The Corporation of the Township of Centre Wellington

Schedule B
Municipal Class Environmental Assessment

Replacement of Trunk Storm Sewer

Victoria Crescent, Elora

Project File Report

TRITON ENGINEERING SERVICES LIMITED
Consulting Engineers

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1.0 INTRODUCTION

The Corporation of the Township of Centre Wellington (Township) initiated a Municipal Class Environmental Assessment (Class EA) in June 2016 to evaluate feasible solutions to address the severe deterioration of stormwater infrastructure, namely the trunk storm sewer located between Victoria Crescent and the outlet to Irvine Creek, in the former village of Elora (project). The trunk storm sewer has insufficient cover and the overall condition of the aging sewer is extremely poor. The Class EA process followed the procedures as set out in the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment document, dated October 2000, and as amended in 2007, 2011, and 2015. Triton Engineering Services Limited (Triton) was retained to administer the Class EA on behalf of the Township.

This Class EA Project File Report (herein referred to as Project File or Report) has been prepared to document the Class EA planning and evaluation process followed for this project, and includes the following major components:

- An overview of the general project/study area and environmental setting.
- A summary of relevant background information associated with the project and justification for addressing existing conditions.
- A description of the alternative solutions considered and evaluated.
- Documentation of the decision-making process used in selection of the preferred alternative.
- A summary of the public consultation process and results.
- A description of the preferred alternative and next steps.

2.0 CLASS ENVIRONMENTAL ASSESSMENT PROCESS

2.1 Ontario Environmental Assessment Act

In accordance with the Ontario Environmental Assessment Act (EAA), its purpose *is 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* (R.S.O. 1990, c. E. 18, s.2). The EA Act sets out a planning and decision-making process for environmental assessment (EA) projects initiated by the public sector (i.e., provincial ministries and agencies, municipalities and public bodies) so that all potential environmental effects of the feasible alternative solutions for a project are identified and considered before the preferred alternative solution is implemented. Public consultation is a mandatory component of the process.

There are two types of assessments within the EA Act; Individual EAs and streamlined EAs. Individual EAs require approval from the Ministry of the Environment, Conservation and Parks (MECP), as these large-scale, complex projects have the potential for significant effects on the environment. Routine, smaller-scale projects that are expected to result in predictable and

manageable effects on the environment are categorized as streamlined EAs. Streamlined EAs follow a streamlined self-assessment and decision-making process. They do not require formal approval from MECP (i.e., are pre-approved or exempt) unless an elevation request for preparation of an Individual EA is made or if environmental concerns cannot be resolved through the Class EA process.

Types of Streamlined EA projects include Class EAs by regulation and Class EAS by activity. Class EAs by regulation include electricity projects, waste management projects and transit projects. There are 11 "parent" Class EA categories/activities within Ontario, as follows:

1. Ministry of Northern Development and Mines Under the Mining Act
2. Forest Management on Crown Lands in Ontario
3. GO Transit
4. Minor Transmission Facilities
5. Municipal Infrastructure Projects
6. Provincial Parks and Conservation Reserves
7. Provincial Transportation Facilities
8. Public Works
9. Remedial Flood and Erosion Control Projects
10. Resource Stewardship and Facility Development Projects
11. Waterpower Projects

Proponents must follow the approved class environmental assessment document corresponding to the activity/project being planned. It should be noted that requirements of applicable regulatory agencies must be completed in addition to the Class EA process; however, some overlap may exist.

This Project is categorized as a Municipal Infrastructure Project and follows the streamlined self-assessment and decision-making process as set out in the MEA Class EA document, dated October 2000, and as amended in 2007, 2011, and 2015.

2.2 Municipal Class EA Process

Municipal Class EA (herein referred to as Class EA) projects involve municipal sewage (sanitary and storm), potable water and transportation projects that are carried out routinely and have predictable environmental effects that can be mitigated.

In addition to providing Municipalities with an approved self-assessment process, the Class EA serves as a public statement of the decision-making process under which municipal projects are planned and implemented. The Municipal Class EA process reflects the following five key principles for successful environmental assessment planning under the EAA:

- consultation with affected parties early on and throughout the process such that the planning process is a cooperative venture.

- consideration of a reasonable range of alternatives, both the functionally different "alternatives to" and the "alternative methods" of implementing the solution.
- identification and consideration of the effects of each alternative on all aspects of the environment.
- 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, to allow "traceability" of decision-making with respect to the project.

The Municipal Class EA categorizes projects according to their potential impact on the environment. This has resulted in the development of the following four Class EA project schedules:

Schedule "A" - Pre-Approved Project: This Schedule includes activities that are limited in scale, have minimal adverse environmental effects and include a number of maintenance and operation activities. As a pre-approved project, it may proceed to implementation without following the full Class EA planning process. Schedule A projects generally include normal or emergency operational and maintenance activities.

Schedule "A+" - Pre-Approved Project with Public Consultation Prior to Implementation: Activities under this Schedule require the Municipality to inform the public of what is to be undertaken in their local area prior to implementation. There is no appeal mechanism to the MECP on these projects for a Part II Order under the EAA and the manner in which the public is advised is to be determined by the Municipality.

Schedule "B" - Projects Subject to Public Screening: Schedule B projects have the potential for some adverse environmental effects. The Municipality is required to undertake a screening process involving mandatory contact with directly affected public and relevant review agencies to ensure that they are aware of the project and that their concerns are addressed. A project file must be prepared and filed for review by the public and review agencies. Activities under this Schedule generally include improvements and minor expansions to existing facilities. There is an appeal mechanism for a Schedule B project called a Part II Order Request; however, only if it applies to potential adverse impacts to constitutionally protected Aboriginal and treaty rights. Ultimately, the Minister makes the final decision on all other comments/concerns/input, if any, as to whether the project requires a higher level of assessment, if it should be approved with conditions, or if it can proceed without conditions.

Schedule "C" - Project Subject to the Full Class EA Planning Process: Activities under this Schedule have the potential for significant environmental effects and must proceed under the full planning and documentation procedures specified in the Class EA document. An Environmental Study Report (ESR) must be prepared and filed for review by the public and review agencies. Schedule C projects generally include the construction of new facilities and major expansions to existing facilities. There is an appeal mechanism for a Schedule B project called a Part II Order Request; however, only if it applies to potential adverse impacts to constitutionally protected

Aboriginal and treaty rights. Ultimately, the Minister makes the final decision on all other comments/concerns/input, if any, as to whether the project requires a higher level of assessment, if it should be approved with conditions, or if it can proceed without conditions.

The planning and design process for each Schedule varies. Figure 1 outlines the five phased planning process. A description of each phase is provided below.

***Phase 1*:** The problem statement that is to be addressed by the project is developed. Notification of the project undertaking to the public, review agencies and interested parties is optional in this Phase.

***Phase 2*:** Alternatives to address the problem are identified and evaluated in the context of potential natural, social and environmental impacts resulting in the selection of a preferred planning alternative. Consultation with the public, review agencies and interested parties is mandatory in Phase 2 to solicit input and comment.

***Phase 3*:** Alternative design concepts for the implementation of the preferred solution identified in Phase 2 are developed and evaluated, including additional mandatory consultation with the public, review agencies and interested parties.

***Phase 4*:** This is the culmination of the planning and design process for Schedule C projects in which all project activities, including the consultation process and results, are documented and published in an Environmental Study Report.

***Phase 5*:** Implementation of the preferred alternative including applicable mitigation measures as identified through the Class EA process.

2.3 Schedule B Class EA Approach

Consistent with the Municipal Class EA (MEA, October 2000, and as amended in 2007, 2011, and 2015), this project is considered a Schedule “B” undertaking. The Schedule “B” Class EA process involves Phases 1 and 2 of the planning process (refer to Figure 1), which includes identification of the Problem/Opportunity Statement, public and agency consultation (two mandatory points of contact), and evaluation of a reasonable range of alternatives that have been identified to address the Problem/Opportunity Statement.

Upon finalization of Phases 1 and 2, a Notice of Completion is issued, which allows the public and review agencies a minimum period of 30 calendar days to review and provide comment and/or input, addressed to the Proponent, on the Class EA documentation for the project. For this project, the Class EA documentation is compiled into this Report. Following the initial 30 calendar day public review period, the project is subject to an additional 30 calendar day review period for MECP to review the project. During the additional 30 calendar day review period, the MECP will decide if the Minister requires a higher level of assessment on the project or if it should be approved with conditions, or if it can proceed without conditions. Consistent with the *COVID-19 Economic Recovery Act*, passed by the Province on July 21, 2020, a project can only be subject to a higher

level of assessment (i.e., Part II Order request granted) if there are concerns regarding potential adverse impacts to constitutionally protected Aboriginal and treaty rights.

2.4 Consultation

Consultation with government approval agencies, Indigenous Communities and the general public is an important element of responsible environmental decision making. These parties must be provided with opportunities to contribute to the decision-making process. Consultation protects the public interest and helps to ensure that concerns are identified early in the project and considered/addressed, where possible.

As per the Code of Practice titled: Consultation in Ontario's Environmental Assessment Process, the purpose of consultation is as follows:

- to provide information to the public;
- to consult with Indigenous Communities;
- to identify persons, groups and communities who may be affected by or have an interest in the undertaking;
- to ensure that government agencies and ministries are notified and consulted early in the process;
- to identify concerns that might arise from the undertaking;
- to create an opportunity to develop proponent commitments in response to local input;
- to focus on and address public concerns rather than regulatory procedures and administration;
- to provide appropriate information to the MECP to enable a fair and balanced decision; and,
- to expedite decision making.

Section 7 of this Report outlines and documents the consultation completed for this Class EA project.

