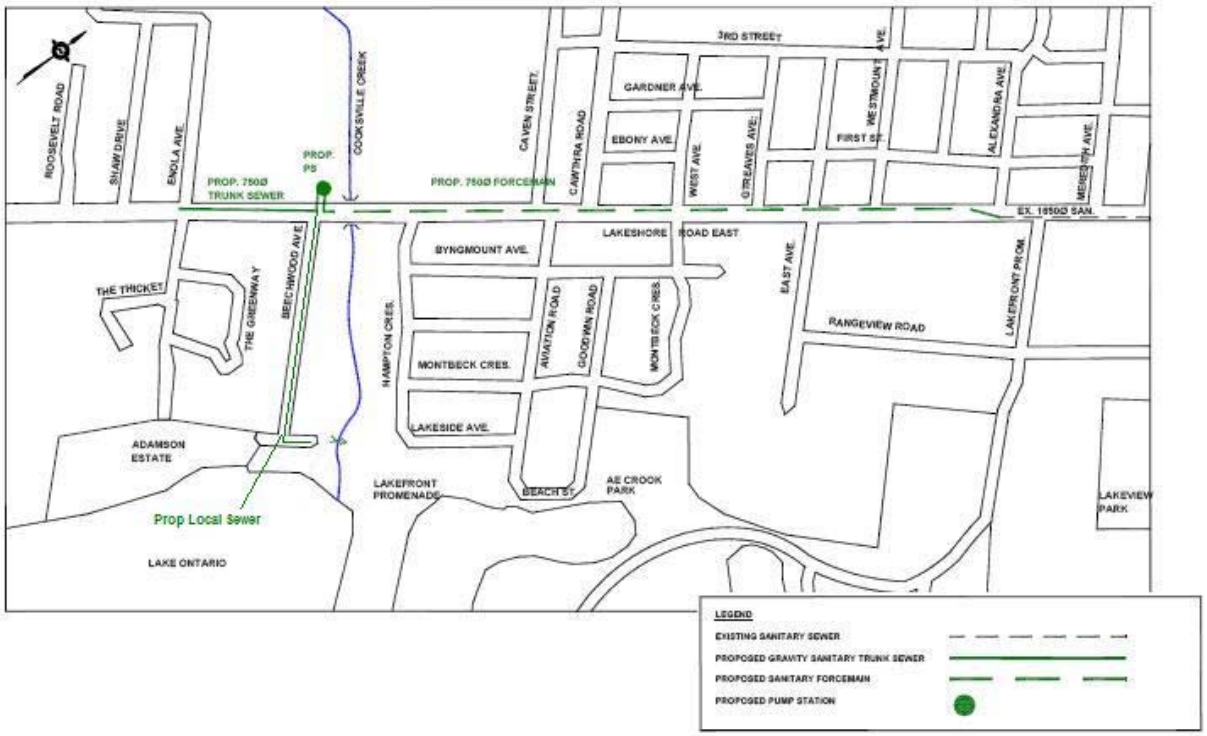


Pump Station Concept Plan

6 Preferred Design Concept

Based on the detailed rating completed by the project team, public consultation and review agency comments, the preferred solution and design concept is to construct a new ±900 mm diameter gravity sewer to intercept flows from north of Lakeshore, a new gravity sewer on Beechwood (portion will be local ±250 mm diameter and a portion will intercept additional flows ±900 mm diameter) and a new ±250 mm diameter gravity sewer on Ritchie Crescent so the existing syphon can be decommissioned, a new pump station located on the east side of 502 Lakeshore Road East and a new twin ±750 diameter forcemains from the new sewage pump station to the receiving sewer at Lakeshore Road East and Alexandria Avenue.

Unless specifically specified the work will be completed using open cut construction methods.



7 Construction Methods

Well construction is intrusive to the environment; both natural and socio – economic, construction methods and timing can be varied to mitigate impacts. All final locations and construction methods will be determined during detailed design.

7.1 CROSSING OF COOKSVILLE CREEK

There are two possibilities for the forcemain crossing of the creek, both of which will minimize additional impact to the natural environment.

The forcemain may be installed using trenchless technologies such as directional drilling or micro tunnelling. Of course the main advantage is zero impact to the creek environment. All work is completed outside the creek, floodplain and buffer zone.

Otherwise, there is an opportunity to team with the City of Mississauga and complete the crossing as part of the bridge reconstruction. While recognizing that the bridge construction is intrusive to the natural environment, the forcemain can be placed without any increase in impact.

7.2 BEECHWOOD / RITCHIE GRAVITY SEWER

It is anticipated that this sewer will be constructed using open cut. The project team recognizes that this is intrusive to the residents, however, in the short span of the roadway, the placement of pits for trenchless work will be similarly intrusive. The sewer depth on Ritchie Crescent will be dependant on the existing basement elevations of the homes and dictate the sewer depth on Beechwood.

7.3 LAKESHORE GRAVITY TRUNK SEWER

It is anticipated that this sewer will be constructed using open cut. The project team recognizes that this approach will have a significant impact to the traffic patterns in the area, however, the placement of two shafts required for a trenchless alternative will have the same impact over such a short span.

7.4 LAKESHORE FORCEMAIN

The portion of forcemain not associated with the creek crossing will be considered for both open cut and trenchless construction. It will depend on the ability to secure sufficient staging areas, impact to traffic, cost and constructability. While the project team recognizes there is a significant impact to the traffic on Lakeshore Road East regardless of the construction method used, there is no viable alternative based on the location of the existing receiving sewer and treatment plant.

