

# Empey Street Wastewater Pumping Station Upgrades

Municipal Class Environmental Assessment  
Project File Report

City of Brantford

6052725

November 2022

## Statement of Qualifications and Limitations

The attached Report (the "Report") has been prepared by AECOM Canada Ltd. ("AECOM") for the benefit of the Client ("Client") in accordance with the agreement between AECOM and Client, including the scope of work detailed therein (the "Agreement").

The information, data, recommendations and conclusions contained in the Report (collectively, the "Information"):

- is subject to the scope, schedule, and other constraints and limitations in the Agreement and the qualifications contained in the Report (the "Limitations");
- represents AECOM's professional judgement in light of the Limitations and industry standards for the preparation of similar reports;
- may be based on information provided to AECOM which has not been independently verified;
- has not been updated since the date of issuance of the Report and its accuracy is limited to the time period and circumstances in which it was collected, processed, made or issued;
- must be read as a whole and sections thereof should not be read out of such context;
- was prepared for the specific purposes described in the Report and the Agreement; and
- in the case of subsurface, environmental or geotechnical conditions, may be based on limited testing and on the assumption that such conditions are uniform and not variable either geographically or over time.

AECOM shall be entitled to rely upon the accuracy and completeness of information that was provided to it and has no obligation to update such information. AECOM accepts no responsibility for any events or circumstances that may have occurred since the date on which the Report was prepared and, in the case of subsurface, environmental or geotechnical conditions, is not responsible for any variability in such conditions, geographically or over time.

AECOM agrees that the Report represents its professional judgement as described above and that the Information has been prepared for the specific purpose and use described in the Report and the Agreement, but AECOM makes no other representations, or any guarantees or warranties whatsoever, whether express or implied, with respect to the Report, the Information or any part thereof.

Without in any way limiting the generality of the foregoing, any estimates or opinions regarding probable construction costs or construction schedule provided by AECOM represent AECOM's professional judgement in light of its experience and the knowledge and information available to it at the time of preparation. Since AECOM has no control over market or economic conditions, prices for construction labour, equipment or materials or bidding procedures, AECOM, its directors, officers and employees are not able to, nor do they, make any representations, warranties or guarantees whatsoever, whether express or implied, with respect to such estimates or opinions, or their variance from actual construction costs or schedules, and accept no responsibility for any loss or damage arising therefrom or in any way related thereto. Persons relying on such estimates or opinions do so at their own risk.

Except (1) as agreed to in writing by AECOM and Client; (2) as required by-law; or (3) to the extent used by governmental reviewing agencies for the purpose of obtaining permits or approvals, the Report and the Information may be used and relied upon only by Client.

AECOM accepts no responsibility, and denies any liability whatsoever, to parties other than Client who may obtain access to the Report or the Information for any injury, loss or damage suffered by such parties arising from their use of, reliance upon, or decisions or actions based on the Report or any of the Information ("improper use of the Report"), except to the extent those parties have obtained the prior written consent of AECOM to use and rely upon the Report and the Information. Any injury, loss or damages arising from improper use of the Report shall be borne by the party making such use.

This Statement of Qualifications and Limitations is attached to and forms part of the Report and any use of the Report is subject to the terms hereof.

## Authors

### Report Prepared By:



Samantha Zandvliet, MPI  
Environmental Planner



Amy Yang, M.A.Sc., EIT  
Process Designer

### Report Reviewed By:



Karl Grueneis, BA  
Senior Environmental Planner

### Report Approved By:



Chris Gouett, M.A.Sc.  
Project Manager

## Prepared for:

City of Brantford  
58 Dalhousie Street  
P.O. Box 818  
Brantford, ON N3T 2J2

## Prepared by:

AECOM Canada Ltd.  
50 Sportsworld Crossing Road, Suite 290  
Kitchener, ON N2P 0A4 Canada

T: 519.650.5313

F: 519.650.3424

www.aecom.com

## Distribution List

# Hard Copies	PDF Required	Association / Company Name
-	✓	City of Brantford
-	✓	AECOM Canada Ltd.

## Revision History

Revision #	Date	Revised By	Revision Description
-	June 30, 2021	-	Draft submitted to City of Brantford.
1	December 14, 2021	SZ, AY, KG, CG	Comments from City addressed and draft circulated to review agencies and Indigenous Communities.
2	November 8, 2022	SZ, AY, KG, CG	Comments addressed from review agencies and Indigenous Communities. Final submitted for 30-day review.

# Executive Summary

## Background

The City of Brantford (the City) has through its Consultant AECOM Canada Ltd. (AECOM) has completed a Municipal Class Environmental Assessment (MCEA) Study for the upgrades to the Empey Street Wastewater Pumping Station (WWPS). The need for increasing the capacity of the Empey Street WWPS was identified in the recent City of Brantford Water, Wastewater and Stormwater Master Servicing Plan 2051 Amendment (GM Blue Plan, June 2021) and is required to meet planned growth, including the lands within the City's new settlement area.

The Study has identified and evaluated various alternatives for the WWPS, which include new construction on the existing property (a new emergency storage tank), or an alternate property (new WWPS with emergency storage tank). The project will also incorporate other upgrades to the existing WWPS necessary to meet future service area demands.

## Study Purpose and Objectives

The purpose of this MCEA Study is to assess and identify a permanent solution to increase the capacity of the Empey Street WWPS to meet planned growth to 2051. An emergency storage tank (EST) is also proposed to manage flows during wet weather events.

The objectives for this MCEA Study include:

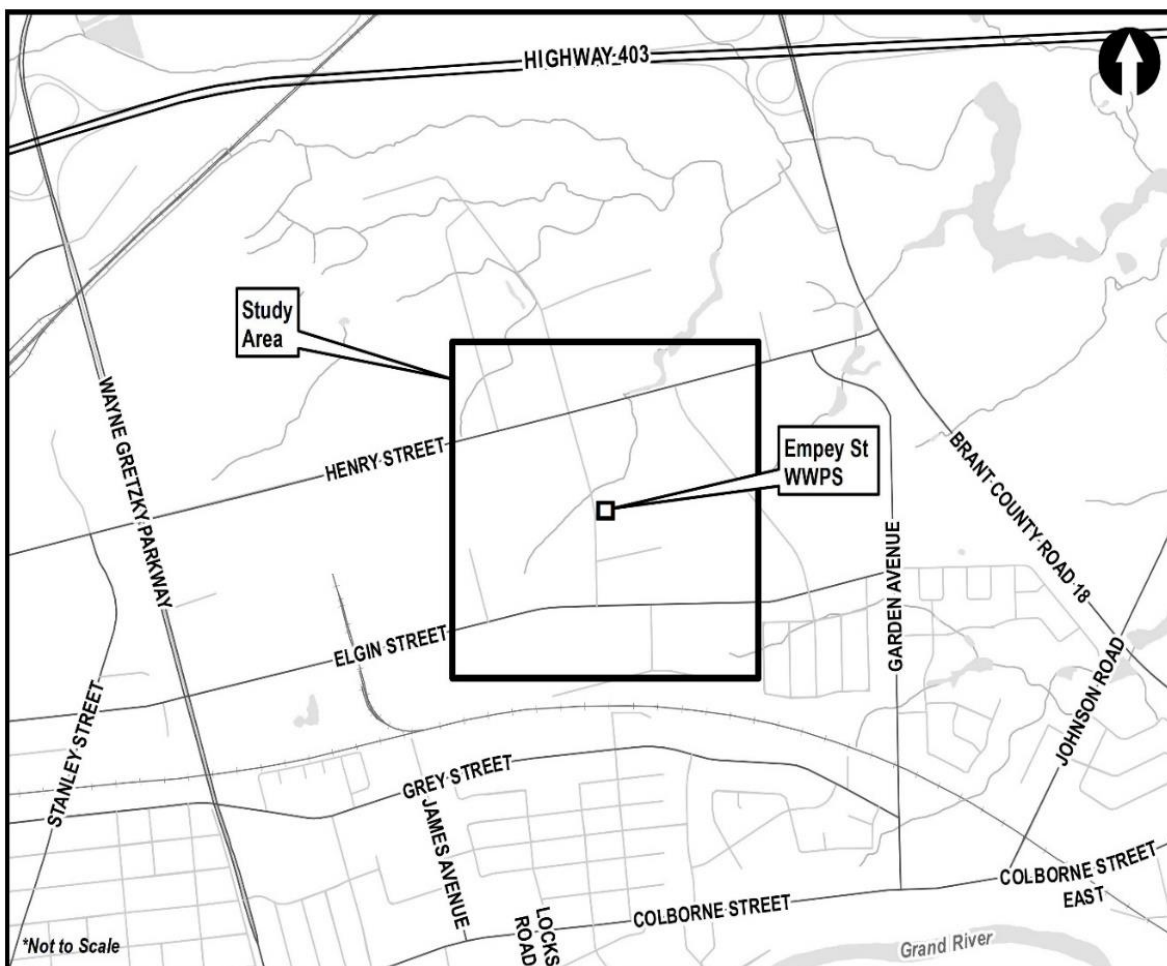
- Reviewing the most current version of the Water, Wastewater and Stormwater Master Servicing Plan (MSP) 2051 Amendment (GM Blue Plan, June 2021), Volume 4: Wastewater Master Plan to understand how future flow and capacities to the Empey Street WWPS have been determined and to confirm the design capacity for the station upgrades
- Completing baseline studies of the archaeological, cultural heritage and natural environment, including desktop Species at Risk and habitat screenings, Ecological Land Classification and field investigations where project impacts are anticipated
- Identifying feasible alternatives to address the problem or opportunity statement
- Evaluating the alternatives and selecting the recommended preferred solution
- Identifying mitigation measures to address anticipated environmental effects

- Preparing a cost estimate for construction of the preferred solution
- Recommending a phasing plan for implementing the proposed works
- Consultation with the public, key review agencies and Indigenous communities to facilitate the sharing of information and ideas, identify potential concerns and bring forth the appropriate response, while ensuring opportunities to obtain feedback that meet the requirements for public notification and consultation as outlined in the MCEA planning process
- Following MCEA documentation filing and clearance, the project will complete the design and construction phases

## Study Area

The Empey WWPS is located at 33 Empey Street and is an important component of the City's sanitary sewage system, sending wastewater to the wastewater treatment plant in the southeast part of the City. **Figure ES-1** shows the Study Area for this MCEA Study.

**Figure ES-1: Study Area**



The lands surrounding the Empey Street WWPS are generally industrial with the exception of a few residential dwellings. The Empey WWPS was originally built in the mid-1960s and several parts of the existing station are showing signs of aging.