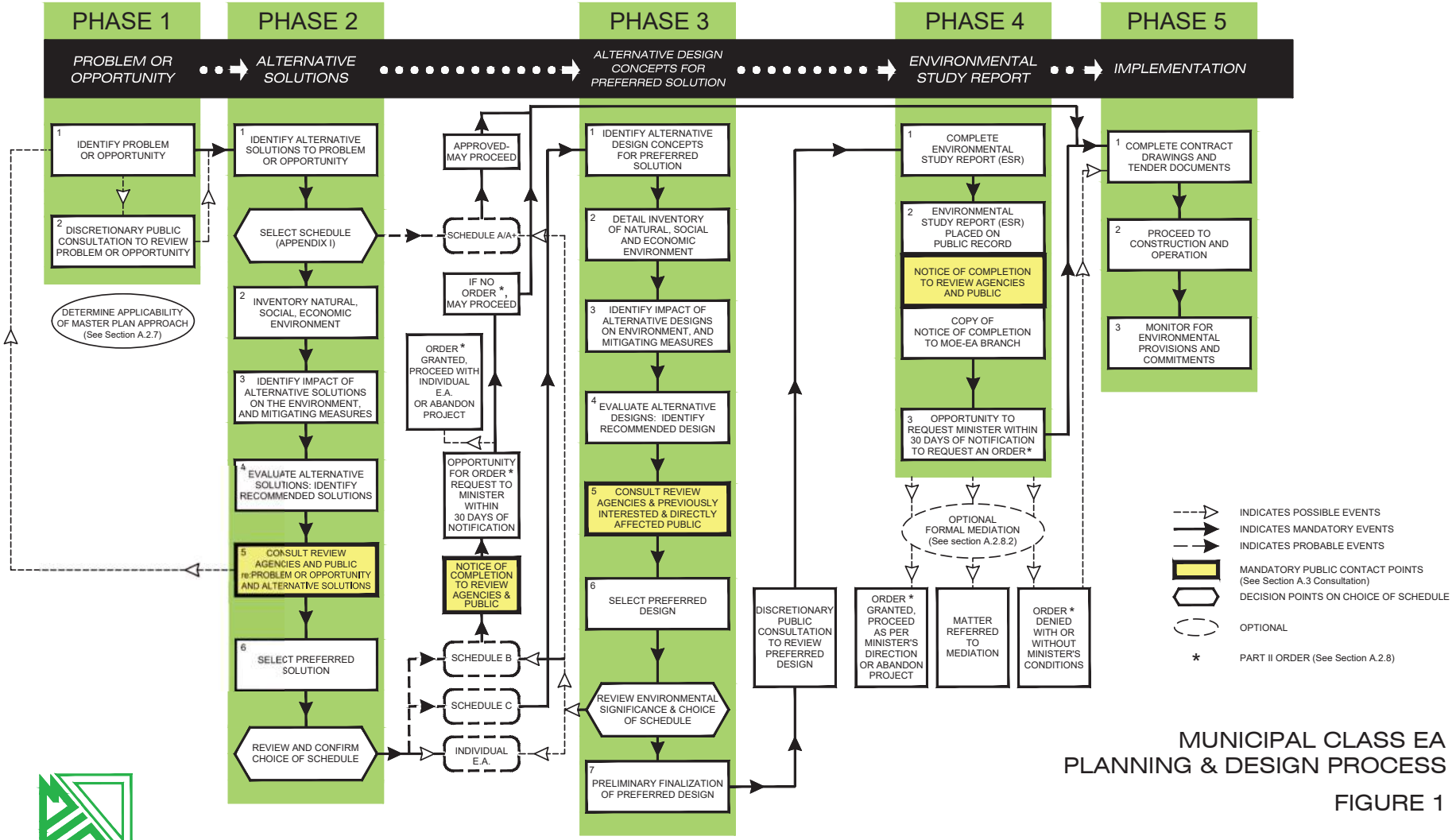
3.0 PROJECT SUMMARY

3.1 Project Background

As part of their routine operation and maintenance activities, the Township's Environmental Services Department documented evidence of severe deterioration of the 600 mm diameter concrete trunk sewer, which has insufficient cover, with exposed concrete visible in some locations. The trunk sewer, which is estimated to be more than 80 years old, is located on private properties across 190 and 200 Victoria Crescent, Elora. The upstream end of the trunk sewer is connected to a catchbasin located on the west side of Victoria Crescent, near the southeast corner of 200 Victoria Crescent. The trunk sewer crosses at the approximate mid-point of the property line into 190 Victoria Crescent, where it connects to an outlet structure located below the Irvine Promenade Trail, which has been constructed through the east bank of the Irvine Creek. The trunk sewer length between the connection to the catchbasin on Victoria Crescent and the outlet structure is approximately 125 m.

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*



MUNICIPAL CLASS EA
PLANNING & DESIGN PROCESS

FIGURE 1

TRITON ENGINEERING SERVICES LIMITED
Consulting Engineers

A Plan of Survey showing the location of the trunk sewer is presented in Appendix A. Currently, the Township has an unregistered easement over these properties for drainage purposes, in accordance with provisions within the Municipal Act, which allows the Township the right to enter onto the property to repair and/or maintain the infrastructure. The Township has made efforts to obtain a registered easement over these properties for drainage purposes; however, this has not been established.

The major natural overland flow route from the contributing catchment area is across (and between) house numbers 190 and 200 Victoria Crescent. It generally follows the alignment of the existing trunk sewer, to across the Irvine Promenade Trail and into the Irvine Creek (Elora Gorge).

In September 2006, as part of recommendations from a technical servicing review for a proposed development (refer to Appendix B), the adequacy (as it relates to hydraulic capacity) of the storm outlet discharging to Irvine Creek from the Victoria Crescent trunk sewer was investigated (i.e., the storm sewer was videoed using closed circuit television [CCTV]). In order to thoroughly examine the storm outlet, it was necessary to include the contributing overall catchment and storm system in the study.

The CCTV investigation of the trunk sewer revealed that a residential gas service had been installed through the concrete trunk sewer, therefore breaking the seal, with additional protrusions through the pipe walls in another location where efforts to install the gas main were attempted. Further, it was identified that an approximate 10 m section of the sewer was sagging; large horizontal cracks were present within a 2 m section of the sewer; there is a presence of a significant pile of concrete at one of the sewer pipe joints; and a steep downward slope at the tail of the concrete pipe where it connects to the PVC outfall structure. The results of the CCTV investigation, which identified the defects that are concerning to the performance and structural stability of the trunk sewer is summarized in a Memorandum dated June 1, 2017, which is presented in Appendix C.

It should be noted that improvements (improve depth, grade, and size) to the outlet structure occurred in 2003 in anticipation of future reconstruction of the upstream storm system. The CCTV investigation of the storm sewer on Smith Street, upstream of the trunk sewer revealed that the invert of the pipe was covered by a layer of gravel and stones; however, the condition of the pipe was good until near the downstream end, toward the trunk sewer, where it was noted that the concrete was in poor condition.

Based on the investigation completed, it was recommended that the storm sewer on Smith Street, from Henderson Street to Victoria Crescent be upgraded to meet minimum depth, sizing and grade requirements to adequately service the overall catchment (including proposed future development). The concern with the recommendation was that in order to achieve adequate cover for this section of pipe, the trunk sewer downstream of Victoria Crescent would also need to be lowered to allow future development of the upstream property.

Additional concerns surrounding the condition of the trunk sewer and associated infrastructure has been brought to the attention of the Township from private property owners. In 2013, storm drainage

improvements were made through retrofitting the catch basin on Victoria Crescent at Smith Street (in line with the trunk sewer) to address flooding issues at downstream private properties that are located adjacent to the trunk sewer. It should be noted that the retrofitting of the catchbasin did address flooding during minor storm events; however, it should be noted that for storms exceeding the capacity of the storm sewer system, the major natural overland route for stormwater remains through the depressed landscape across private properties located adjacent to the trunk sewer. The performance of the catch basin and associated storm system is limited to the current conditions and design capacity of the infrastructure.

An on-Site meeting, between Township staff, Triton, and the owners of 190 and 200 Victoria Crescent, was held on April 23, 2014 to discuss the condition of the trunk sewer and the need for its replacement and the proposed route for the sewer reconstruction. At the time of the meeting, the Class EA schedule for the Project had not been decided; however, following the meeting, it was evident that due to the residents' concerns to their private property, a range of alternatives and supporting technical studies would be required for the Project, in accordance with a Schedule "B" undertaking of the Class EA process.

3.2 Phase 1 – Problem/Opportunity Statement

A technical servicing review for a proposed development, within the catchment area contributing stormwater flow to the Victoria Crescent trunk storm sewer, identified the need to improve stormwater infrastructure within the catchment area. Upgrades to the stormwater management system are required to support the proposed development; however, future additions to the upstream portion of the stormwater management system are limited by the downstream trunk sewer (with respect to size, depth, and grade). The outlet structure on the trunk storm sewer was improved in 2003 (with respect to size, depth, and grade) to service the overall catchment area, including expected future development; however, future development in the upstream portion of the catchment area is not possible until the replacement of the deteriorating trunk sewer is addressed. Therefore, the following Problem/Opportunity Statement has been identified:

Severe deterioration of stormwater infrastructure within the catchment area has been identified. Specifically, the aging trunk sewer, which discharges to the Irvine Creek in the vicinity of Victoria Crescent (Elora), is in extremely poor condition and has insufficient cover. Replacement of the trunk sewer is required not only to address the extremely poor condition but also to provide upgrades to meet minimum depth, sizing and grade requirements to provide service to the overall contributing catchment area.

3.3 Phase 2 – Alternative Solutions

Replacement of the trunk storm sewer requires a reasonable range of feasible alternatives that will address the Problem/Opportunity Statement to be identified and assessed, consistent with the Phase 2 of the Class EA process.

The alternative solutions considered for this Project are as follows:

Alternative 1 – Do nothing, meaning that the deteriorating trunk storm sewer will remain and replacement would not occur. The approximate existing trunk storm sewer location is presented on Figure 2.

Alternative 2 – Replace the trunk storm sewer in the same location and maintain the existing outlet structure. Figure 3 presents the approximate trunk storm sewer location for Alternative 2, which is consistent with the location of the existing trunk storm sewer.

Alternative 3 – Decommission and abandon the existing trunk storm sewer (excluding outlet structure) and install a new trunk storm sewer, between the catchbasin in front of 200 Victoria Crescent, along a new alignment that roughly follows the southern boundary of private property located at 200 Victoria Crescent and connect to the existing outlet structure. Figure 3 presents the approximate trunk storm sewer location for Alternative 3.

Alternative 4A – Decommission and abandon the existing trunk storm sewer and outlet structure, and install a new trunk storm sewer, extending from the catchbasin in front of 200 Victoria Crescent, along a new alignment that follows Victoria Crescent in a southerly direction to the intersection with Henderson Street/James Crescent/James Street and east through Victoria Park, as presented on Figure 4. This alternative includes a new outlet structure to be established through the bank of Irvine Creek in a new location.

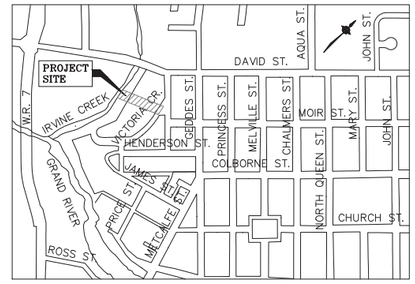
Alternative 4B – Decommission and abandon the existing trunk storm sewer and outlet structure, and install a new trunk storm sewer, extending from the catchbasin in front of 200 Victoria Crescent, along a new alignment that follows Smith Street to Henderson Street, Henderson Street toward intersection with Henderson Street/James Crescent/James Street and east through Victoria Park, as presented on Figure 4. This alternative includes a new outlet structure to be established through the bank of Irvine Creek in a new location. This alternative will also require the existing storm water infrastructure on Smith Street and Henderson Street to be removed. An overview of the alternative solutions is presented on Figure 5.

It should be noted that the option to rehabilitate the existing trunk storm sewer was not considered a feasible alternative solution for the following reasons:

- It would not be able to service the overall contributing catchment area due to limitations of the existing sewer's grade/elevation;
- It would only be a short-term/interim solution as there is no guarantee that a lining would adhere to the existing sewer and/or if it did adhere, how long it would last;
- The potential for sewer failure/collapse due to the structural deterioration would still exist; and
- The trunk storm sewer would not meet current design standards (i.e., depth of cover and grade requirements).