8 Construction Mitigation

Regardless of the construction method used, the Region will take measures to minimize the impact by using industry standard construction mitigation practices throughout this project, such as the use of hoarding and best practices in dust suppression and mud control.

In addition to these mitigation measures, local residents, institutions and businesses will be notified in advance of project-related activities being conducted in their neighbourhood, and that all construction equipment will meet current regulations.

The following are site-specific mitigation methods intended to reduce more localized social impacts of this project:

8.1 SHAFT LOCATION AT LAKESHORE ROAD AND EAST AVENUE

This shaft location will be located as far away as possible from the neighbouring homes on Byngmount Avenue and the Peel Non-Profit Housing Corporation's facility at 958/960 East Avenue (just south and east of the proposed site). Local residents will be notified before and during construction to adequately inform them of the project. Public Inquiries / Concerns will be tracked and dealt with in a timely manner. Measures will be taken to ensure safe pedestrian diversion from the sidewalk on the south side if necessary, as well as recognition of the transit stop in proximity to this site.

8.2 PROPOSED PUMPING STATION LOCATION

The preferred site for the new pumping station is located on private property at 501 Lakeshore Rd E, west of Cooksville Creek. The successful completion of the transfer of ownership of the required property is critical to the success of this project. Measures will be taken to minimize impacts on the houses across the street, and of course the Cooksville Creek and riparian vegetation. The pump station will be designed in conjunction with City of Mississauga Design Guidelines including a vegetation buffer zone to reduce the visual impact.

8.3 CONSTRUCTION DURING THE WINTER

Social impacts from this type of construction project are greater in the summer than in the winter simply because residents and the public are outside more in the summer. While it is not feasible to conduct the entire project in the winter, the Region will attempt to schedule winter construction of disruptive activities where possible.

8.4 MAINTAIN ACCESS TO THE WATERFRONT TRAIL

Mississauga's Waterfront Trail is an important and well used local and regional recreational amenity. Although there is no formalized / constructed trail through this area, Richey Crescent provides the on-road

connection between the Lakefront Promenade Park on the east via the pedestrian bridge that crosses Cooksville Creek, and the Adamson Estate Park on the west. It will be important to ensure unimpeded (east-west) pedestrian access where possible, as it is well used (year round) by walkers, joggers and cyclists. Clear signage directing trail users to the accessible portions of the road will accompany construction here.

8.5 SIMULTANEOUS CONSTRUCTION OF DIFFERENT PHASES

Social impacts can be reduced by constructing different parts of the sanitary sewers at the same time. The impacts of this project are spread out over a large distance, and the most significant impacts will be experienced in the open cut areas and the vicinity of the shaft locations. Timing construction activities simultaneously would be beneficial, because the community as a whole would be faced with a shorter construction period.

8.6 STREET ACCESS

Regardless of the method of construction used, there will inevitably be some restriction of access to residents, business and institutions. In addition to taking steps possible to minimize this impact, the public will be given sufficient notice to make alternate access arrangements as required.

9 Requirements for Implementation

It is the intent of the Region to proceed with the works required to implement the preferred design concept and have a completely constructed and functioning sewage pumping station at the conclusion of this project. This section includes a brief description of the improvements, upgrades and changes to infrastructure required for implementation. This is not meant to be an all-inclusive list but a way to inform the public of the extent of the work and minimize surprises in the future.

9.1 CONSTRUCTION OF THE PUMP STATION

The new pump station will be constructed in the preferred location. The construction will include a dry well and wet well constructed underground as well as an above ground building that will house the controls and a standby generator that will power the station if a power failure occurs. Additionally, the site will include a vehicular access and parking area.

9.2 CONSTRUCTION OF LAKESHORE GRAVITY SEWER

This will be a ± 900 mm diameter sewer constructed along Lakeshore Road East. The most likely method of construction is open cut requiring the closure of a minimum of one lane during construction. Since this is a trunk sewer, connection will be made at the manholes only and individual properties will not be connected to it.

9.3 CONSTRUCTION OF BEECHWOOD / RITCHIE GRAVITY SEWER

This sewer will be a ± 250 mm diameter on Ritchie Crescent and the southern portion of Beechwood, with a ± 900 mm diameter sewer being constructed on the northern of Beechwood up to the new pump station. The most likely method of construction is open cut requiring the closure of a minimum of one lane during construction. Since this is a local sewer, properties connections will be made.

9.4 LAKESHORE FORCEMAIN

This will most likely be twin ± 750 mm diameter forcemains to be constructed from the new pump station to Lakeshore Road East and Alexandria Avenue. The most likely method of construction will be a combination of open cut and trenchless technologies (trenchless across Cooksville Creek and open cut for the remaining portion) . Regardless of the method there will be impact to the traffic patterns and number of lanes available.

9.5 NEW RECEIVING STRUCTURE

We anticipate, due to the size of the forcemains, that a new underground manhole will be required on Lakeshore Road at Alexandria Avenue. The structure will allow the forcemain to discharge to the gravity sewer which will transport the effluent to the treatment plant.

9.6 EXISTING SYPHONS UNDER COOKSVILLE CREEK

The existing syphons will be decommissioned as part of this project. Decommissioning will include cleaning, grouting the syphons and sealing the accesses on both sides of the creek.

10 Next Steps

The project team on behalf of the Region will be publishing this report for a public review period. The Class EA process entitles members of the public, interest groups and review agencies to review the ESR for thirty-days (30). During this time, any person, interest group or agency that has outstanding concerns which cannot be resolved by discussion with the Region may request a Part II Order by submitting a written request to the Ministry of the Environment at the following address:

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If no Part II Order requests are received within the thirty-day (30) review period, the Region will proceed with design and construction of the preferred design concept.