## **Master Servicing Plan**

Through the Water, Wastewater and Stormwater Master Servicing Plan (MSP) 2051 Amendment (GM Blue Plan, June 2021) , Volume 4: Wastewater Master Plan, the City has identified the need to increase the WWPS's capacity from its current design firm capacity of 1260 L/s to 1600 L/s. Upgrades recommended in the MSP include:

- Twinning of the existing wetwell
- Provision of an EST
- Installation of four higher capacity pumps
- A new control building
- Renewal to meet current flow needs including maintenance, repair, and rehabilitation

## **Municipal Class Environment Assessment Process**

This Study has been conducted in accordance with the planning and design process for Schedule B projects, as outlined in the Municipal Engineers Association's (MEA) MCEA Guide (October 2000, as amended in 2007, 2011 and 2015), which is approved under the Ontario *Environmental Assessment Act (EAA)* (R.S.O. 1990, c. E.18).

As a Schedule B project, the Empey Street WWPS Upgrades and associated linear infrastructure is subject to Phase 1 (identify the Problem or Opportunity) and Phase 2 (identify and evaluate Alternative Solutions) of the MCEA planning process.

### **Phase 1: Problem or Opportunity Statement**

Phase 1 of the MCEA planning process requires the City to first document factors leading to the conclusion that the improvement is needed, and to develop a clear statement of the identified problems and opportunities to be investigated. The Problem or Opportunity for this study is presented as follows:

#### **Problem:**

- ◆ Significant near and long-term growth is expected within the City. The City's recent Water, Wastewater and Stormwater Master Servicing Plan (MSP) 2051 Amendment (GM Blue Plan, June 2021) has identified the need to increase the capacity of the existing Empey Street WWPS to meet planned growth to 2051. The increased capacity suggested as required by the MSP is due to an adjustment of municipal boundaries between the City of Brantford and County of Brant and Settlement Area boundaries.

- ◆ The capacity increase is specifically required to meet planned growth, including the areas within the City's new settlement area, which will eventually lie within the Empey Street WWPS catchment area.
- ◆ The WWPS's available storage capacity under the design 10-year peak wet weather flow (PWWF) is insufficient to meet the desired emergency storage capacity. As part of the MSP, it was recommended that the City complete a number of upgrades to the Empey Street WWPS including twinning of the wetwell and the provision of an EST to accommodate one hour of storage for a 10-year peak wet weather flow.

### **Opportunity:**

- ◆ Complete the Schedule B Municipal Class Environmental Assessment (MCEA) planning process in consultation with key stakeholders, review agencies, Indigenous communities and the public that will establish a preferred solution for the Empey Street WWPS design to meet anticipated 2024 in-service date.

## **Phase 2: Alternative Solutions**

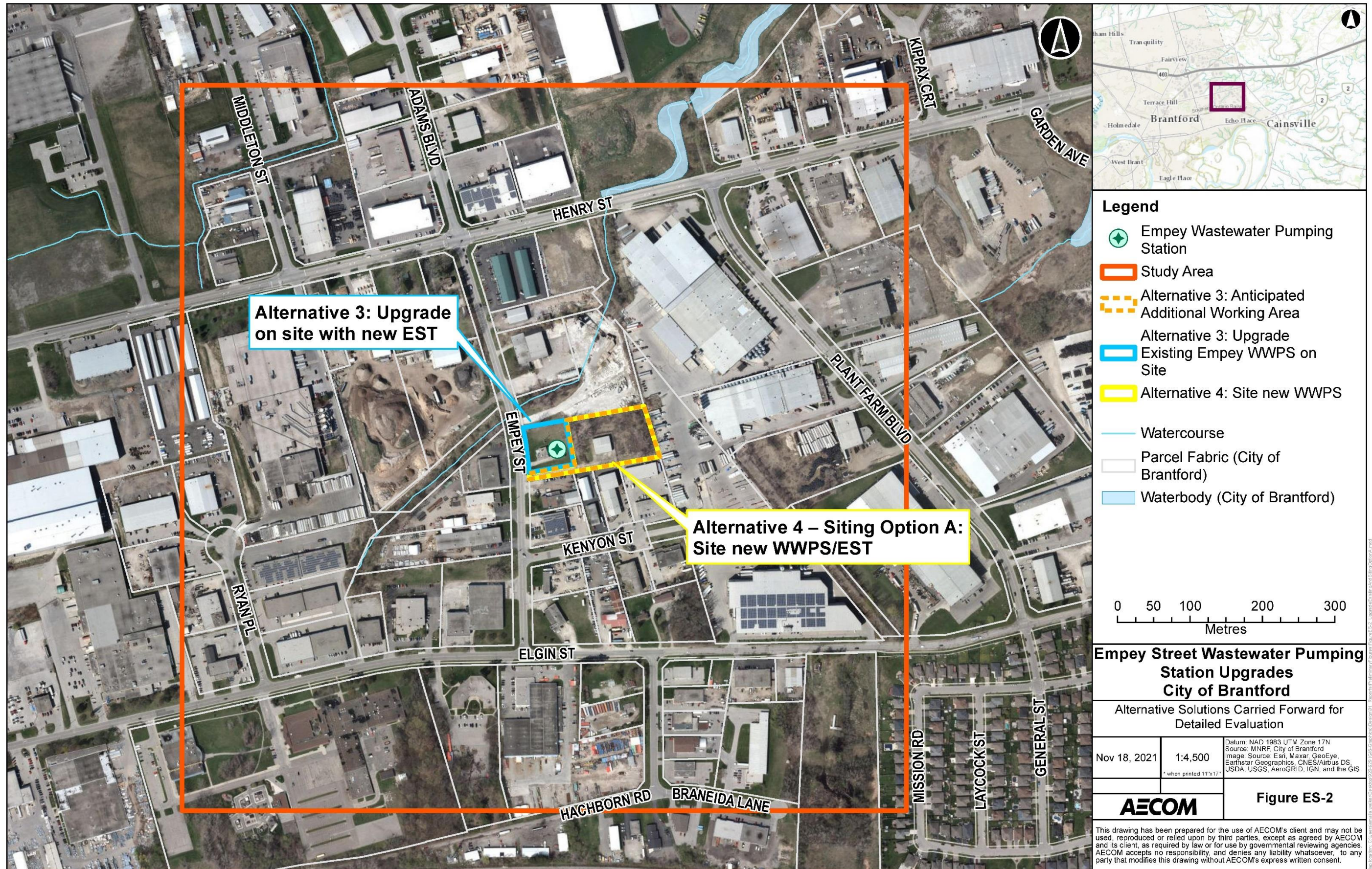
Phase 2 of the MCEA process was focused on identifying and assessing alternative solutions and selecting a preferred solution for increasing wastewater pumping capacity. The evaluation was comprised of a multi-step process. As an initial step in evaluating alternative solutions, a screening analysis was undertaken. The alternative solutions that did not address the Phase 1 problem or opportunity statement were screened out, while the alternative solutions that had the potential to address the problem or opportunity, were carried forward to the second stage of the alternative solutions evaluation.

The two alternatives carried forward for detailed evaluation are shown in **Figures ES-2** and include:

- Alternative 3: Upgrade Existing Empey Street WWPS on Site (33 Empey Street)
- Alternative 4: Site New WWPS – Siting Option A (37 Empey Street)



Figure ES-2: Alternative Solutions



Alternative 3 aligns with the recommendations from the City's MSP. This involves upgrading the existing Empey Street WWPS on site. As the existing wetwell volume is sufficient for 2051 average daily flow and in compliance per the Ministry of Environment, Conservation and Parks (MECP) Design Guidelines for Sewage Works, the existing wetwell does not need to be expanded. The potential for twinning the wetwell may be considered in the future. This alternative also includes an EST sized to accommodate 1 hour storage at the current 10-year PWWF. The EST has been designed to be modular such that additional emergency storage can be added as required in the future.

Alternative 3 is also anticipated to include additional temporary working area on the adjacent property at 37 Empey Street to improve constructability, as needed. The City recognizes that additional land for any future Empey Street WWPS upgrades or emergency storage tank expansion could be required if the Empey WWPS catchment area ever expands in the future. It would also allow the City the ability to ensure that incompatible land uses are not developed beside the WWPS.

On August 24, 2021 Brantford City Council approved the purchase of the entire 37 Empey Street property, subject to conditions and negotiations. The closing date of the sale was December 15, 2021.

Alternative 4 – Siting Option A involves siting a new wastewater pumping station at 37 Empey Street, including a new EST.

For this alternative, once the new WWPS is in service, the existing WWPS would be decommissioned. Decommissioning would require demolition of the existing station, including removal of all above and underground components.

The two alternatives were compared against a set of evaluation criteria categorized by land use, technical, natural environment, socio-economic environment, climate change, cultural environment, and cost considerations. **Table ES-1** summarizes the key outcomes of the comparative evaluation.

**Table ES-1: Summary of Evaluation Results**

Alternative 3: Upgrade Existing Empey Street WWPS on Site (33 Empey Street)	Alternative 4: Site New WWPS – Siting Option A (37 Empey Street)
<ul style="list-style-type: none"> <li>• May require additional working area<sup>1</sup></li> <li>• Less design flexibility</li> <li>• Requires less tree and vegetation removal</li> <li>• Smaller carbon footprint related to less construction materials</li> <li>• Shorter construction schedule allows in-service date to be met</li> <li>• Significantly lower construction cost</li> </ul>	<ul style="list-style-type: none"> <li>• Requires purchase of property<sup>2</sup></li> <li>• Does not require temporary working easement</li> <li>• Greater design flexibility</li> <li>• Requires more tree and vegetation removal</li> <li>• Higher carbon footprint related to use of more construction materials</li> <li>• Longer construction schedule and potential difficulty in meeting in-service date</li> <li>• Higher construction cost</li> </ul>

Note: 1. Approval of additional working area on the adjacent property at 37 Empey Street is subject to successful purchase of the entire property at 37 Empey Street by the City or temporary working easement if the entire property is not purchased. On August 24, 2021 Brantford City Council approved the purchase of the entire 37 Empey Street property, subject to conditions and negotiations. The closing date of the sale was December 15, 2021.