TOWNSHIP OF CENTRE WELLINGTON

REPLACEMENT OF TRUNK STORM SEWER VICTORIA CRESCENT (ELORA)



KEY PLAN – ELORA

LEGEND:

EXISTING STORM SEWER DIRECTION OF FLOW

APPROXIMATE PROPERTY LIMITS

EXISTING STORM SEWER

JUNE 2017 1:250

M6186
FIGURE 2

TRITON ENGINEERING SERVICES LIMITED
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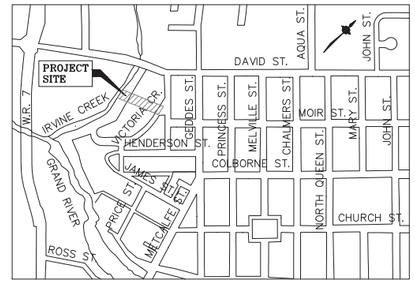
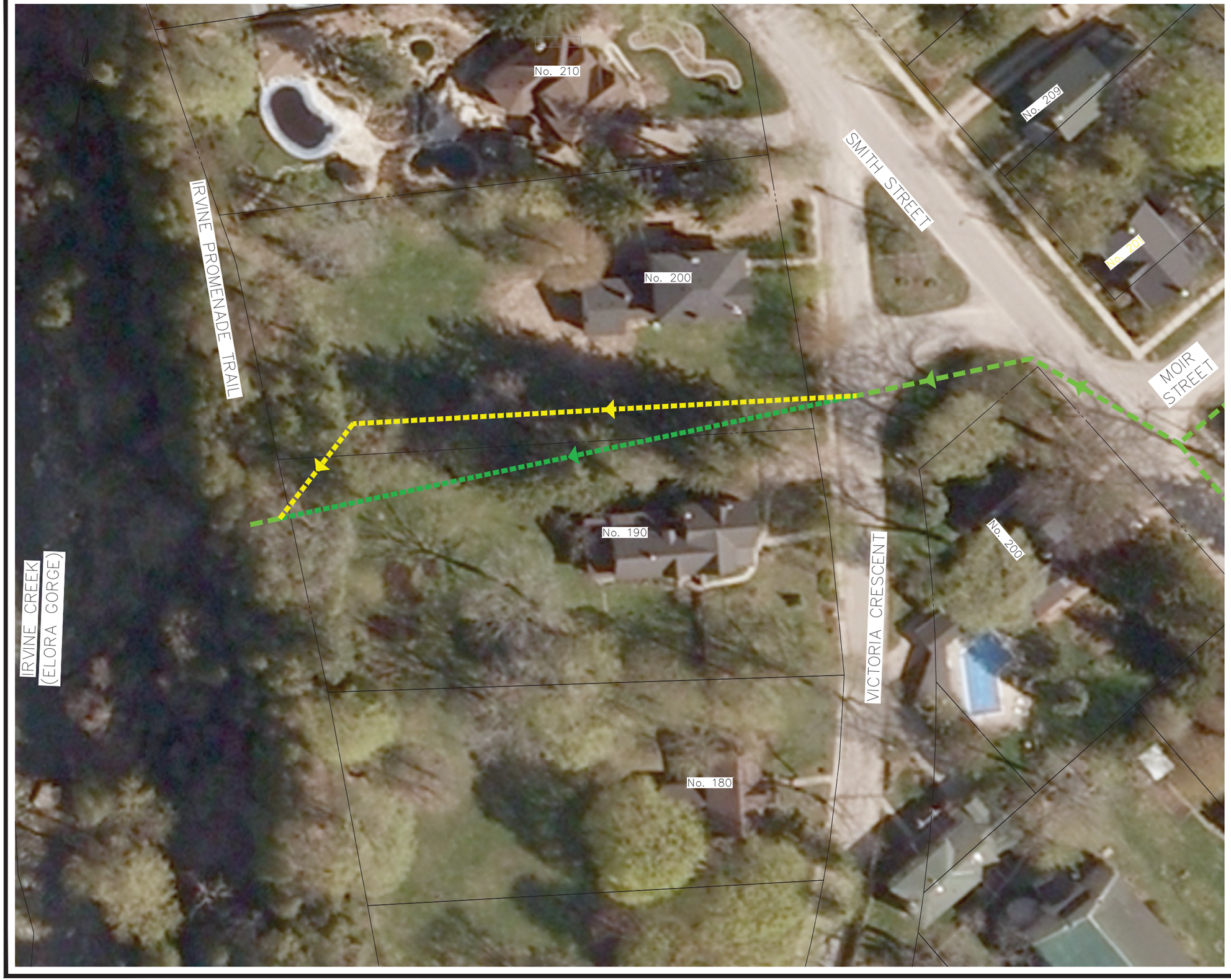
Fergus, Ontario

TOWNSHIP OF CENTRE WELLINGTON

REPLACEMENT OF TRUNK STORM SEWER VICTORIA CRESCENT (ELORA)



KEY PLAN – ELORA



LEGEND:

- EXISTING STORM SEWER DIRECTION OF FLOW
- APPROXIMATE PROPERTY LIMITS
- ALTERNATIVE 2 TRUNK SEWER ALIGNMENT
- ALTERNATIVE 3 TRUNK SEWER ALIGNMENT

ALTERNATIVES 2 AND 3 STORM SEWER ALIGNMENT

JUNE 2017 1:250

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FIGURE 3

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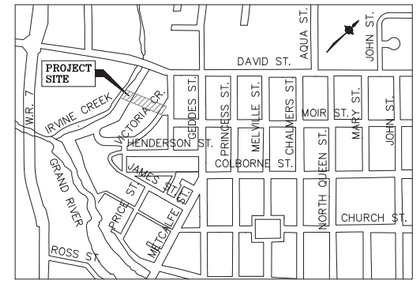
Fergus, Ontario

TOWNSHIP OF CENTRE WELLINGTON

REPLACEMENT OF TRUNK STORM SEWER VICTORIA CRESCENT (ELORA)



KEY PLAN – ELORA

LEGEND:

- EXISTING STORM SEWER DIRECTION OF FLOW
- APPROXIMATE PROPERTY LIMITS
- ALTERNATIVE 4A TRUNK SEWER ALIGNMENT
- ALTERNATIVE 4B TRUNK SEWER ALIGNMENT
- 380.78+ EXIST. GROUND SURFACE ELEVATION (TESL SURVEY, 2017)

ALTERNATIVES 4A AND 4B STORM SEWER ALIGNMENT

JUNE 2017 1:750

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FIGURE 4

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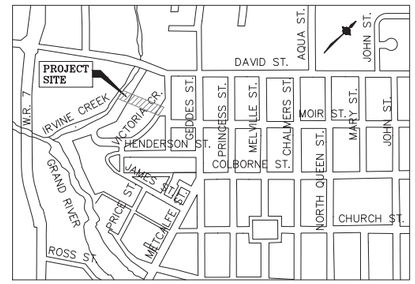
Fergus, Ontario

TOWNSHIP OF CENTRE WELLINGTON

REPLACEMENT OF TRUNK STORM SEWER VICTORIA CRESCENT (ELORA)



KEY PLAN – ELORA

LEGEND:

- APPROXIMATE PROPERTY LIMITS
- EXISTING STORM SEWER DIRECTION OF FLOW
- ALTERNATIVE 2 TRUNK SEWER ALIGNMENT (REPLACE IN EXISTING LOCATION)
- ALTERNATIVE 3 TRUNK SEWER ALIGNMENT
- ALTERNATIVE 4A TRUNK SEWER ALIGNMENT
- ALTERNATIVE 4B TRUNK SEWER ALIGNMENT
- 380.78+ EXIST. GROUND SURFACE ELEVATION (TESL SURVEY, 2017)

ALTERNATIVES 2, 3, 4A & 4B STORM SEWER ALIGNMENTS

AUGUST 2017 1:750

M6186
FIGURE 5

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Consulting Engineers
Fergus, Ontario

4.0 STUDY AREA

The Study Area is located within the community of Elora, in the Township of Centre Wellington, Wellington County. The limits of the Study Area are defined by the approximate limits of disturbance of the alternatives being considered, and is presented on Figure 6.

5.0 INVENTORY OF EXISTING CONDITIONS

The analysis and evaluation of the alternatives is based on impacts to environmental features of the Project Study Area. Before the alternatives can be evaluated, background/existing environmental conditions are defined to determine the magnitude of potential effects (positive or negative) to these features.

The Class EA divides the environment into five categories, with each category divided into its own components that may be impacted through implementation of the alternative solutions in consideration. These categories and example of associated subcategories are as follows:

- Natural Environment
  - Terrestrial Vegetation and Wildlife
  - Fish, Aquatic Wildlife and Vegetation
  - Climate
  - Soils Geology
  - Groundwater
  - Surface Drainage
- Technical Environment
  - Transportation
  - Infrastructure
- Cultural Environment
  - Heritage Resources
  - Archaeological Resources
- Social Environment
  - Residential, Institutional, Commercial and Industrial
  - Recreational Activities
  - Public Health
  - Noise
- Economic Environment
  - Capital and Operational Costs

A physical description and general inventory of the natural, technical, and social/cultural environments of the Study Area was completed to identify any environmental factors that could influence selection of the preferred alternative solution.

Ontario

Ministry of Natural Resources and Forestry

Make-a-Map: Natural Heritage Areas

FIGURE 6 - Project Study Area

Map created:5/17/2022

Notes:

Township of Centre Wellington
Municipal Class Environmental Assessment
Replacement of Trunk Storm Sewer
Victoria Crescent, Elora

Legend

Assessment Parcel

0.4 0 0.18 0.4 Kilometres

Absence of a feature in the map does not mean they do not exist in this area.

5.1 Natural Environment

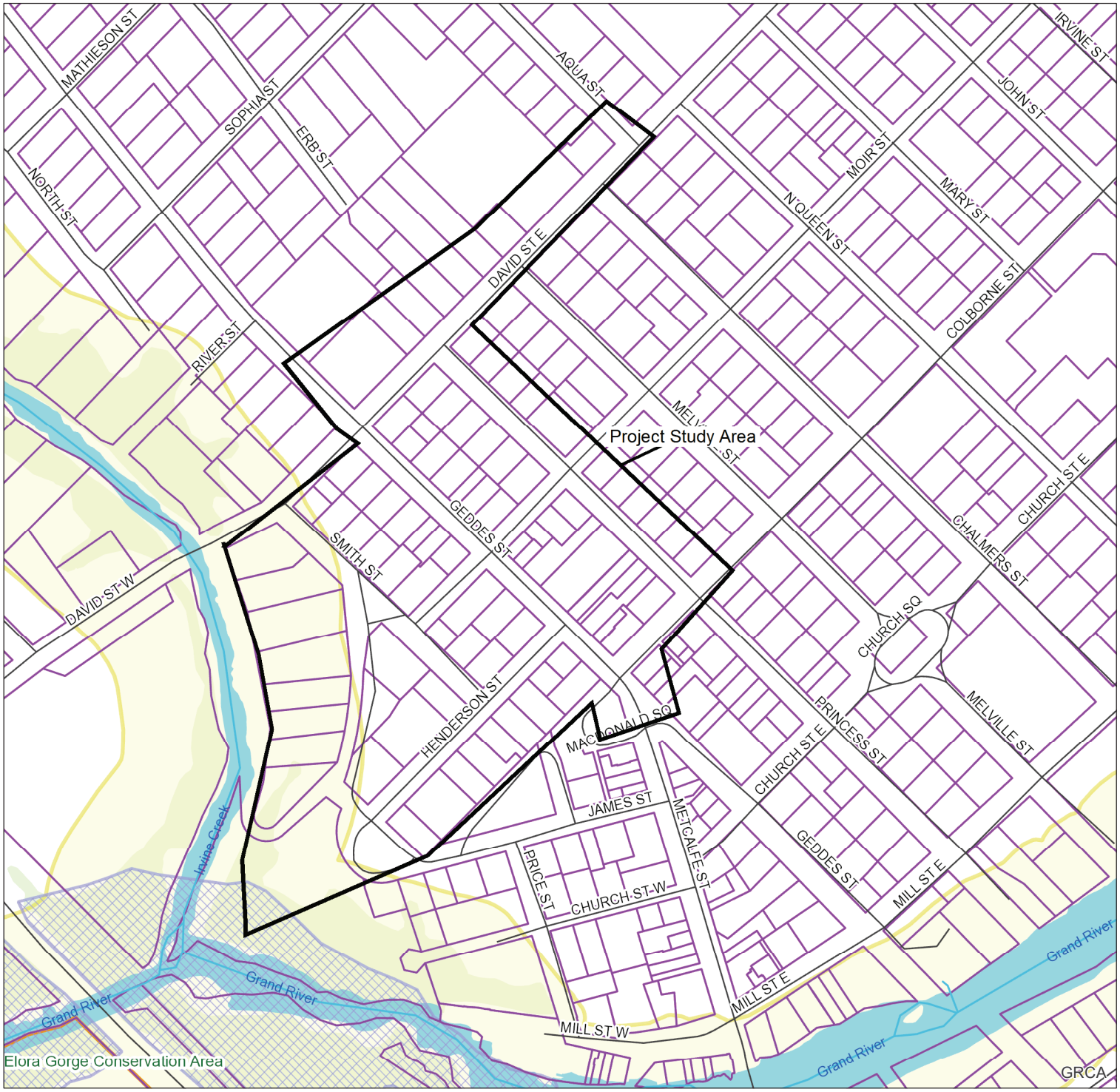
5.1.1 Existing Natural Features

The community of Elora is located within the Grand River Watershed, which ultimately discharges into Lake Erie from the Grand River. Irvine Creek is adjacent to the western side of the Study Area. The confluence of the Irvine Creek with the Grand River is located to the southwest of the Study Area. The Study Area is bounded by Smith Street to the north and Henderson Street to the east. The southern boundary of the Study Area is through Victoria Park at the approximate centerline through the Irvine Promenade Walking Trail. With the exception of the portion of the Study Area within Victoria Park and Irvine Promenade Trail, the majority of the Study Area is within a mature urban residential landscape (i.e., large property sizes, quiet streets, mature trees and landscaping, etc.).

The Project Study Area includes lands categorized as Core Greenlands, as shown on the Land Use Plan, Schedule A-1, which is included in Appendix D. The alternatives under consideration are evaluated in accordance with Section D.8, “Core Greenlands” and in conjunction of Section C.3 “Natural Heritage”, of the Township of Centre Wellington Official Plan (Official Plan), Consolidated January 2013.

The Grand River Conservation Authority (GRCA) mapping database was consulted as part of the desktop investigation to collect background information on the significant environmental features within the Study Area. All of the properties on the west side of Victoria Crescent within the Study Area are located within the GRCA regulation limit. This means that any work proposed within these limits require approval from GRCA prior to implementation. Irvine Creek and the Grand River are both considered GRCA regulated waterbodies and there is a floodplain setback on each side of the waterbodies. The toe of the slope to Irvine Creek is located approximately at or behind the residences on the west side of Victoria Crescent, with overstep and steep slopes down to the Irvine Creek. The landscape east of the Irvine Promenade Trail is considered to be a “built-up” landscape. The Irvine Promenade Trail and west of the trail to the Irvine Creek are identified as forested areas.

The GRCA mapping tool identified an Area of Natural and Scientific Interest (ANSI) within the Study Area, known as the Elora Gorge, which is delineated within Victoria Park and the Irvine Creek near the confluence with the Grand River. An ANSI is representative of land and/or water that contains natural landscapes or features identified by Ontario Ministry of Natural Development, Mines, Natural Resources and Forestry (NDMNRF) as having importance with respect to natural heritage, protection, appreciation, scientific study or education. The ANSI within the Study Area is identified as having regional significance related to life sciences; however, is non-sensitive and does not have restrictions associated with it. Additionally, Victoria Park is also identified by NDMNRF as a Wooded Area. Figure 7 presents the GRCA Regulated Area, ANSI and Wooded Areas within the Study Area.



Grand River Conservation Authority

Date: May 17, 2022

FIGURE 7 - Map of Natural Features

Township of Centre Wellington Municipal Class Environmental Assessment Replacement of Trunk Storm Sewer Victoria Crescent, Elora

Legend

- Municipal Boundary (GRCA)
- Watercourse - Local (GRCA)
- Parcel - Assessment Public (MPAC/MNRF)
- Wetland (GRCA)
- ANSI (ON)
- CA Boundary - Local (GRCA)
- Waterbody - Local (GRCA)
- Regulation Limit (GRCA)
- Wooded Area (MNRF)

0 25 50 100 150 Metres

N

Map Centre (UTM NAD83 z17): 545,837.99 4,836,990.35

This map is not to be used for navigation

NAD 1983 UTM Zone 17N

Scale: 4,474

5.1.2 Tree Inventory

Aboud and Associates Inc. (Aboud) was retained by Triton, on behalf of the Township, to conduct an assessment of the trees within the anticipated limits of disturbance for each of the alternatives. Aboud collected tree information on September 12, 2017 and a summary of their assessment is provided in Appendix E.

5.1.3 Species at Risk

A desktop investigation for information pertaining to Species at Risk (SAR) under the provincial *Endangered Species Act* and *Federal Species at Risk Act* (SARA) was performed to identify the potential presence of at-risk species within the Study Area.

In accordance with data presented on the NDMNRF website, 24 at risk species, consistent with SARA, were identified within Wellington County. Of the 24 at risk species identified, nine species have an Endangered status, seven species have a Threatened status, and eight species have a status of Special Concern. Table 1 provides a summary of the at-risk species.

NHIC mapping available through the NDMNRF website was used to identify the presence of any Species at Risk in Ontario (SARO) within the Study Area. In accordance with NHIC mapping, one SARO, was observed within a 1 km^2 grid encompassing the Study Area. The SARO identified was the Black Redhorse (*Moxostoma duquesnei*), which is a fish and mussels species type, and has a "threatened" status. This threatened species was last observed in the area in 1982 and is provincially ranked as S2 (imperiled), which means very few (<20) populations exist.

NDMNRF and NHIC both use range maps to protect the exact location of an identified species. Therefore, the SAR identified through the desktop investigation can only be considered as potentially present within the Study Area. Field observations have not been completed to determine whether any of the identified species are present within the Study Area.

Table 1 - Summary of At-Risk Species Potentially Within the Study Area

Species name	Common Name	Species Type	Status
Ambystoma jeffersonianum	Jefferson Salamander	Amphibians	Endangered
Haliaeetus leucocephalus	Bald Eagle	Birds	Special Concern
Hirundo rustica	Barn Swallow	Birds	Threatened
Chlidonias niger	Black Tern	Birds	Special Concern
Dolichonyx oryzivorus	Bobolink	Birds	Threatened
Sturnella magna	Eastern Meadowlark	Birds	Threatened
Ammodramus henslowii	Henslow's Sparrow	Birds	Endangered
Lanius ludovicianus	Loggerhead Shrike	Birds	Endangered
Asio flammeus	Short-eared Owl	Birds	Special Concern
Icteria virens	Yellow-breasted Chat	Birds	Endangered
Moxostoma duquesnei	Black Redhorse	Fish and Mussels	Threatened
Clinostomus elongatus	Redside Dace	Fish and Mussels	Endangered
Notropis photogenis	Silver Shiner	Fish and Mussels	Threatened
Lampsilis fasciola	Wavy-rayed Lampmussel	Fish and Mussels	Threatened
Bombus affinis	Rusty-patch Bumble Bee	Insects	Endangered
Castanea dentata	American Chestnut	Plants and Lichens	Endangered
Asplenium scolopendrium	Hart's-tongue Fern	Plants and Lichens	Special Concern
Carex lupuliformis	False Hop Sedge	Plants and Lichens	Endangered
Potamogeton hillii	Hill's Pondweed	Plants and Lichens	Special Concern
Thamnophis butleri	Butler's Gartersnake	Snakes and Lizards	Endangered
Thamnophis sauritus	Eastern Ribbonsnake	Snakes and Lizards	Special Concern
Emydoidea blandingii	Blanding's Turtle	Snakes and Lizards	Threatened
Graptemys geographica	Northern Map Turtle	Snakes and Lizards	Special Concern
Chelydra serpentina	Snapping Turtle	Snakes and Lizards	Special Concern

5.1.4 Breeding Bird Habitat

The online Atlas of Breeding Birds of Ontario was consulted to identify the potential presence of breeding birds within the Study Area. The Study Area is encompassed within geographic survey and area entitled Square 17NJ45 (Region 47). A total of 85 bird species were identified as having breeding evidence. With respect to breeding status, 36 species were confirmed, 9 species were categorized as possible, and 40 species were categorized as probable

The Study Area, which is approximately 0.1 km^2 represents 0.1% of the geographic square (100 km^2). Majority of the Study Area is urbanized, further limiting the natural habitat for breeding birds identified as having breeding evidence within Square 17NJ45. Field observations have not been

completed to determine whether the presence of breeding birds and breeding bird habitat are present within the Study Area.

5.1.5 Physiography and Soils

GRCA online mapping was consulted to obtain surficial and Paleozoic geology information for the Study Area. The GRCA mapping tool uses NDMNRF data to define physiography and soils characteristics of the Site. The west side of Victoria Crescent and through Victoria Park, west of the parking loop, including the Elora Gorge, is situated within the Guelph Formation and Amabel Formation, which is dolomite material (Paleozoic bedrock) that was deposited during the Silurian age. This material has variable permeability and drains to the west to Irvine Creek. Surface soils consist of clay, silt, gravel and diamicton. The eastern half of the Study Area (including Victoria Crescent and the east property boundaries for private properties on the west side of Victoria Crescent) is characterized by Outwash, which is primarily gravel material that was deposited during the Wisconsinan age. This material is highly permeable and drains to the west to Irvine Creek.

The physiography of the Study Area is within the Guelph Drumlin Field.

Surficial and Paleozoic geology of the Study Area is presented on Figure 8.

5.1.6 Groundwater

MECP's publicly accessible online well records mapping was consulted to identify well records, within the Study Area, which identified three domestic wells, constructed in 1946, 1947 and 1987, with depths of 20.4 m, 45.7 m and 63.1 m below ground surface (MECP, 2022). The static water level on the well records ranges from 2.7 m to 15.2 m below ground surface.

5.1.7 Surface Water

The trunk storm sewer outlets to the Irvine Creek, which is a tributary of the Grand River. The Irvine Creek is located adjacent to the rear boundary of the properties on the west side of Victoria Crescent between Smith Street and James Street. These properties are also located within the GRCA regulation limit of both of the Irvine Creek and Grand River. The Regulated waterbodies and associated lands within the GRCA regulation limit are subject to *Ontario Regulation (O.Reg.) 150/06: GRCA Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses*.