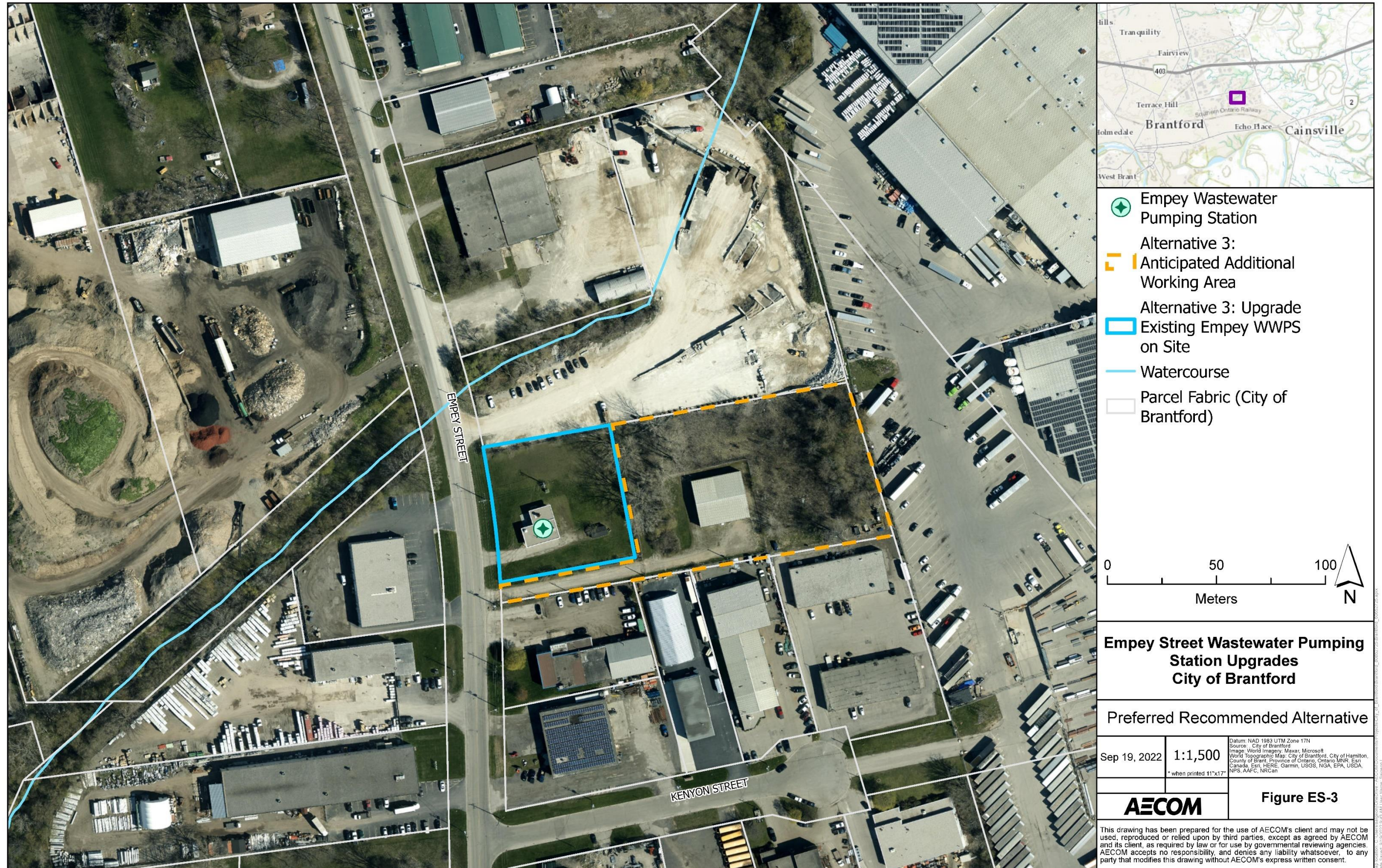
Note: 2. At the time of the evaluation the City did not own the 37 Empey Street property. As described above, the City has since purchased the property for potential working area and future EST expansion as well as ensuring land use compatibility

The recommended preferred solution, as conceptually shown in **Figure ES-3** is Alternative 3, which involves upgrades to the existing Empey Street WWPS on site. As highlighted in **Table ES-1**, the rationale for selecting Alternative 3 as the preferred solution is described below:

- Requires less tree and vegetation removal and has a smaller carbon footprint due to less construction materials
- Shorter construction schedule, which allows the City to meet an anticipated 2024 in-service date
- Significantly lower construction cost, in order of \$1.8 million less compared to siting and building a new wastewater pumping station

While upgrading the station compared to building a new station is less flexible in terms of process layout, the existing land area at the Empey WWPS is sufficient to construct the proposed works.

Figure ES-3: Preferred Solution



## Potential Effects and Proposed Mitigation Measures

Potential effects related to construction of the Empey Street WWPS Upgrades (Alternative 3) will be limited to the duration and location of construction. Based on the preferred solution and the preliminary proposed construction techniques, construction is expected to have varied environmental effects. By incorporating proper best management practices and construction techniques, adverse construction related effects can be minimized. The existing conditions (**Section 4**) were used as baseline conditions against which changes due to the project (effects) were assessed.

As noted in the MCEA evaluation, the upgrade of the existing Empey Street WWPS will require temporary bypass pumping of sanitary sewer flows during construction. Temporary bypass pumping methods within the station property which minimize impact to traffic are preferred and to be fully investigated during project implementation, however it is noted that a temporary full road closure on Empey Street (no through traffic, however access to properties will be maintained) may be required. Temporary bypass pumping duration may be required for several months. Additional project impacts are discussed in more detail in **Section 9**.

Proposed mitigation measures will be further developed during the design phase by means of further studies and permit applications, where applicable.

## Communications and Consultation Overview

A key priority of community engagement has been to encourage the participation of stakeholders, key review agencies, the public and Indigenous communities. Several steps have been undertaken to help ensure that information is shared and concerns are captured and addressed in an inclusive and transparent manner throughout the MCEA process to build confidence and trust in the decision-making process and meet the requirements of the MCEA process. The following summarizes the key activities undertaken:

- A contact list was established at the onset of the Study and regularly updated to notify key review agencies, stakeholders, Indigenous communities, and members of the public that requested to be kept informed
- The Notice of Commencement, Notice of Public Information Centre (PIC), and Notice of Completion were distributed to the Project's contact list
- Notifications were advertised in the Brantford Expositor (Civic News section), Two Row Times and Turtle Island newspapers
- The City's website ([brantford.ca/EmpeyWWPS](http://brantford.ca/EmpeyWWPS)) and the City's social media platforms provided relevant project details

- A virtual PIC was held to provide stakeholders, key review agencies, the public and Indigenous communities an opportunity to learn about the project and provide feedback for consideration
- Local Indigenous communities were identified and notified as part of this MCEA study. At the onset of the study, a letter requesting the level of interest in the Project was individually issued to each of the identified communities to allow for the sharing of information
- Individual meetings were held with relevant stakeholders and agencies, as required, or as opportunities arose

## **Conclusions and Next Steps**

This MCEA Study fulfills the requirements for Schedule B projects as outlined in the MEA MCEA manual. Consultation requirements of the MCEA process have been fulfilled through a virtual PIC, and consultation with stakeholders, review agencies, and local Indigenous communities, and the submission of this Project File for the 30-day comment period. The MCEA planning process has not identified any significant environmental concerns that cannot be addressed by incorporating best management practices and established mitigation measures during construction.

Subject to receiving MCEA clearance following the 30-day comment period, the City will complete the design phase, which includes permitting-approvals and proceed to construction as per the preliminary project schedule to meet the anticipated 2024 in-service date.

# Table of Contents

<b>1.</b>	<b>Introduction</b>	<b>1</b>
1.1	Background	1
1.2	Study Purpose and Objectives	1
1.3	Study Area	2
1.4	Study Team Organization	4
<b>2.</b>	<b>Master Servicing Plan</b>	<b>5</b>
<b>3.</b>	<b>Municipal Class Environmental Assessment Planning Process</b>	<b>8</b>
3.1	Overview	8
3.2	Project Planning Schedules	9
3.2.1	Empey WWPS Upgrades MCEA Schedule	10
3.3	Communications and Consultation Overview	10
3.4	Public Review of Project File and Next Steps	11
<b>4.</b>	<b>Existing Conditions</b>	<b>13</b>
4.1	Technical Environment	13
4.1.1	Empey Street WWPS Station	13
4.1.2	Utilities	13
4.2	Natural Environment	14
4.2.1	Terrestrial	14
4.2.1.1	Vegetation Communities	14
4.2.2	Wildlife	16
4.2.3	Species at Risk	16
4.2.4	Provincially Ranked Species & Features	17
4.2.5	Regionally Ranked Species & Features	17
4.3	Geotechnical and Soil Characteristics	17
4.4	Socio-Economic Environment	18
4.5	Cultural Heritage Environment	18
4.5.1	Archaeological Resources	18
4.5.2	Built Heritage Resources and Cultural Heritage Landscapes	19
<b>5.</b>	<b>Provincial and Municipal Planning Context</b>	<b>20</b>
5.1	Provincial Policy Statement	20
5.2	A Place to Grow: Growth Plan for the Greater Golden Horseshoe	21
5.3	City of Brantford Official Plan	21
5.4	The Grand River Conservation Authority Requirements	22
5.5	Grand River – Approved Source Protection Plan	22
<b>6.</b>	<b>Phase 1: Problem or Opportunity Statement</b>	<b>24</b>

<b>7.</b>	<b>Phase 2: Alternative Solutions</b>	<b>25</b>
7.1	Approach to and Screening of Alternatives	25
7.1.1	Alternative 4 – Identification of WWPS Siting Options	26
7.2	Evaluation Criteria and Methodology	30
7.3	Evaluation of Empey Street WWPS Alternatives	31
7.4	Preferred Solution and Rationale – Alternative 3	35
<b>8.</b>	<b>Preferred Undertaking – Project Description</b>	<b>37</b>
8.1	Design Considerations	37
8.1.1	Empey Street WWPS Upgrades	37
8.1.1.1	Emergency Storage Tank	37
8.1.1.2	Gravity Sewer Connection	37
8.1.1.3	Twinned Wetwell	37
8.1.1.4	Review of Overflow to Environment Feasibility	38
8.1.2	Property Requirements/Easement Requirements	38
8.2	Cost Estimate	38
8.3	Permits and Approvals	38
8.4	Project Phasing	40
8.4.1	Temporary Bypass Pumping	40
8.4.2	Proposed Construction Sequencing	40
8.5	Preliminary Project Schedule	41
<b>9.</b>	<b>Anticipated Environmental Effects, Mitigation Measures and MCEA Commitments</b>	<b>42</b>
9.1	Anticipated Effects and Mitigation Measures	42
9.2	Climate Change	46
9.2.1	Potential Construction Effects	46
9.2.2	Potential Operation Effects	46
9.2.3	Mitigation	46
9.3	MCEA Commitments	46
9.4	Proposed Construction Monitoring	47
9.5	Post-Construction Monitoring	47
<b>10.</b>	<b>Consultation Summary</b>	<b>48</b>
10.1	Notifications	48
10.1.1	Notice of Commencement	48
10.1.2	Notice of Public Information Centre	48
10.1.3	Notice of Completion	49
10.2	Public Information Centre	49
10.3	Agency and Stakeholder Consultation	49
10.4	Indigenous Community Consultation	53
<b>11.</b>	<b>Conclusions and Recommendations</b>	<b>56</b>