5.1.8 Source Water Protection

The Study Area is located within the Grand River Source Protection Area of the Lake Erie Source Protection Region and is therefore subject to the approved Grand River Source Protection Plan, Chapter 7 - County of Wellington Source Protection Plan, dated February 9, 2022. Consistent with the MECP Source Protection Information Atlas, and as illustrated on Figure 9, the Study Area is

located within Zones B and C of the GRCA Wellhead Protection Area. Further Source Water Protection details for the Study Area are summarized in Table 2, as follows:

Table 2 – Summary of Source Water Protection Details for the Study Area

	Wellhead Protection Area	
Details	B	C
WHPA Score	10	8
WHPA-E (GUDI)	No	No
Intake Protection Zone	3	3
IPZ Score	5	5
Issue Contributing Area	No	No
Significant Groundwater Recharge Area?	No	No
Highly Vulnerable Aquifer?	Yes	Yes
HVA Score	6	6
Event Based Area?	No	No
WHPA Q1	Yes	Yes
WHPA Q1 Stress	Significant	Significant
WHPA Q2	Yes	Yes
IPZ Q	No	No

A summary of the Significant Drinking Water Threats, as per the MECP Source Protection Information Atlas, is provided in Appendix F.

The construction of a new trunk storm sewer from Victoria Crescent to either the existing (Alternatives 2 and 3) or alternative outfall locations (Alternatives 4A and 4B) is not a significant drinking water threat; however, considering that the Study Area is located within a wellhead protection area for water quantity with significant stress, there are policies within the Grand River Source Protection Plan, Chapter 7 – Wellington County that are applicable to the project, which should be incorporated in future considerations, through consultation with the local source water protection authority, as follows:

- WC-MC-23.1 and WC-MC-23.2 directed at MECP regarding terms and conditions to address groundwater recharge considerations in environmental compliance approvals for existing and future stormwater management facilities
- WC-MC-3.7 directed at MECP regarding terms and conditions in environmental compliance approvals for existing or future stormwater management facilities
- WC-CW-21.1 directed at the Township regarding monitoring of groundwater and surface water systems to assess impact from consumptive water takings and / or recharge reducing activities
- WC-CW-21.2 and WC-NB-21.3 directed at the County, Grand River Conservation Authority, Municipalities and the MECP, regarding sharing information about water resources between interested parties
- WC-CW-21.4 directed at Municipalities regarding education and outreach initiatives
- WC-NB-21.5 directed at MECP regarding continuation of assessments and monitoring programs (Tier 3 Models)

- WC-MC-23.3 directed at the County regarding settlement area expansions
- WC-MC-23.4 directed at the Planning Approval Authorities regarding best management practices for new developments
- WC-MC-23.5 directed at the Planning Approval Authorities regarding water balance assessment for the new developments
- WC-CW-23.6 directed at Municipalities regarding design standards for maintaining and enhancing groundwater recharge and
- WC-NB-23.7 directed at MECP regarding inspection planning.

5.2 Technical Environment

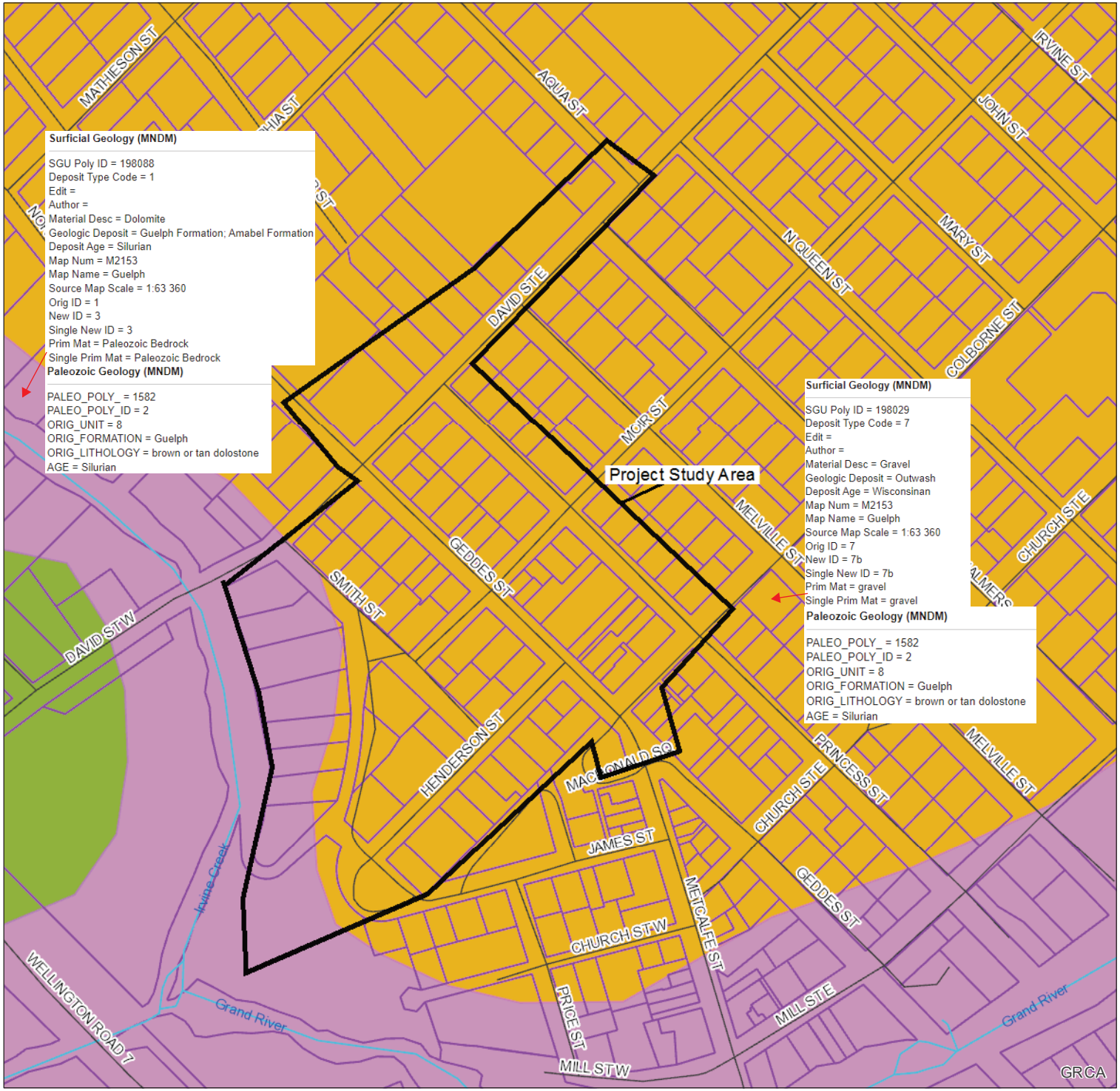
5.2.1 Planning Considerations

The Township of Centre Wellington Official Plan (2013) (Official Plan) was consulted to determine planning considerations applicable to the project. The Study Area is located within the Urban Boundary and Heritage Area. Additionally, land uses within the Study Area include Core Greenlands, Recreational, and Residential. A copy of Schedule A-1, showing the Land Use Plan for Fergus, Elora-Salem is provided in Appendix D.

The Official Plan (2013) outlines policies specific to the land use schedule. Consistent with the Official Plan (2013), the objectives, permitted uses, and design considerations and policy for stormwater management will be considered in evaluation of the alternatives and detailed design of the preferred alternative. In accordance with the Official Plan (2013), studies will be undertaken, as necessary, to assess impacts of the project as it relates to development (including municipal services) within the Township.

5.2.2 Existing Storm Water Infrastructure

As described in Section 3.1, a CCTV recording of the trunk storm sewer was completed in 2006 as part of a technical servicing review for a proposed development in the upstream portion of the contributing overall catchment area to the trunk sewer (refer to Appendix C). The CCTV recording revealed several structural concerns with respect to stability of the trunk sewer (i.e., severe deterioration). Site reconnaissance resulted in the identification of insufficient cover over the trunk storm sewer, with some areas of concrete sewer exposed above grade. Additionally, storm sewers directly upstream of the trunk sewer showed signs of significant deterioration, based on observed conditions as part of the technical servicing review. In order to allow for servicing of future developments in the upstream portion of the contributing catchment area, upgrades to the storm sewer network, which is controlled by the grade and depth at the downstream end of the storm system (i.e., trunk storm sewer), are required. Appendix B provides a summary of the technical servicing review.



Grand River Conservation Authority

Date: May 17, 2022

FIGURE 8 - Surficial and Paleozoic Geology

Township of Centre Wellington Municipal Class Environmental Assessment Replacement of Trunk Storm Sewer Victoria Crescent, Elora

Legend

- Parcel - Assessment Public (MPAC/MNRF)

Surficial Geology (MNDM)

- Clay
- Diamicton
- Fill
- Gravel
- Organic deposits
- Paleozoic Bedrock
- Sand
- Silt

Paleozoic Geology (MNDM)

- Amabel
- Amherstburg
- Bass Islands
- Bertie
- Bois Blanc
- Clinton-Cataract
- Dundee
- Guelph
- Hamilton
- Lockport
- Lucas
- Marcellus
- Onondaga
- Oriskany
- Queenston
- Salina

- Watercourse (GRCA)

0 25 50 100 150 Metres

N

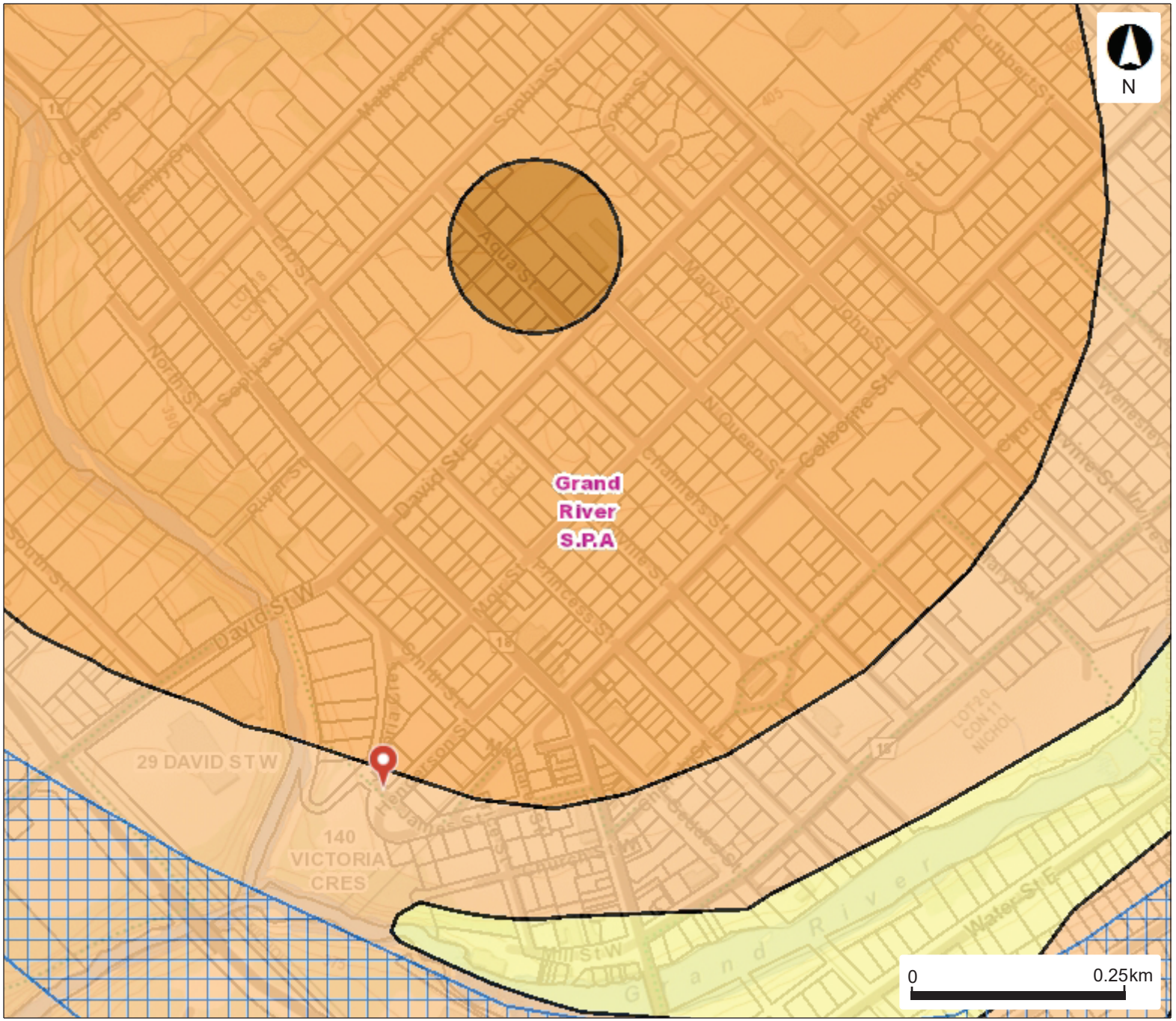
Map Centre (UTM NAD83 z17): 545,837.99 4,837,021.13

This map is not to be used for navigation

NAD 1983 UTM Zone 17N

Scale: 4,474

FIGURE 9 - WHPA/Source Water Protection Area Mapping



Legend

- Source Protection Areas
- Issue Contributing Areas
- WHPA Groundwater Under Direct Influence (WHPA-E)
- Wellhead Protection Area
  - A
  - B
  - C
  - C1
  - D
  - F
- Intake Protection Zone 1
- Event Based Areas
- Intake Protection Zone 2
- Assessment Parcel with Addre

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Environment, Conservation and Parks (MECP) shall not be liable in any way for the use or any information on this map. of, or reliance upon, this map.

Ontario

Map Created: 5/13/2022
Map Center: 43.68553 N, -80.43035 W

5.3 Social Environment

In 2009 and 2014, prior to the initiation of this Class EA, the Township and the property owners of Houses 190 and 200 Victoria Crescent discussed granting an easement to the Township for the existing storm sewer located on the properties. The property owners of Houses 190 and 200 Victoria Crescent expressed concerns surrounding the potential loss of mature trees (includes tree itself and/or its root system) located on the existing property line between the two properties, which are located directly over the existing trunk sewer. These property owners explained that the presence of the existing trees is what attracted them to purchase their properties and that the existing trees contribute to the cultural heritage landscape of the area. Additionally, they expressed concerns that removal of the existing mature trees and a legal easement over the trunk sewer would negatively impact the value of their properties.

5.4 Cultural Heritage Environment

Cultural heritage resources include archaeological resources, built heritage resources and cultural heritage landscapes.

5.4.1 Built Heritage Resources and Cultural Heritage Landscapes

Consistent with the Class EA planning requirements, the cultural heritage environment was considered in the evaluation of alternatives. The MHSTCI *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* checklist was completed to determine whether the Study Area contains known or potential built heritage resource(s) or cultural heritage landscape(s). With assistance from the Township's Planning and Development Department, the screening checklist was completed and identified known and potential built heritage resources. The Study Area lies within a Heritage Area, as identified in the Township's Official Plan. A copy of the completed checklist is included in Appendix G.

Richard Unterman of Unterman McPhail Associates was also consulted to discuss this Class EA and recommended that a Cultural Heritage Evaluation Report (CHER) and Heritage Impact Assessment (HIA) be completed once the preferred alternative was selected. Therefore, a CHER for the property at 200 Victoria Crescent will be completed by a qualified heritage consultant. If the property was found to be of cultural heritage value or interest, then an HIA will be completed by a qualified heritage consultant. An HIA for the property at 190 Victoria Crescent will be completed by a qualified heritage consultant.

All CHERs and HIAs will be completed as soon as possible during detailed design and prior to any ground disturbing activities to ensure recommendations are addressed and incorporated into the project. All draft CHER and HIA will be submitted to MTCS, municipal heritage committee and heritage planner for review and comment and will be made available to local organizations or individuals who have expressed interest in review.

5.4.2 Archaeological Resources

Consistent with MHSTCI requirements, the *Criteria for Evaluating Archeological Potential* checklist was used to determine if the Project Study Area has the potential to contain archaeological resources. Due to the Project Study Area being recognized for its cultural heritage value, archaeological assessment of the Study Area is required, according to the *Criteria for Evaluation Archeological Potential* checklist, presented in Appendix H.

A Stage 1 Archaeological Assessment (Project Information Form [PIF]) P057-0836-2016) was completed by ASI Archaeological & Cultural Heritage Services and entered into the Ontario Public Register of Archaeological Reports. A copy of the letter from MTCS to ASI informing that the report is compliant with the *Ontario Heritage Act* (OHA) and Standards and Guidelines for Consultant Archaeologist is provided in Appendix H.

Stage 1 Archaeological Assessments include a background study of historical data and property inspection of the study area to determine the archaeological potential of the properties that may be disturbed as a result of Project implementation. The Stage 1 Archaeological Assessment for this Class EA covered approximately 800 m^2 at the existing location of the trunk sewer on private properties of 190 and 200 Victoria Crescent and the Irvine Promenade Trail at the existing outlet structure. The limits of the study area considered for the Stage 1 Archaeological Assessment are presented on Figure 6 of ASI's Stage 1 Archaeological Assessment Report, dated November 22, 2016, which is included in Appendix H. These limits represent the expected limits of disturbance for Alternatives 2 and 3.

Consistent with ASI's Report documenting the Stage 1 Archeological Assessment, the entire Study Area is considered to retain archaeological potential. Within a one-kilometer radius of the Study Area, there are four previously registered archaeological sites; the properties of 190 and 200 Victoria Crescent are on the Township's Municipal Heritage Register; and the potential for identification of Indigenous and Euro-Canadian archaeological resources exists, depending on the degree that the existing soils have been impacted by disturbance; therefore, the following are recommended:

1. Prior to implementing any proposed impacts, complete a Stage 2 archaeological assessment by test-pit survey at five metre intervals.
2. Stage 1 archeological assessment, if the proposed work extends outside of the current Study Area.

A Stage 2 archaeological assessment will be completed as soon as possible during detailed design and prior to any ground disturbing activities to support the design of the preferred alternative.

5.5 Economic Environment

5.5.1 Capital and Operational Costs

The cost associated with implementation of each of the alternatives was estimated to assist in the comparative analysis of the alternatives in regards to the economic environment. Each of the alternatives in consideration vary in terms of the required level of effort to implement, duration of construction activities, extent of infrastructure required, and extent of restoration activities, which also results in varying capital costs between the alternatives. With the exception of Alternative 1 "Do Nothing", it is assumed that operational/maintenance costs for each of the alternatives would be similar and therefore are negligible in the evaluation of alternatives process. Costs for property acquisition or obtaining an easement for the trunk storm sewer are applicable to Alternatives 1, 2 and 3 and would be similar for each of these alternatives. Given that costs associated with property acquisition or obtaining an easement are expected to be minor to moderate in comparison to costs associated with the design, permitting/approvals and construction of Alternatives 4A and 4B and therefore have not been included in the decision matrix. It should be noted that the estimated costs presented Appendix I in the decision matrix for the evaluation of alternatives in Appendix I are preliminary for comparative analysis only and do not reflect detailed engineering design or associated regulatory permits and approvals. Further, discussions surrounding property acquisition related to the project are outside of the scope of this Class EA and are not documented in this Project File Report.

6.0 EVALUATION OF ALTERNATIVE SOLUTIONS

The alternative solutions were evaluated using the decompositional reasoning method. In this method, the predicted effect of an alternative is evaluated for each of the specific environmental components and then combined to draw a conclusion for each alternative as a whole. A weighted decision matrix was used to assist in the comparison of the alternatives since many variables are being considered. A weighted decision matrix uses normalized weights for the evaluation criteria (variables) such that each environmental category corresponds to the number of variables within it. Normalized weighting of the criteria (variables) within an environmental category allows the environmental categories to be relative and easily comparable.

The significance of an environmental criterion (variable) and the predicted effect (performance) of an alternative were assigned a numerical rating to provide a quantitative measurement. Significance weightings were assigned based on an attempt to best represent the viewpoints of all stakeholders. To allow a comparison of the different influences on the environmental aspects of the project, the impact on an environmental component is quantified as the significance weighting multiplied by the performance score, which was assigned based on the anticipated effects from implementation of the alternative. The overall impact of an alternative was calculated as the cumulative score of the total impacts for each environmental category.

Field inspection of the proposed sewer alignments, specific assessment of environmental features within the Study Area, consultation with regulatory agencies, the public and the Township to-date including concerns, attitudes, values, perceptions and preferences, regulatory requirements, and project objectives are incorporated into the assessment of the alternatives and contributed to the assignment of significance weightings for each of the environmental variables. The significance weightings are reflective of existing conditions of the Study Area and correspond to the following scale:

- 1 = Low importance
- 2 = Important
- 3 = High Importance
- 4 = Utmost Importance

The performance of an alternative with respect to its effect on an environmental criterion is in terms of impact interpretation. Consideration of the magnitude, duration, extent, and nature of the predicted effect, as well as any mitigation/compensation measures were assumed in the evaluation of the performance of an alternative solution with respect to each environmental criterion. Performance of an alternative was measured using the following rating system:

- 2 = significant net benefits are expected
- 1 = net positive impacts (benefits outweigh the negative impacts)
- 0 = neutral; no changes to existing conditions are expected
- -1 = net negative impacts (negative impacts outweigh the benefits)
- -2 = significant negative impacts are expected

The goal of the comparative analysis is to manage the subjective and objective complexity of the variables and alternatives through the combination of pre-defined external standards and context-specific judgements and prioritize the alternatives in terms of preference for implementation. The detailed weighted decision matrix used to determine the preliminary preferred alternative is presented in Appendix I. A summary of the results is presented in Table 3. Based on the results of the comparative analysis, the preliminary preferred alternative solution is Alternative 3, since it resulted in the overall least impacts to all environments considered. Alternative 3 involves the construction of a new trunk storm sewer from Victoria Crescent to the existing outfall at Irvine Creek along a new alignment and includes decommissioning and abandoning the existing storm sewer in place.