## Figures

Figure 1-1: Study Area	3
Figure 4-1: Ecological Land Classification	15
Figure 7-1: Alternatives	28
Figure 7-2: Preferred Solution	36

## Tables

Table 2-1: Population Projections in Empey Street WWPS Catchment	5
Table 2-2: Peak Wet Weather Flows	6
Table 4-1: Incidental Wildlife Observations	16
Table 7-1: Screening of Alternatives	25
Table 7-2: Alternative 4 – Screening of WWPS Siting Options	29
Table 7-3: Evaluation Criteria	30
Table 7-4: Evaluation of Empey Street WWPS Alternatives	32
Table 8-1: Anticipated Permits and Approvals	39
Table 9-1: Potential Construction-Related Effects and Mitigation Measures	43
Table 9-2: Natural Environment Mitigation Measures	45
Table 10-1: Agency and Stakeholder Meetings – MCEA Phases 1 and 2	50
Table 10-2: Key Agency and Stakeholder Correspondence – MCEA Phases 1 and 2	51
Table 10-3: Indigenous Community Correspondence – MCEA Phases 1 and 2	54

## Appendices

Appendix A. MSP Review Technical Memorandum	
Appendix B. Natural Environment Report	
Appendix C. Stage 1 Archaeological Assessment Report	
Appendix D. Desktop Cultural Heritage Screening Memorandum	
Appendix E. Public Consultation Record	
Appendix F. Agency and Stakeholder Consultation Record	
Appendix G. Indigenous Consultation Record	

# 1. Introduction

## 1.1 Background

The City of Brantford (the City) has, through its Consultant, AECOM Canada Ltd. (AECOM), completed a Municipal Class Environmental Assessment (MCEA) Study for the upgrades to the Empey Street Wastewater Pumping Station (WWPS). The need for increasing the capacity of the Empey Street WWPS was identified in the recent City of Brantford Water, Wastewater and Stormwater Master Servicing Plan 2051 Amendment (GM Blue Plan, June 2021) and is required to meet planned growth, including the lands within the City's new settlement area.

The Study has identified and evaluated various alternatives for the WWPS, which include new construction on the existing property (i.e., emergency storage tank (EST)), or an alternate property (new WWPS with emergency storage tank). The Project will also incorporate other upgrades to the existing WWPS necessary to meet future service area demands.

The study has been conducted in accordance with Schedule "B" requirements of the Municipal Engineers Association (MEA) MCEA manual (October 2000, as amended in 2007, 2011 and 2015) under the *Ontario Environmental Assessment Act*.

## 1.2 Study Purpose and Objectives

The purpose of this MCEA Study is to assess and identify a preferred solution in order to increase the capacity of the Empey Street WWPS to meet planned growth. An emergency storage tank (EST) or alternative means (for example, a diesel pump or overflow chamber) is also proposed to manage flows during wet weather events.

The objectives for this MCEA Study include:

- Reviewing the most current version of the Water, Wastewater and Stormwater Master Servicing Plan (MSP) 2051 Amendment, Volume 4: Wastewater Master Plan to understand how future flow and capacities to the Empey Street WWPS have been determined and to confirm the design capacity for the station upgrades
- Completing baseline studies of the archaeological, cultural heritage and natural environment, including desktop Species at Risk and habitat screenings, Ecological Land Classification and field investigations where project impacts are anticipated

- Identifying feasible alternatives to address the problem or opportunity statement
- Evaluating the alternatives and selecting the recommended preferred solution
- Identifying mitigation measures to address anticipated environmental effects
- Preparing a cost estimate for construction of the preferred solution
- Recommending a phasing plan for implementing the proposed works
- Consultation with the public, key review agencies and Indigenous communities to facilitate the sharing of information and ideas, identify potential concerns and bring forth the appropriate response, and ensure opportunities to obtain feedback that meet the requirements for public notification and consultation as outlined in the MCEA planning process
- Following MCEA documentation filing and clearance, proceeding to design and construction phases

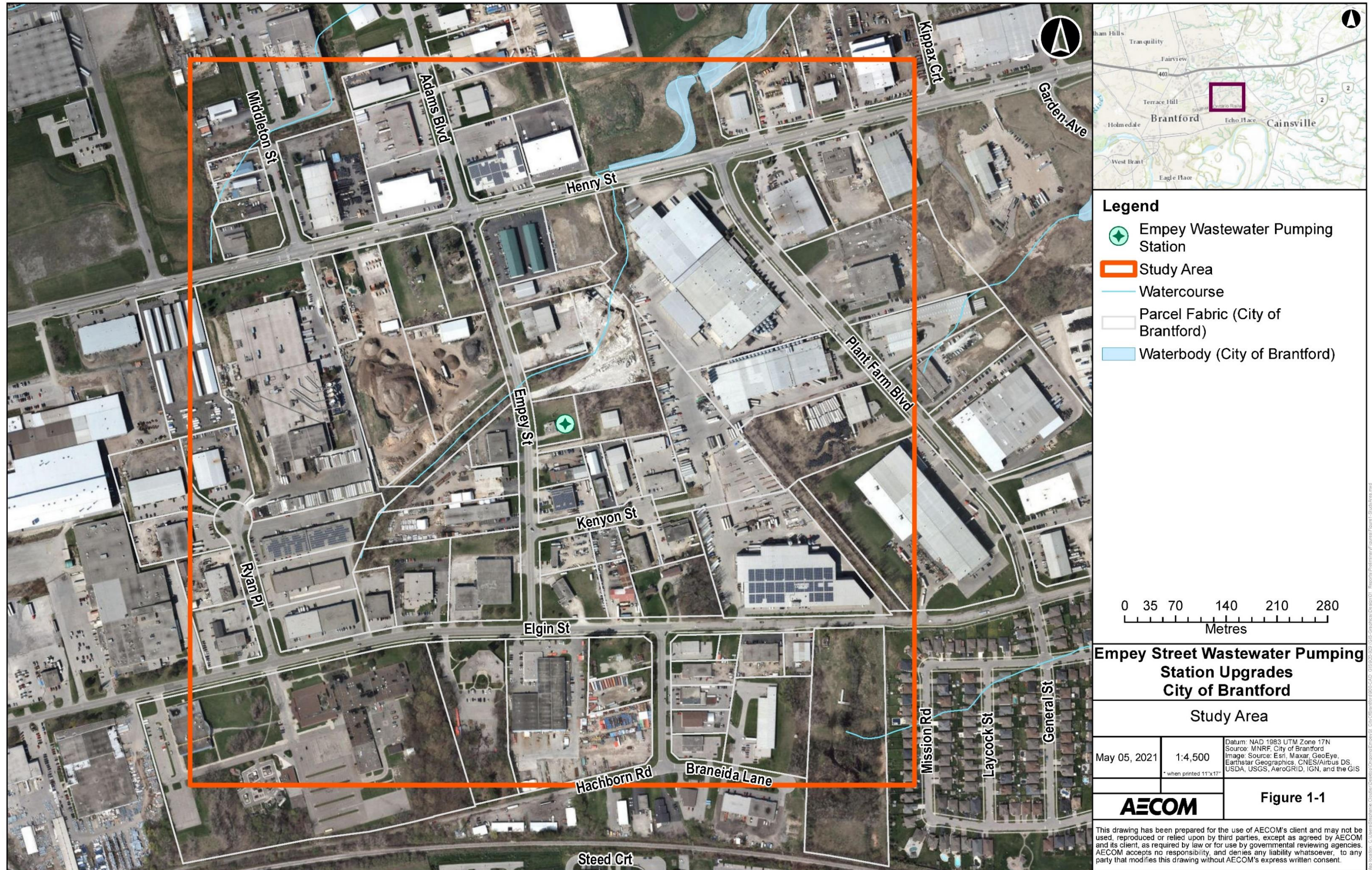
This study has defined the problem and opportunities, developed and evaluated alternative solutions, assessed impacts of the preferred solution, and identified mitigation measures to avoid or minimize any potential adverse impacts. This report documents the planning and design process followed for this Project.

### **1.3 Study Area**

The Empey WWPS is located at 33 Empey Street and is an important component of the City's sanitary sewage system, sending wastewater to the wastewater treatment plant in the southeast part of the City. **Figure 1-1** shows the Study Area.

The lands surrounding the Empey Street WWPS are generally industrial with the exception of a few residential dwellings. The Empey WWPS was originally built in the mid-1960s and several parts of the existing station are showing signs of aging.

Figure 1-1: Study Area



## 1.4 Study Team Organization

The Empey Street WWPS Upgrades MCEA has been a collaborative effort between the City and AECOM. The Project Managers for the Project are listed below.

### Proponent:

**City of Brantford**

Shahab Shafai, M.Sc., P.Eng.

Project Manager

City of Brantford

Phone: (519) 759-4150 ext. 5745

Email: [SShafai@brantford.ca](mailto:SShafai@brantford.ca)

### Consultant:

**AECOM Canada Ltd.**

Chris Gouett, M.A.Sc.

Project Manager

AECOM Canada Ltd.

Phone: (519) 650-8614

Email: [Chris.Gouett@aecom.com](mailto:Chris.Gouett@aecom.com)

## 2. Master Servicing Plan

AECOM reviewed the most current version of the Water, Wastewater and Stormwater Master Servicing Plan (MSP) 2051 Amendment (GM Blue Plan, June 2021) , Volume 4: Wastewater Master Plan. The MSP followed MCEA Master Plan Approach #1. A final update of the MSP was completed to reflect growth expected within the expanded City limits to 2051 population projections in the Official Plan update. The need for increased capacity of the Empey Street WWPS was identified in the MSP to meet planned growth and to accommodate extraneous flows. The MSP and the City have identified the need to increase the WWPS's capacity from its current design firm capacity of 1,260 L/s to 1,600 L/s. It should be noted that most details presented in this review are from the recent MSP update with projections to 2051 (published June 2021).