Table 3 – Summary of Alternatives Evaluation Decision Matrix

CRITERIA		Criteria Significance (1)	Normalized Weighting of Criteria	ALTERNATIVE 1 "Do Nothing" Performance Marking (3)	Impacts (4)	ALTERNATIVE 2 Replace Storm Sewer in Same Location Performance Marking (3)	Impacts (4)	*PRELIMINARY PREFERRED ALTERNATIVE* ALTERNATIVE 3 New Storm Sewer on New Alignment Along Southerly Limit of House No. 200 Victoria Crescent, Connected to Existing Outlet Structure Performance Marking (3)	Impacts (4)	ALTERNATIVE 4A New Storm Sewer on New Alignment Along Victoria Crescent and Through Victoria Park, Including the Installation of a New Outlet Structure Through the Bank of Irvine Creek Performance Marking (3)	Impacts (4)	ALTERNATIVE 4B New Storm Outlet on New Alignment Routed Along Smith St. and Henderson St. and Through Victoria Park, Including the Installation of a New Outlet Structure Through the Bank of Irvine Creek Performance Marking (3)	Impacts (4)
CULTURAL HERITAGE ENVIRONMENT													
• Archaeological Resources • Built Heritage Resources and Cultural Heritage Resources	• Impacts to archaeological resources and areas of archaeologial potential • Potential impacts to known or potential built heritage resources and Cultural Heritage Landscapes	3	1.00	0	0.00	0	0.00	**0**	**0.00**	-2	-2.00	-2	-2.00
				Total Impacts on Cultural Heritage Environment (4)	**0.00**	**Total Impacts on Cultural Heritage Environment (4)**	**0.00**	**Total Impacts on Cultural Heritage Environment (4)**	**0.00**	**Total Impacts on Cultural Heritage Environment (4)**	**-2.00**	**Total Impacts on Cultural Heritage Environment (4)**	**-2.00**
				Ranking of Alternative Within Cultural Heritage Environment (6)	**1**	**Ranking of Alternative Within Cultural Heritage Environment (6)**	**1**	**Ranking of Alternative Within Cultural Heritage Environment (6)**	**1**	**Ranking of Alternative Within Cultural Heritage Environment (6)**	**2**	**Ranking of Alternative Within Cultural Heritage Environment (6)**	**2**
SOCIAL ENVIRONMENT													
Land Use	• Impacts on private property	4	0.44	-2	-0.89	-2	-0.89	**-1**	**-0.44**	-2	-0.89	-2	-0.89
	• Temporary construction impacts (access, noise, dust, etc.)	3	0.33	0	0.00	-1	-0.33	**-1**	**-0.33**	-2	-0.67	-2	-0.67
	• Impacts on land use and traffic	2	0.22	0	0.00	-1	-0.22	**-1**	**-0.22**	-2	-0.44	-2	-0.44
				Total Impacts on Social Environment (4)	**-0.89**	**Total Impacts on Social Environment (4)**	**-1.44**	**Total Impacts on Social Environment (4)**	**-1.00**	**Total Impacts on Social Environment (4)**	**-2.00**	**Total Impacts on Social Environment (4)**	**-2.00**
				Ranking of Alternative within Social Environment (6)	**1**	**Ranking of Alternative within Social Environment (6)**	**3**	**Ranking of Alternative within Social Environment (6)**	**2**	**Ranking of Alternative within Social Environment (6)**	**4**	**Ranking of Alternative within Social Environment (6)**	**4**
NATURAL ENVIRONMENT													
Trees and Vegetation	• Impacts to trees and vegetation	4	0.29	-1	-0.29	-2	-0.57	**-1**	**-0.29**	-2	-0.57	-2	-0.57
Wildlife	• Impacts to wildlife and species at risk	4	0.29	-1	-0.29	-1	-0.29	**0**	**0.00**	-2	-0.57	-2	-0.57
Hydrology	• Impacts to storm water management	3	0.21	-2	-0.43	1	0.21	**1**	**0.21**	2	0.43	2	0.43
	• Impacts to water quality	3	0.21	-1	-0.21	2	0.43	**2**	**0.43**	2	0.43	2	0.43
				Total Impacts on Natural Environment (4)	**-1.21**	**Total Impacts on Natural Environment (4)**	**-0.21**	**Total Impacts on Natural Environment (4)**	**0.36**	**Total Impacts on Natural Environment (4)**	**-0.29**	**Total Impacts on Natural Environment (4)**	**-0.29**
				Ranking of Alternative Within Natural Environment (6)	**4**	**Ranking of Alternative Within Natural Environment (6)**	**2**	**Ranking of Alternative Within Natural Environment (6)**	**1**	**Ranking of Alternative Within Natural Environment (6)**	**3**	**Ranking of Alternative Within Natural Environment (6)**	**3**
TECHNICAL ENVIRONMENT													
Design/Function	• Ability to address opportunity statement	4	0.17	-2	-0.33	2	0.33	**2**	**0.33**	2	0.33	2	0.33
	• Design considerations	3	0.13	0	0.00	1	0.13	**1**	**0.13**	-2	-0.25	-2	-0.25
	• Ability to meet current municipal design standards	3	0.13	0	0.00	1	0.13	**1**	**0.13**	1	0.13	1	0.13
	• Staging, grading constraints, utility conflicts, traffic management	3	0.13	0	0.00	0	0.00	**0**	**0.00**	-2	-0.25	-2	-0.25
	• Initial anticipated studies	4	0.17	0	0.00	0	0.00	**0**	**0.00**	-2	-0.33	-2	-0.33
	• Initial anticipated approvals	4	0.17	0	0.00	0	0.00	**0**	**0.00**	-2	-0.33	-2	-0.33
	• Maintenance/access considerations	3	0.13	-2	-0.25	-2	-0.25	**-1**	**-0.13**	2	0.25	2	0.25
				Total Impacts on Technical Environment (4)	**-0.58**	**Total Impacts on Technical Environment (4)**	**0.33**	**Total Impacts on Technical Environment (4)**	**0.46**	**Total Impacts on Technical Environment (4)**	**-0.46**	**Total Impacts on Technical Environment (4)**	**-0.46**
				Ranking of Alternative Within Technical Environment (6)	**4**	**Ranking of Alternative Within Technical Environment (6)**	**2**	**Ranking of Alternative Within Technical Environment (6)**	**1**	**Ranking of Alternative Within Technical Environment (6)**	**3**	**Ranking of Alternative Within Technical Environment (6)**	**3**
ECONOMIC ENVIRONMENT													
Costs	• Capital costs	3	0.50	-1	-0.50	0	0.00	**0**	**0.00**	-2	-1.00	-2	-1.00
	• Operation and maintenance costs	3	0.50	-2	-1.00	1	0.50	**2**	**1.00**	1	0.50	1	0.50
				Total Impacts on Economical Environment (4)	**-1.50**	**Total Impacts on Economical Environment (4)**	**0.50**	**Total Impacts on Economical Environment (4)**	**1.00**	**Total Impacts on Economical Environment (4)**	**-0.50**	**Total Impacts on Economical Environment (4)**	**-0.50**
				Ranking of Alternative within Economical Environment (6)	**4**	**Ranking of Alternative within Economical Environment (6)**	**2**	**Ranking of Alternative within Economical Environment (6)**	**1**	**Ranking of Alternative within Economical Environment (6)**	**3**	**Ranking of Alternative within Economical Environment (6)**	**3**
				TOTAL IMPACT ON ALL ENVIRONMENTS(5)	**-4.19**	**TOTAL IMPACT ON ALL ENVIRONMENTS(5)**	**-0.83**	**TOTAL IMPACT ON ALL ENVIRONMENTS(5)**	**0.82**	**TOTAL IMPACT ON ALL ENVIRONMENTS(5)**	**-5.24**	**TOTAL IMPACT ON ALL ENVIRONMENTS(5)**	**-5.24**
				PRELIMINARY RANKING OF ALTERNATIVE, TOTAL OF ALL ANTICIPATED IMPACTS CONSIDERED (6)	**3**	**PRELIMINARY RANKING OF ALTERNATIVE, TOTAL OF ALL ANTICIPATED IMPACTS CONSIDERED (6)**	**2**	**PRELIMINARY RANKING OF ALTERNATIVE, TOTAL OF ALL ANTICIPATED IMPACTS CONSIDERED (6)**	**1**	**PRELIMINARY RANKING OF ALTERNATIVE, TOTAL OF ALL ANTICIPATED IMPACTS CONSIDERED (6)**	**4**	**PRELIMINARY RANKING OF ALTERNATIVE, TOTAL OF ALL ANTICIPATED IMPACTS CONSIDERED (6)**	**4**

Notes:

(1) Significance Weighting of Environmental Criterion (based on best representation of stakeholders' viewpoints)

1 = Low Importance
2 = Important
3 = High Importance
4 = Utmost Important

(2) Normalized Weighting of Criteria = Criteria Significance / Sum of all Criteria Significance within Environmental Category

(3) Performance Rating,* based on the expected impacts of an alternative to a specific criterion

2 = Significant net benefits are expected
1 = Net positive impacts (benefits outweigh the negative impacts)
0 = Neutral; none or very limited changes to existing conditions are expected
-1 = Net negative impacts (negative impacts outweigh the benefits)
-2 = Significant net negative impacts are expected

*Factors considered in the assignment of a performance rating:
- magnitude of impact (low/moderate/high)
- geographic extent of impact (site specific, local, regional)
- duration of impact (temporary, long-term, permanent)
- frequency of impact (rare, irregular, regular, continuous)
- other projects/activities/actions that may contribute to the cumulative environmental impacts
- reversibility of impact (reversible or irreversible)
- ecological/socioeconomic context (undisturbed, developed)
- confidence in prediction of impact (low, moderate, high)
- likelihood of impact (low, medium, high probability)

(4) Impact = Normalized Criteria Weighting x Performance Marking

(5) Total Impact on all Environments = Sum of all impacts on all environmental categories

(6) Preliminary Ranking of alternatives based on the following numerical scale and colour scheme:

1 = Most Preferred (1st Choice)
2 = 2nd Choice
3 = 3rd Choice
4 = Least Preferred (Last Choice)

Alternative 3 was presented as the preliminary preferred alternative at the Public Information Centre (PIC) held on November 29th, 2017. The preliminary preferred alternative was presented at the PIC to focus the attention of attendees (i.e., public, review agencies, municipal staff, etc.) on the Township's preliminary conclusions and to solicit for additional information, if any, that would affect the results of the decision matrix and to direct the next steps of the EA process. Stakeholder comments received at and following the PIC regarding the evaluation of alternatives were considered in confirming the preferred solution, which is Alternative 3. The Township will consult with residents/owners of private property impacted by the project, as required, to finalize the details for the design and implementation of the preferred alternative.

7.0 CONSULTATION PROGRAM

7.1 General

Consultation with affected parties is a key component of the environmental assessment process. Public involvement at the onset of a project allows early identification of concerns/information, improves project understanding, and focuses planning and decision making.

Proponents undertaking a Schedule "B" Class EA are required to engage in a screening process that includes a mandatory minimum of two points of contact with stakeholders (i.e., agencies, interest groups, Indigenous Communities and the public). The proponent has the freedom to tailor the consultation program, including the methods of contact, to suit the project and stakeholder needs; however, the minimum requirements must be met and must ensure that stakeholders are aware of the project and have ample opportunity to provide input related to project.

The first mandatory point of contact is during Phase 2 of the Class EA process, after the project problem/opportunity statement has been identified, and an inventory of existing environmental resources and local sensitivities that may be impacted by alternative solutions have been identified. The purpose of the first point of contact is to review potential issues, and invite public input to assist in selection of a preferred solution. Although the Class EA Schedule is typically selected by the proponent before the first point of contact is made, the input from the first point of contact will confirm or change the Schedule and determine how the project proceeds. The mandatory first point of contact is the same for Schedule B and C projects and Schedule A projects do not require formal contact with the public.