The MSP recommends the City complete a number of upgrades to the Empey Street WWPS to meet population growth needs. Population growth within the Empey Street WWPS catchment area considers the North Expansion Lands and East Expansion Lands (east of King George Road), in addition to planned development within WWPS catchment area. Projected growth suggests increased capacity to the catchment area needed to support the 2051 growth. The original design capacity for Empey St WWPS is 1,260 L/s, whereas the observed firm capacity was 1,120 L/s (representing a decrease in capacity of 140 L/s). The station's available storage capacity under the design 10-year peak wet weather flow is insufficient to meet the desired emergency storage capacity. The projected population growth within the Empey Street WWPS catchment area is shown in **Table 2-1**.

**Table 2-1: Population Projections in Empey Street WWPS Catchment**

Population	2016	2041	2051
<b>Residential</b>	23,230	46,386	47,459
<b>Employment</b>	18,392	30,180	30,251

Upgrades recommended in the MSP include:

- Twinning of the existing wetwell
- Provision of an emergency storage tank (EST)
- Installation of four higher capacity pumps
- A new control building
- Renewal to meet current flow needs including maintenance, repair and rehabilitation

The MSP and City Vertical Design Standards identify the intended WWPS service level to be the provision of pump capacity to convey 100-year peak wet weather flow (PWWF), and storage for one hour at 10-year PWWF. The peak design flow was calculated based on the dry weather flow, Harmon's Peaking Factor, and infiltration allowance. The average dry weather flow (ADWF) at Empey Street WWPS in 2016 was 100.7 L/s while the projected 2051 ADWF is projected to be 207.2 L/s. **Table 2-2** summarizes the existing wet weather flows for the Empey Street WWPS that was provided in the MSP.

**Table 2-2: Peak Wet Weather Flows**

Projection	PWWF	10-Year PWWF 1-Hour Storage Requirement	Equivalent 10- Year PWWF Based on Storage Volume	100-Year PWWF
<b>Current (2016)</b>	466 L/s	3,650 m <sup>3</sup>	1,014 L/s	853 L/s
<b>2041*</b>	1,403 L/s	5,194 m <sup>3</sup>	1,443 L/s	Not Provided
<b>2051<sup>+</sup></b>	1,431 L/s	5,352 m <sup>3</sup>	1,487 L/s	Not Provided

Note: Wet weather flows for 2041 (designated with \*) were presented during the 2051 Capital Program Workshop (February 19, 2021).  
The reported wet weather flows for 2051 (designated with a +) are from the November 2021 Master Serving Plan Update - 2051 Amendment (GM BluePlan Engineering Limited, November 2021)."

As an additional factor of safety, it has been suggested to increase the PWWF by the current capacity discrepancy between the design and observed firm capacity (140 L/s as stated previously). This additional factor of safety is intended to account for increased intensity growth and/or degradation of pump capacity over time. As a result, the updated peak design flows become:

- 2041 Flow: 1,403 L/s + 140 L/s = 1,543 L/s
- 2051 Flow: 1,431 L/s + 140 L/s = 1,571 L/s

In discussion with the City, it has been agreed to proceed with a peak design flow of 1,600 L/s.

The Empey Street WWPS does not currently have a dedicated EST. As noted previously in **Table 2-2** the volume for one-hour storage at the existing 10-year PWWF is 3,650 m<sup>3</sup>. One-hour storage at the future 2051 10-year PWWF is 5,352 m<sup>3</sup>. The MSP notes the current available emergency storage at the station is 2,262 m<sup>3</sup>.

The MSP proposes that emergency storage will be implemented at the Empey Street WWPS through the expanded wetwell (estimated to be 500 m<sup>3</sup>) and provision of a 2,000 m<sup>3</sup> EST. This would not be sufficient to provide one-hour of emergency storage, however sewer network improvements in advance of 2051 are assumed to result in reduced extraneous flows and therefore reduced storage requirements.

In summary, the MSP Update for 2051 identified the following capacities at the Empey Street WWPS (GM BluePlan Engineering Limited, 2021):

- Design Firm Capacity: 1,600 L/s
- Future growth PWWF: 1,431 L/s
- Future (2051) Storage Requirement (10-year storm for one-hr storage): 5,352 m<sup>3</sup>.

The above values form the basis for the design phase of the Empey Street WWPS Upgrades. Refer to **Appendix A** for the complete Technical Memorandum for the MSP Review completed by AECOM.



## 3. Municipal Class Environmental Assessment Planning Process

### 3.1 Overview

All municipalities in Ontario are subject to the provisions of the Ontario *Environmental Assessment Act (EAA)* and its requirements to prepare an EA for applicable public works projects. The Ontario Municipal Engineers Association (MEA) “Municipal Class Environmental Assessment” manual (October 2000, as amended in 2007, 2011 and 2015) provides municipalities with a phased planning procedure, to plan and undertake all municipal sewage, water, stormwater management and transportation projects that occur frequently, are usually limited in scale and have a predictable range of environmental impacts and applicable mitigation measures.

In Ontario, infrastructure projects, including the Empey Street WWPS Upgrades, are subject to the Municipal Class Environmental Assessment (MCEA) process and must follow a series of mandatory steps as outlined in the MCEA Manual. The MCEA Manual consists of five phases and the application of the phases depends on the MCEA Schedule that applies to a project. The phases are summarized below:

- **Phase 1 – Problem or Opportunity:** Identify the problems or opportunities to be addressed and the needs and justification.
- **Phase 2 – Alternative Solutions:** Identify alternative solutions to the problems or opportunities by taking into consideration the existing environment, and establish the preferred solution taking into account public and agency review and input.
- **Phase 3 – Alternative Design Concepts for the Preferred Solution:** Examine alternative methods of implementing the preferred solution based upon the existing environment, public and agency input, anticipated environmental effects and methods of minimizing negative effects and maximizing positive effects.
- **Phase 4 – Environmental Study Report:** Document in an Environmental Study Report (ESR), a summary of the rationale, planning, design and consultation process for the project as established through Phases 1 to 3 above and make such documentation available for scrutiny by review agencies and the public.
- **Phase 5 – Implementation:** Complete contract drawings and documents, proceed to construction and operation, and monitor construction for

adherence to environmental provisions and commitments. Also, where special conditions dictate, monitor the operation of the completed facilities.

Phases 1, 2 and 5 of the MCEA process apply to this project as it falls under the Schedule B project category. The MCEA process ensures that all projects are carried out with effectiveness, efficiency and fairness. The process serves as a mechanism for understanding economic, social and environmental concerns while implementing improvements to municipal infrastructure.

## 3.2 Project Planning Schedules

The MCEA defines four types of projects and the processes required for each (referred to as Schedule A, A+, B, or C). The selection of the appropriate schedule is dependent on the anticipated level of environmental impact, and for some projects, the anticipated construction costs. Projects are categorized according to their environmental significance and their effects on the surrounding environment. This study is categorized as a schedule B planning activity. The following describes the MCEA planning schedules:

- **Schedule A:** Projects are limited in scale, have minimal adverse environmental effects and include a number of municipal maintenance and operational activities. These projects are pre-approved and may proceed to implementation without following the full MCEA planning process.
- **Schedule A+:** The purpose of Schedule A+ is to ensure appropriate public notification for certain projects that are pre-approved under the MCEA. It is appropriate to inform the public of municipal infrastructure project(s) being constructed or implemented in their area.
- **Schedule B:** Projects have the potential for some adverse environmental effects. The proponent is required to undertake a screening process (Phases 1 and 2), involving mandatory contact with directly affected public and with relevant review agencies to ensure that they are aware of the project and that their concerns are addressed. If there are no outstanding concerns, then the proponent may proceed to implementation. At the end of Phase 2, a Project File documenting the planning process followed through Phases 1 and 2 shall be finalized and made available for public and agency review. However, if a concern is raised related to aboriginal and treaty rights which cannot be resolved, a Section 16 Order) may be requested and considered by the Minister of the Environment, Conservation and Parks (MECP). Alternatively, the proponent may elect voluntarily to plan the project as a Schedule C undertaking.

- **Schedule C:** Projects have the potential for significant adverse environmental effects and must proceed under the full planning and documentation (Phases 1 to 4) procedures specified in the MCEA Manual. Schedule C projects require that an Environmental Study Report (ESR) be prepared and filed for review by the public and review agencies. If concerns related to aboriginal and treaty rights are raised that cannot be resolved then a Section 16 Order may be requested.

### 3.2.1 Empey WWPS Upgrades MCEA Schedule

As the Empey Street WWPS Upgrades involves the review of various alternatives, which among others, includes siting of a new WWPS (where equipment is located in a new building or structure) and associated linear infrastructure that are potentially outside of an existing road allowance and or utility corridor (potential for property acquisition), Phases 1 and 2 (Schedule B undertaking) of the MCEA planning process apply to this Study. The level of analysis includes first developing the problem or opportunity statement, followed by identifying and evaluating alternatives in order to establish a preferred solution.

## 3.3 Communications and Consultation Overview

A key priority of community engagement has been to encourage the participation of stakeholders, key review agencies, the public and Indigenous communities. Several steps have been undertaken to help ensure that information is shared and concerns are captured and addressed in an inclusive and transparent manner throughout the MCEA process to build confidence and trust in the decision-making process and meet the requirements of the MCEA process. The following summarizes the key activities undertaken:

- A contact list was established at the onset of the study and regularly updated to notify key review agencies, stakeholders, Indigenous communities and members of the public that requested to be kept informed
- The Notice of Commencement, Notice of Public Information Centre (PIC), and Notice of Completion were distributed to the Project's contact list
- Notifications were advertised in the Civic News, Two Row Times and Turtle Island newspapers
- The City's website ([brantford.ca/EmpeyWWPS](http://brantford.ca/EmpeyWWPS)) and the City's social media platforms provided relevant project details

- A virtual PIC was held to provide stakeholders, key review agencies, the public and Indigenous communities an opportunity to learn about the project and provide feedback for consideration
- Local Indigenous communities were identified and notified as part of this MCEA study. At the onset of the study, a letter requesting the level of interest in the Project was individually issued to each of the identified communities to allow for the sharing of information
- Individual meetings were held with relevant stakeholders and agencies, as required, or as opportunities arose

All comments received were considered and addressed to the extent possible by the Study Team. Refer to **Section 10** for the overview of consultation for Phases 1 and 2 of this MCEA study.

### 3.4 Public Review of Project File and Next Steps

This Project File comprises the documentation for Schedule B requirements. Placement of the Project File report for public review on the City's website ([brantford.ca/EmpeyWWPS](http://brantford.ca/EmpeyWWPS)) completes Phase 2 of this MCEA study. The 30-day comment period commences on November 24, 2022 and ends on December 24, 2022. Interested persons may provide written comments to our study team by December 24, 2022. All comments and concerns should be sent directly to the Project Managers listed below.

- Shahab Shafai, M.Sc., P.Eng.  
Project Manager  
City of Brantford  
(519) 759-4150 ext. 5745  
[SShafai@brantford.ca](mailto:SShafai@brantford.ca)
- Chris Gouett, M.A.Sc.  
Project Manager  
AECOM Canada Ltd.  
(519) 650-8614  
[Chris.Gouett@aecom.com](mailto:Chris.Gouett@aecom.com)

In addition, a Section 16 Order request may be made to the Ministry of the Environment, Conservation and Parks (MECP or Ministry) for an order requiring a higher level of study (i.e., requiring an individual/comprehensive EA approval before being able to proceed), or that conditions be imposed (e.g., require further studies), only on the grounds that the requested order may prevent, mitigate or remedy adverse impacts on

constitutionally protected Aboriginal and treaty rights. Requests on other grounds will not be considered. Requests should include the requester contact information and full name.

Requests should specify what kind of order is being requested (request for conditions or a request for an individual/comprehensive environmental assessment), how an order may prevent, mitigate or remedy potential adverse impacts on Aboriginal and treaty rights, and any information in support of the statements in the request. This will ensure that the Ministry is able to efficiently begin reviewing the request.

The request should be sent in writing or by email by December 24, 2022 to both contacts below:

- Minister of the Environment, Conservation and Parks  
Ministry of Environment, Conservation and Parks  
777 Bay Street, 5th Floor  
Toronto, Ontario M7A 2J3  
[minister.mecp@ontario.ca](mailto:minister.mecp@ontario.ca); and
- Director, Environmental Assessment Branch  
Ministry of Environment, Conservation and Parks  
135 St. Clair Avenue West, 1st Floor  
Toronto, Ontario M4V 1P5  
[EABDirector@ontario.ca](mailto:EABDirector@ontario.ca)

Requests should also be copied to Mr. Shafai at the City by mail or by e-mail. Please visit the Ministry's website for more information on requests for orders under Section 16 of the *Environmental Assessment Act* at: <https://www.ontario.ca/page/class-environmental-assessments-section-16-order>

All personal information included in your request – such as name, address, telephone number and property location – is collected, under the authority of Section 30 of the *Environmental Assessment Act* and is collected and maintained for the purpose of creating a record that is available to the general public. With the exception of personal information, all comments will become part of the public record of the Study.

## 4. Existing Conditions

### 4.1 Technical Environment

#### 4.1.1 Empey Street WWPS Station

The Empey Street WWPS consists of a main floor and basement/drywell. The main floor consists of two separate areas: (1) a dedicated access room to the wetwell with separate entrance and (2) an above grade control building. The control building includes an electrical room, office, washroom, and storage room. A diesel standby generator is installed in the electrical room.

The below grade drywell is accessed via the electrical room. Four pumps are installed in the drywell; two centrifugal radial flow pumps and two dry pit submersible pumps. Each pump discharges to an independent 500 mm ductile iron riser connected to an outlet trough which conveys flows by gravity to a 1,050 mm trunk sewer. This trunk sewer eventually discharges to the Elgin Street trunk sewer. In Fall 2021 the isolation gates and valves were replaced.

The Empey Street WWPS does not currently have an emergency storage tank or overflow. There have been no reports of sewer back-up into neighbouring properties.

The station observed firm capacity is 1,120 L/s, however the original design capacity is 1,260 L/s. To meet the 2051 growth of the Empey Street WWPS catchment area, the firm capacity is proposed to be increased to 1,600 L/s. Firm capacity determination was completed in the MSP – more information can be found in **Section 2**.

#### 4.1.2 Utilities

Utilities within the Study Area are confirmed to include stormwater sewers and sanitary sewers along Empey Street (including connections to the Empey Street WWPS). There are overhead electrical utility lines along Empey Street and on the station property to provide 600V utility power.

The City will contract the services of a subsurface utilities engineering firm to confirm locations of stormwater sewers, sanitary sewers and electrical utility lines, and identify and locate municipal water services, below grade electrical utility (if any), natural gas services, and telecommunications.

## 4.2 Natural Environment

### 4.2.1 Terrestrial

Field investigations were conducted in May and September 2021, where permissions to enter were granted. Understanding the existing conditions within the area is needed in order to evaluate the potential alternatives and identify anticipated impacts. The following summarizes the results of the background review and field investigations. Refer to **Appendix B** for the detailed natural environment findings.

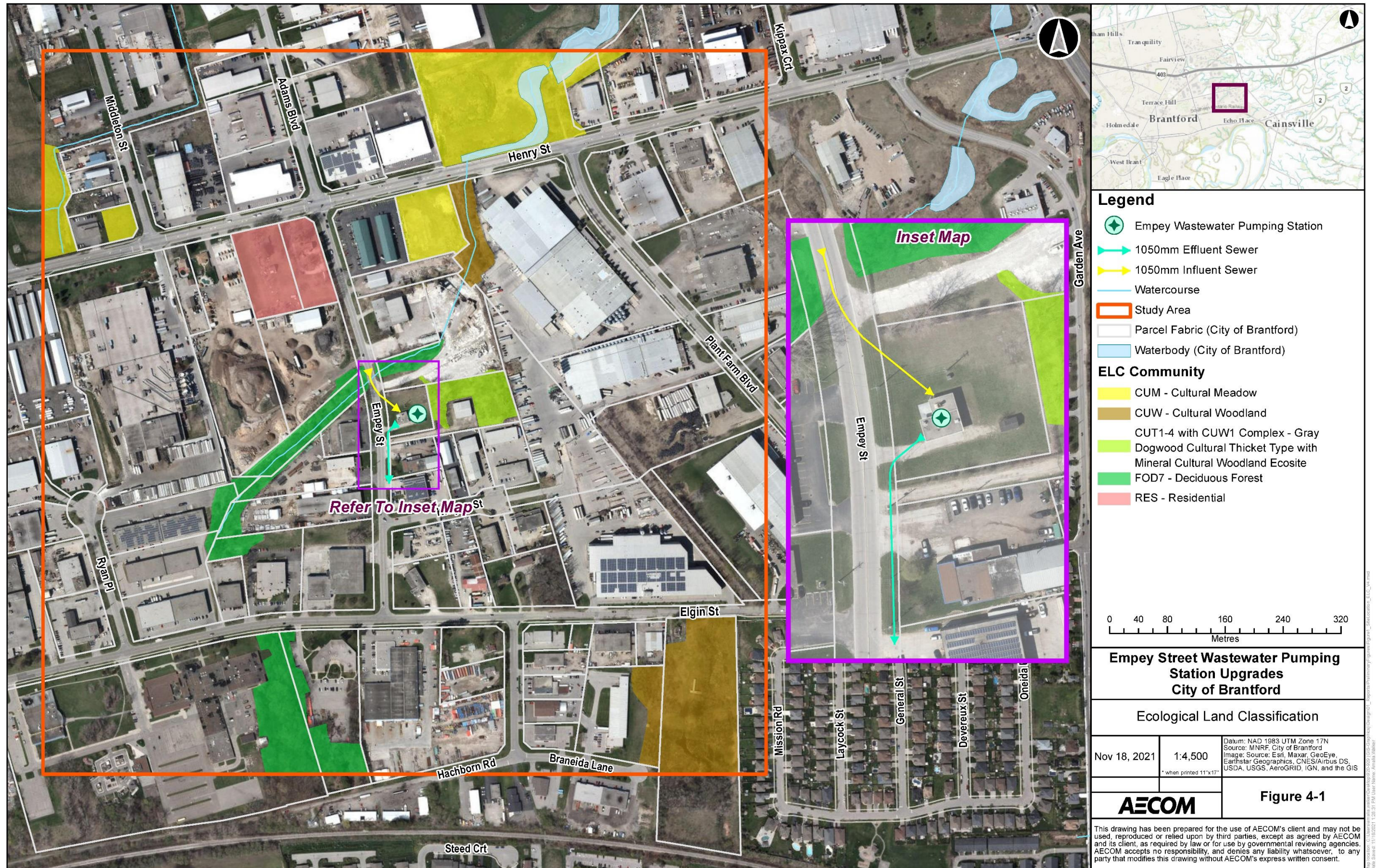
#### 4.2.1.1 Vegetation Communities

Vegetation communities within the Study Area were limited due to the highly developed nature of the area. Ecological Land Classification (ELC) communities are shown in **Figure 4-1**. Areas without classification are either too small for ELC designation or developed industrial areas. Natural areas identified on edges of the Study Area away from the anticipated direct impacts were not assessed further.

As shown in **Figure 4-1**, the Study Area is largely built-up and does not contain significant natural heritage features in and around the Empey Street WWPS site. The majority of the existing Empey Street WWPS property is dominated by mowed Kentucky Bluegrass (*Poa pratensis*) and non-native invasive shrub or tree species around the fence line. Shrub species include Tartarian honeysuckle (*Lonicera tartarica*), European buckthorn (*Rhamnus cathartica*), Manitoba maple (*Acer negundo*) and occasional red-osier dogwood (*Cornus sericea*). The mowed lawn area also has occurrences of dandelion (*Taraxacum officinale*), broadleaf plantain (*Plantago major*), Virginia strawberry (*Fragaria virginiana*), and clover (*Trifolium spp.*). Due to the maintained nature of the site, it does not have a corresponding ELC community and is classed as industrial.

The site adjacent to the Empey Street WWPS, located at 37 Empey Street, contains natural vegetation communities. The natural vegetation communities on the property just meet the minimum threshold to be classified using ELC. Along the north side of the property, behind the existing building, is a Gray Dogwood Cultural Thicket Type (CUT1-4) with Mineral Cultural Woodland (CUW1) complexes. The cultural thicket community is dominated by Gray Dogwood (*Cornus racemosa*) and European buckthorn with other mixed dogwood species, red raspberry (*Rubus idaeus*) and young green ash (*Fraxinus pennsylvanica*) and young black walnut (*Juglans cinera*). Within the pockets of cultural woodland tree species present include mature eastern cottonwoods (*Populus deltoides*), and the occasional mature Black Walnut with a sparse shrub layer dominated by European buckthorn and chokecherry (*Prunus virginiana*). The ground layer is dominated by leaf litter and patches of garlic mustard (*Alliaria petiolata*). The central portion of the property around the existing building is mowed lawn.