The second mandatory point of contact is made at the completion of the planning process in the form of a Notice of Completion. The purpose of the Notice of Completion is to formally advise the public and agencies of the 30-calendar day (minimum) review period before the proponent will proceed to design and construction of the recommended preferred alternative solution. Prior to implementation of a project, the proponent is obligated to consider and address any concerns that are presented from the stakeholders. Ultimately, the Minister makes the final decision on all comments/concerns/input, if any, as to whether the project requires a higher level of assessment (i.e., Part II Order granted, but only if it applies to potential adverse impacts to constitutionally

protected Aboriginal and treaty rights), if it should be approved with conditions, or if it can proceed without conditions.

The Aboriginal and Treaty Rights Information System (ATRIS) was consulted to search for Indigenous Communities within a 50 km radius of the Study Area and the Six Nations of the Grand River Territory, Haudenosaunee Confederacy Chiefs Council, and to Mississaugas of the New Credit First Nation were included in the stakeholder contact list.

7.2 Notice of Commencement

A Notice of Study Commencement (Notice) was posted in the June 17th and 24th, 2017 issue of the Wellington Advertiser, which is a free press weekly newspaper that is distributed throughout Wellington County. The Notice was also posted on the Township's website on June 17, 2017 and distributed in a letter (via mail) to approval agencies, Indigenous Communities, utility suppliers, municipalities, potentially interested stakeholders, and residents in the vicinity of the Victoria Crescent trunk sewer. The purpose of the Notice was to create awareness of the project and act as an invitation to participate in the EA screening process. A copy of the Notice and stakeholder contact list that the notice was distributed to is provided in Appendix J.

Comments were received from the MECP, MHSTCI, Transport Canada, GRCA in response to the Notice of Commencement. In general, the comments included acknowledgement of receipt of the notice and provided background information and guidance on requirements for the project. A summary of the comments received following distribution and advertisement of the project Notice of Commencement is provided in Appendix J. It should be noted that no comments were received from the general public, Indigenous Communities, and other potentially interested stakeholders as a result of this notice.

7.3 Public Information Centre

Consistent with the requirements of the Class EA process, formal (mandatory) contact with the stakeholders took place in the form of a Public Information Centre, which was held on November 29th, 2017. Notice of invitation to the PIC were included in the November 17th and 24th, 2017 issues of the Wellington Advertiser newspaper and was distributed to the stakeholder contact list. A copy of this notice and the stakeholder contact list that it was distributed to is included in Appendix K.

The purpose of the PIC was to present the background/existing inventory of the environment, including results of any studies that were conducted to assist in the evaluation, the alternative solutions to address the problem statement, anticipated impacts (positive and negative) to the environment, mitigation measures to reduce or eliminate negative impacts, and the preliminary preferred alternative solution based on the weighted decision matrix and information collected as of the PIC date. A hard copy Project File Report (binder) was available for review at the PIC, which contained all information on the project (excluding this report) as of the date of the PIC. A copy of the information boards that were on display at the PIC are provided in Appendix K. A copy of the attendance sheet for the PIC is also included in Appendix K. A summary of questions, comments

and/or concerns raised at the PIC and how these items were addressed by the Proponent are provided in Appendix K.

Stakeholder comments received at and following the PIC regarding the evaluation of alternatives were considered in confirming the preferred solution, which is Alternative 3. As noted in Appendix K, the Township will consult with residents/owners of private property impacted by the project, as required, to finalize the details for the design and implementation of the preferred alternative. None of the feedback concerned potential adverse impacts to constitutionally protected Aboriginal and treaty rights; however, it should be noted that the Indigenous Communities consulted during the project did not respond to any of the notices circulated or advertised.

7.4 Notice of Completion

The second point of mandatory contact is the Notice of Completion, which was published in the June 9, 2022 issue of the Wellington Advertiser newspaper and was also distributed to review agencies (via registered mail and email), Indigenous Communities (via registered mail and email) and public stakeholders (via regular mail and/or email) on June 9, 2022. It should be noted that the lapse in time between the PIC and Notice and Completion was to allow for property acquisition discussions related to the project; however, these discussions are outside the scope of the Class EA and are not documented in this Project File Report. The majority of the Class EA was complete following the PIC.

A copy of the Notice of Completion, template for notifications, and the distribution list is provided in Appendix L. This Project File Report was filed for public review, through the Township website and hardcopy at the Township office, starting on June 9, 2022.

Consistent with MECP's recommendations, each of the Indigenous Community contacts on the distribution list for the Notice of Completion were contacted via email and phone call as a follow-up on the letters/notices that were circulated for the Class EA.

A summary of questions, comments and/or concerns received during the public review period and how these items were addressed by the Proponent are provided in Appendix L. Appendix L also includes the original correspondence records associated with the Notice of Completion and the follow-up correspondence with Indigenous Community contacts.

8.0 RECOMMENDED PREFERRED ALTERNATIVE

In summary, the alternatives were evaluated based on the existing conditions, stakeholder input, and a balanced weighting of the cultural, social, natural, technical and economical environments. A preliminary preferred alternative was identified and presented at a PIC. Following consideration of questions, comments and/or concerns from Stakeholders during the PIC, Alternative 3, which is to construct a new trunk storm sewer along a new alignment following the southerly limit of 200 Victoria

Crescent and connecting to the existing outlet structure, is the confirmed and recommended preferred alternative solution.

Under the terms of the Class EA document, the project and recommended solution is considered to fall under the Schedule "B", which generally involve improvements and minor expansions to existing facilities and have the potential for adverse environmental impacts. These projects are approved for implementation provided completion of the screening process (Phase 1 and 2 of the Class EA process), including mandatory consultation and resolution of concerns with public stakeholders and pertinent review agencies.

8.1 Project Implementation

Pending successful completion of the Schedule "B" Class EA process, Alternative 3 will be designed in detail and applications for mandatory permits and regulatory requirements will be submitted. The approved work will be completed by a qualified Contractor, who will be selected for the work through a competitive bidding process. The Township will ensure that the installation, operation, and maintenance of the new trunk storm sewer is in accordance with requirements of applicable regulatory permits and approvals. Applicable approvals and/or permits that are anticipated include, but are not limited to the following:

- Registration of a Legal Easement on House No. 190 and 200 Victoria Crescent properties for drainage purposes.
- GRCA – Application for Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Permit (Pursuant to O.Reg. 150/06)
- MECP – Environmental Compliance Approval (ECA) Application for Sewage Works (only if Township Consolidated Linear Infrastructure (CLI) ECA has not been issued and/or the design is not considered pre-approved according to the CLI-ECA design criteria).
- MECP – formal review under the Endangered Species Act (ESA)/Species at Risk Act to determine whether authorization under the ESA is required.

9.0 POTENTIAL IMPACTS AND MITIGATING MEASURES

The potential impacts to the surrounding environmental factors which may arise as a result of the implementation of the Recommended Preferred Alternative would be considered short-term.

The following list summarizes potential impacts during construction of Alternative 3:

- Increase in noise during normal working hours from construction equipment
- Localized decrease in ambient air quality
- Increase in dust emissions
- Spills associated with construction, potentially impacting groundwater, surface water
- Removal of riparian vegetation and associated habitat
- Disturbance of breeding bird and terrestrial habitat

- Traffic disruption/lane/road closure on Victoria Crescent
- Soil erosion and sedimentation
- Generation of excess construction soil
- Potential impacts to cultural heritage resources

The following list summarizes corresponding mitigation measures to reduce potential impacts during construction:

- Ensure construction activities are during work hours and in accordance with the Township's noise by-law
- Ensure equipment is maintained in good operating condition to prevent unnecessary emissions
- Implement dust control and prevention measures (i.e., the application of non-chloride dust suppressants).
- Prepare a Spill prevention and contingency plan
- Revegetation and additional mitigation measures to reduce potential impacts to be developed in consultation with the appropriate agencies during detailed design and permitting
- Abide by applicable regulations, stockpile construction materials such that habitat and limits of disturbance are minimized
- Provide advance notification of traffic disruption to emergency, waste and transportation services; properties within the neighbourhood; and post on Township website/social media
- Install, inspect and maintain sediment and erosion control measures to minimize impacts on surrounding properties and within the regulated area
- Activities involving the management of excess soil, including open cut construction, will be completed in accordance with O.Reg. 406/19 and the ministry's current guidance document (Management of Excess Soil – A guide for Best Management Practices, 2014).
- Compliance with the recommendations of the Stage 2 archaeological assessment report.
    - If archaeological resources are impacted by construction of the project, all activities impacting archeological resources will cease immediately and MTCS will be notified via email at archaeology@ontario.ca. A licensed archaeologist is required to carry out an archaeological assessment in accordance with the *Ontario Heritage Act* and the Standards and Guidelines for Consultant Archaeologists.
    - If human remains are encountered, all activities must cease immediately, and the local police and coroner will be contacted. In situations where human remains are associated with archaeological resources, MTCS will be notified via email at archaeology@ontario.ca to ensure that the site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.
    - Recommended technical cultural heritage studies will be completed as early as possible during detailed design.

It should be noted that other potential impacts and/or mitigation measures may be identified through studies that will be completed to support the detailed design and implementation of the project.

The implementation of the Recommended Preferred Alternative has the potential to provide long-term improvements to existing conditions. The new trunk storm sewer along the new alignment to connect and discharge to the existing outlet will be designed to ensure the depth, sizing and grade requirements are in accordance with Township and MECP standards to adequately service the overall catchment (including proposed future development).

The project is not expected to have a significant impact on climate change given that the new trunk storm sewer will be outletting to the existing outlet structure and will be servicing the same catchment area; however, in a more efficient capacity. Given that climate change has been linked to the increased frequency of extreme weather events, the project will allow the Town to be more resilient to extreme weather events because the existing trunk storm sewer is in extremely poor condition and is not able to service the overall contributing catchment area and risks failure.

10.0 PROJECT NEXT STEPS

The Proponent will consider and address comments received during the Project File public review period and incorporate a summary of the correspondence in the final Project File Report. The project will proceed in accordance with the outcome of the Project File review period, subject to a decision from the Minister to approve the project with or without conditions or elevate the project to a higher level of study (if it is determined the project has the potential for adverse impacts to constitutionally protected Aboriginal and treaty rights).

The Township will continue to reach out to Indigenous Communities if there are any substantial changes to the project/process or if there is a need to apply for permits that may be of interest or concern. The Township will maintain a record of consultation for the project during detailed design to support MECP review of applications, as required.

11.0 ADDITIONAL STUDIES TO BE COMPLETED

Additional anticipated studies to support the design, application for permitting/approvals, and implementation of Alternative 3 include the following:

- Stage II Archaeological Assessment,
- Cultural Heritage Resource Assessment
- Scoped Environmental Impact Study (EIS), refer to Appendix M for the expected requirements as per Aboud, based on consultation with GRCA.

These studies will be undertaken early on during detailed design and the associated draft reports will be provided the appropriate agencies, Township contacts, Indigenous Communities and all interested stakeholders.

11.1 Future Considerations

The completed Class EA holds a 10-year implementation period. It is recommended that Township Staff and Council implement a practical timeline and budget to move forward with the next steps of the project. A practical timeline for ensuing processes is necessary for the completion of a successful project. These processes include but are not limited to; preparation of a request for proposal (RFP) for engineering services, detailed engineering design, agency approval processes, construction tender package and physical construction and inspection of the works.