Figure 4-1: Ecological Land Classification





There is one watercourse to the north and west of the Empey Street WWPS. This unnamed tributary of the Fairchild Creek is a first order stream within the Grand River Conservation Authority's Regulated Areas. The valley lands adjacent to the unnamed Fairchild Creek tributary were assessed and observed to be narrow with steep treed slopes leading up to the neighbouring developed areas. The vegetation community is classified as a Fresh – Moist Lowland Deciduous Forest Ecosite (FOD7). The canopy is dominated by eastern cottonwoods (*Populus deltoides*), green ash (*Fraxinus pennsylvanica*) and sparse mature willows (*Salix sp.*). There is little to no sub-canopy and the shrub layer is dominated by European buckthorn (*Rhamnus cathartica*) and Russian olive (*Elaeagnus angustifolia*) on the edges. The ground cover is sparse and primarily garlic mustard (*Alliaria petiolata*).

#### 4.2.2 Wildlife

Based on background review, several Species at Risk (SAR) were identified as having the potential to occur or have suitable habitat within the Study Area which are discussed in **Section 4.2.3**. No other provincially rare plant or animal species had record of occurrence data within the Study Area.

Incidental wildlife observations as well as the identification of preferred wildlife habitat conditions were documented during the May 2021 field investigations conducted by AECOM. The following incidental wildlife was observed during field investigations:

**Table 4-1: Incidental Wildlife Observations**

Wildlife	Name
Bird	Red-winged Blackbird
Bird	American Goldfinch
Bird	American Robin
Bird	House Sparrow
Mammal	Gray Squirrel
Mammal	Raccoon

Habitat for wildlife was limited with species observations common to areas heavily influenced by human disturbance.

#### 4.2.3 Species at Risk

From a review of the available data, a total of 30 SAR species were identified as potentially occurring within the Study Area. Of these species, ten are listed as Endangered (END), nine as Threatened (THR) and eleven as Special Concern (SC). A

preliminary screening exercise was conducted to determine the number of species with potentially suitable habitat within the Study Area. Potentially suitable habitat was determined by comparing existing conditions on site using aerial photography to habitat descriptions of each SAR species.

The full table of SAR identified through the background review and probability of occurrence is included in Appendix A of the Natural Environment Report (**Appendix B**).

Through the completion of field investigations, many of the listed SAR identified to have potential suitable habitat within the Study Area were deemed unsuitable due to factors such as limited size of suitable communities, vegetation composition or distance to developed areas. The findings indicate there are potentially suitable habitat for four SAR was identified within the Study Area:

- Little Brown Myotis (*Myotis lucifugus*), END
- Northern Myotis (*Myotis septentrionalis*), END
- Tri-colored Bat (*Perimyotis subflavus*), END
- Eastern Wood-Pewee (*Contopus virens*), SC

Suitable habitat for the above SAR was not identified within the properties at 33 or 37 Empey Street.

#### **4.2.4 Provincially Ranked Species & Features**

No provincially ranked features or species were observed in the Study Area, however, the following presents a list of species potentially located in the Study Area based on the presence of preferred habitat conditions:

- Eastern Wood-Pewee, Special Concern, Habitat for these species are considered Significant Wildlife Habitat and is afforded protection under the Provincial Policy Statement

#### **4.2.5 Regionally Ranked Species & Features**

No regionally ranked features or species were observed in the Study Area.

### **4.3 Geotechnical and Soil Characteristics**

A total of 4 boreholes taken in 1963 (2) and 1980 (2) were previously collected from the existing Empey Street WWPS property. These results indicate that soil is primarily comprised of clayey silt, silty clay, with occasional sand (mostly at the surface). In March 2022, a total of ten boreholes were drilled on the Empey Street WWPS property

to depths of 3.7 to 29.0 metres below existing grade. Results from the 2022 geotechnical field investigation indicate that subsurface soil consists of existing fill overlying native deposits of silt and clay. Below the fill, all boreholes extending to the termination depth typically ranged in composition from clayey silt to silty clay. Localize silt with some sand and clay were encountered within the silt and clay in select boreholes.

A soils characterization report was also completed at based on boreholes drilled on the Empey Street WWPS property in March 2022. Results from the Soil Characterization Report indicate that there were no visual/olfactory evidence of potential contamination. Results were compared to MECP Tables 1 SCS (RPICC), Table 2.1 ESQS (ICC), Table 3 SCS (ICC Coarse), and Table 1 and 2.1 LSLs. Three distinct excess soil zones were identified within the project area. For Zone 1, a review of results indicate that soil quality within the majority of the Project Area meets MECP Table 1 SCS/LSLs (excluding EC and/or SAR) for all assessed parameters. For Zone 2, results indicate soil at two locations exceed Table 2.1/3.1 ESQS/ LSLs. If geotechnically suitable, these can be reused onsite and could be considered to be suitable for reuse at an off-site location acceptable of meeting the MECP Table 2.1/3.1 ICC ESQs/LSLs with a variance for EC and SAR impacts. Lastly, for Zone 3, a review of results indicate that select samples exceeded concentration of those outlined in MECP Table 2.1/3.1 ICC ESQS in some soil samples (detections of PHCs F2 and/or F4G). These soils will not be used for reuse in the project area and are likely not suitable for reuse at an off-site location.

## 4.4 Socio-Economic Environment

The lands surrounding the Empey Street WWPS are generally industrial with the exception of a few residential dwellings.

The alternatives being considered as part of this MCEA Study are located within lands designated “General Employment” in the Official Plan (August 2021 Consolidation).

## 4.5 Cultural Heritage Environment

The following describes the cultural heritage resources related to the to the alternatives presented in **Section 7** and includes archaeological resources, built heritage landscapes and cultural heritage landscapes.

### 4.5.1 Archaeological Resources

A Stage 1 Archaeological Assessment (AA) has been completed as part of this Study to evaluate the archaeological potential within the Study Area related to the alternatives presented in **Section 7**. The report is included in **Appendix C**.

The Stage 1 AA report details the rationale, methods and results of the Stage 1 AA. The Stage 1 AA was completed by using background research to describe the geography, land use history, previous archaeological field work and current conditions of the Study Area to determine its archaeological potential. In addition, satellite imagery and thematic and historic maps, were analyzed. The results of the Stage 1 AA indicate while the majority of the Study Area does not contain archaeological potential, as it has been extensively and deeply disturbed by past construction activity, there are sections of the Study Area that are not obviously disturbed and will therefore require a Stage 2 Archaeological Assessment prior to any ground-disturbing activity.

Given the results of this assessment, AECOM makes the following recommendations:

1. The areas shaded green in Figure 6 of **Appendix C** contain archaeological potential. These areas must be subject to Stage 2 archaeological assessment (**Appendix C**, Figure 6) before any land alteration takes place, in accordance with Section 2.1 Property Survey of the Standards and Guidelines for Consultant Archaeologists (2011).
2. Much of the Study Area has been subject to deep and extensive disturbance from previous residential and commercial development, as well as the construction of roadways and associated infrastructure (red areas in **Appendix C**, Figure 6).

#### **4.5.2 Built Heritage Resources and Cultural Heritage Landscapes**

A desktop review screening for cultural heritage resources in the Study Area has been completed (**Appendix D**) to identify built heritage resources and/or cultural heritage landscapes within and/or adjacent to the proposed alternatives within the Study Area. The Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes was used to help determine whether the MCEA alternatives may impact cultural heritage resources.

The Study Area contains two built heritage resources. The first is a previously identified heritage register project located at 336 Henry Street. The second is a residential property located at 521 Elgin Street that has been identified as a potential built heritage resource. Based on the alternatives evaluated in detail (**Section 7**), there will be no direct or indirect impact to the two identified built heritage resources. Therefore, no further work is required.

## 5. Provincial and Municipal Planning Context

### 5.1 Provincial Policy Statement

The Provincial Policy Statement (PPS) is issued under the authority of the Planning Act, R.S.O. 1990, c. P.13. The PPS provides provincial policy direction on matters related to land use planning and development that affect communities, such as ensuring the appropriate infrastructure is available to accommodate current and future needs. The current PPS came into effect on May 1, 2020, replacing the 2014 PPS, and applies to planning decisions made on or after that date.

The key sections of policies applicable to this MCEA study are as follows:

- 1.1 Managing and Directing Land Use to Achieve Efficient and Resilient Development and Land Use Patterns
- 1.2 Co-ordination
- 1.6 Infrastructure and Public Service Facilities
- 2.1 Natural Heritage
- 2.6 Cultural Heritage and Archaeology
- 3.0 Protecting Public Health and Safety

**Relevance to MCEA:** Pursuant to PPS policy 1.2.1, this MCEA is consistent with the PPS through the implementation of a co-ordinated, integrated and comprehensive approach to dealing with infrastructure.

Subsection 1.6.6 of the PPs outlines the policies for sewage. Policy 1.6.1.1 states “Planning for sewage and water services shall:

- a) direct and accommodate expected growth or development in a manner that promotes the efficient use and optimization of existing:
  1. municipal sewage services and municipal water services; and
  2. private communal sewage services and private communal water services, where municipal sewage services and municipal water services are not available;
- b) ensure that these systems are provided in a manner that:
  1. can be sustained by the water resources upon which such services rely;
  2. is feasible, financially viable and complies with all regulatory requirements; and
  3. protects human health and the natural environment;

- c) promote water conservation and water use efficiency;
- d) integrate servicing and land use considerations at all stages of the planning process; and
- e) be in accordance with the servicing hierarchy outlined through policies 1.6.6.2, 1.6.6.3, 1.6.6.4 and 1.6.6.5.”

Consistent with the PPS, the alternatives, as described in **Section 7**, were reviewed on the basis of their feasibility, cost and compliance with regulatory requirements. Land use considerations were also a key factor in screening of the alternatives.

The efficient use and optimization of the existing station has been considered and evaluated to address the need for increasing the capacity of the Empey Street WWPS.

## 5.2 A Place to Grow: Growth Plan for the Greater Golden Horseshoe

The Growth Plan for the Greater Golden Horseshoe (Office Consolidation 2020) was established by the Ontario government to provide a framework for municipalities to implement Ontario’s vision for stronger communities and growth management throughout the region. The goal of the Growth Plan for the Greater Golden Horseshoe is to focus growth in compact development patterns, offer a variety of housing options, and mixed-use development within ‘Urban Growth Centres’. The Plan sets out minimum density targets for jobs and residents per hectare in ‘Urban Growth Centres’.

The infrastructure framework in the Growth Plan requires that an integrated approach to land use planning, infrastructure investments, and environmental protection to is undertaken to achieve the outcomes of the Plan.

**Relevance to MCEA:** The Study Area is situated within the Greater Golden Horseshoe Growth Plan Area. The polices in the Growth Plan were considered in the review of alternatives.

## 5.3 City of Brantford Official Plan

The City of Brantford’s Official Plan (OP; August 2021 Consolidation) provides a vision for the future growth of the City and a policy framework to guide the City’s physical development to 2051.

OP Section 8 details the policies for servicing infrastructure and utilities, which includes policies for wastewater servicing infrastructure. Pursuant to OP Section 8.1, wastewater servicing infrastructure shall be designed, constructed and maintained to:

- i. Provide adequate service to proposed developments
- ii. Accommodate the full development of the drainage area;
- iii. Utilize gravity flow wherever possible, to avoid the need for pumping stations;
- iv. Protect the natural characteristics of the landscapes in which they are located; and,
- v. Satisfy the servicing standards of the City.

**Relevance to MCEA:** The OP was considered in the evaluation of alternatives. The proposed alternatives evaluated in this report are designated “General Employment” as per Schedule 3 (Land Use Plan) of the OP.

## 5.4 The Grand River Conservation Authority Requirements

The Grand River Conservation Authority (GRCA) is authorized by the Development, Interference with Wetlands and Alterations to Shorelines and Watercourse Regulation (Ontario Regulation 152/06 also known as the “Generic Regulation”). These Regulations, passed under the Conservation Authorities Act, regulate natural and hazardous areas such as areas within and adjacent to rivers or stream valleys, areas that are subject to the hazards of flooding and erosion, and areas within and adjacent to wetlands areas.

**Relevance to MCEA Study:** The Study Area falls within the Grand River Watershed within the jurisdiction of GRCA and includes the Fairchild Creek Watershed. The Study Area contains an unnamed tributary of Fairchild Creek that is regulated by the GRCA. No negative impacts are anticipated to this feature of interest as a result of the preferred solution described in **Section 8**. The GRCA will be consulted during the design stage to review the approach to bypass pumping in the area of the watercourse. The GRCA is also interested in the means of discharge to the watercourse during dewatering (if any).

## 5.5 Grand River – Approved Source Protection Plan

Section A.2.10.6 of the MCEA manual directs proponents, including the City, to consider Source Water Protection (SWP) in the context of the Clean Water Act (CWA; 2006). Projects proposed within a SWP vulnerable area are required to consider policies in the applicable Source Protection Plan (SPP), including their impact with respect to the

project. A watershed-based SPP contains policies to reduce existing and future threats to drinking water in order to safeguard human health through addressing activities that have the potential to impact municipal drinking water systems. The Grand River Source Protection Plan is the relevant SPP for this project, and contains policies that address current and future threats to municipal drinking water supply within the Grand River watershed.

An update of the Grand River Source Protection Plan came into effect February 3, 2021. The plan has two volumes:

- Volume 1 provides the history of source protection planning and the Clean Water Act, Source Protection Plan objectives, and description of the watershed
- Volume 2 contains the plan policies listed by municipality

Volume 2, Chapter 15 contains the policies for the City of Brantford. There are four types of vulnerable areas covered by the SPP:

1. Intake protection zones (IPZs) – An IPZ is the area around a surface body of water where water is drawn in and conveyed for municipal drinking water
2. Highly vulnerable aquifers (HVAs) – Aquifers are underground layers of water that supply wells. HVAs are susceptible to contamination due to their proximity to the ground surface or where the types of materials in the ground around it are highly permeable.
3. Significant groundwater recharge areas (SGRAs) - SGRAs are characterized as having porous soils (e.g., sand or gravel), which allow for water to easily seep into the ground and flow to an aquifer.
4. Wellhead protection areas (WHPAs) – WHPAs are areas of land around a municipal well where land use activities have the greatest potential to affect the quality of water flowing into the well.

**Relevance to MCEA:** The Study Area is located within the Intake Protection Zone (IPZ-3). A Source Protection Restricted Land Use Declaration Form will be required during detailed design based on the Project's location in the IPZ-3. Once the form is reviewed, a notice under the Clean Water Act is issued that will state any requirements that are necessary for the application to proceed.



## 6. Phase 1: Problem or Opportunity Statement

Phase 1 of the five-phase Municipal Class EA planning process requires the proponent of an undertaking (i.e., the City) to first document factors leading to the conclusion that the improvement is needed, and to develop a clear statement of the identified problems or opportunities to be addressed. As such, the problem or opportunity statement is the main starting point in the undertaking of a MCEA and becomes the central theme and integrating element of the Project. It also assists in setting the scope of a MCEA study.

The following problem or opportunity statement has been developed for this MCEA study:

### ■ **Problem:**

- Significant near and long-term growth is expected within the City. The City's recent Water, Wastewater and Stormwater Master Servicing Plan (MSP) 2051 Amendment (GM Blue Plan, June 2021) has identified the need to increase the capacity of the existing Empey Street WWPS to meet planned growth to 2051. The increased capacity suggested as required by the MSP is due to an adjustment of municipal boundaries between the City of Brantford and County of Brant and Settlement Area boundaries.
- The capacity increase is specifically required to meet planned growth, including the areas within the City's new settlement area, which will eventually lie within the Empey Street WWPS catchment area.
- The WWPS's available storage capacity under the design 10-year peak wet weather flow (PWWF) is insufficient to meet the desired emergency storage capacity. As part of the MSP, it was recommended that the City complete a number of upgrades to the Empey Street WWPS including twinning of the wetwell and the provision of an EST to accommodate one hour of storage for a 10-year peak wet weather flow.

### ■ **Opportunity:**

- Complete the Schedule B Municipal Class Environmental Assessment (MCEA) planning process in consultation with key stakeholders, review agencies, Indigenous communities and the public that will establish a preferred solution for the Empey Street WWPS design to meet anticipated 2024 in-service date.

## 7. Phase 2: Alternative Solutions

### 7.1 Approach to and Screening of Alternatives

Phase 2 of the MCEA process is focused on identifying and assessing alternative solutions and selecting a preferred solution. The evaluation was comprised of a multi-step process where various alternatives were identified and considered for increasing wastewater pumping capacity. As an initial step in evaluating alternative solutions, a screening analysis was undertaken.

The alternative solutions that did not meet the Phase 1 problem or opportunity statement (**Section 6**) were screened out, while the alternative solutions that had the potential to meet the problem or opportunity, were carried forward to the second stage of the alternative solutions evaluation and compared against the evaluation criteria. The evaluation criteria are presented in **Section 7.2** which provides the detailed evaluation that was undertaken to confirm the recommended preferred solution.

**Table 7-1** documents the initial step that was undertaken to screen the alternatives taking into consideration the alternatives identified as part of AECOM's Empey Street WWPS Master Servicing Plan (MSP) review.

**Table 7-1: Screening of Alternatives**

Alternative	Description	Potential to Address Problem/Opportunity	Screening Result
<b>1. Do Nothing – Maintain Station Capacity</b>	<ul style="list-style-type: none"> <li>Maintain the status quo. No immediate upgrades are planned or made; however, regular maintenance and/or strategic WWPS component replacement is undertaken to ensure smooth operation.</li> </ul>	<ul style="list-style-type: none"> <li>Does not address the problem or opportunity statement.</li> <li>This approach would not address the need to address capacity constraints due to future projected growth changes to the wastewater system.</li> </ul>	<ul style="list-style-type: none"> <li>Do not carry forward for further evaluation</li> </ul>
<b>2. Limit Growth</b>	<ul style="list-style-type: none"> <li>Assumes no improvements will be made beyond regular maintenance and includes measures to limit development in the Study Area.</li> </ul>	<ul style="list-style-type: none"> <li>Does not address the problem or opportunity statement.</li> <li>Measures to limit projected growth are not consistent with provincial and municipal plans and policies.</li> </ul>	<ul style="list-style-type: none"> <li>Do not carry forward for further evaluation</li> </ul>

Alternative	Description	Potential to Address Problem/Opportunity	Screening Result
<b>3. Upgrade Existing Empey Street WWPS on Site</b>	<ul style="list-style-type: none"> <li>■ As per MSP recommendations, upgrade the existing Empey Street WWPS, including the construction of a new EST on existing site.</li> <li>■ This alternative includes anticipated additional working area at 37 Empey Street.</li> </ul>	<ul style="list-style-type: none"> <li>■ Addresses the problem or opportunity statement.</li> </ul>	<ul style="list-style-type: none"> <li>■ Carry forward for further evaluation</li> </ul>
<b>4. Site New WWPS</b>	<ul style="list-style-type: none"> <li>■ Site a new WWPS with emergency storage.</li> </ul>	<ul style="list-style-type: none"> <li>■ Addresses the problem or opportunity statement.</li> </ul>	<ul style="list-style-type: none"> <li>■ Carry forward for further evaluation</li> </ul>
<b>5. Implement Wet Weather Flow Management and Reduction Program</b>	<ul style="list-style-type: none"> <li>■ Implementation of wet weather flow management and reduction programs to identify and reduce sources of extraneous flow entering the system within the Empey Street WWPS Catchment Area.</li> </ul>	<ul style="list-style-type: none"> <li>■ While beneficial and proactive, does not address the problem or opportunity statement on its own.</li> </ul>	<ul style="list-style-type: none"> <li>■ Carry forward in conjunction with other alternatives</li> </ul>

Based on the above screening, the following forms the alternatives that will be carried forward for detailed evaluation:

- Alternative 3: Upgrade Existing Empey Street WWPS on Site
- Alternative 4: Site New WWPS

Alternative 5: Implement Wet Weather Flow Management and Reduction Program will be applied in conjunction with the preferred alternative.

### 7.1.1 Alternative 4 – Identification of WWPS Siting Options

Alternative 4 involves siting a new WWPS. Potential locations for identifying WWPS siting options were identified based on applying the following guidelines:

- Proximity to the existing Empey Street WWPS site
- Land availability, considering preference for publicly owned land and existing/future land use (e.g., pending development application)
- Minimum site size (approximately 50x50 m<sup>2</sup> or 0.25 hectares or 0.6 acres) and land parcel shape (preference for square or rectangular property) based on area needed for WWPS and emergency storage tank (EST)

- Vehicular access
- Proximity to utilities
- Property owner willingness to sell land

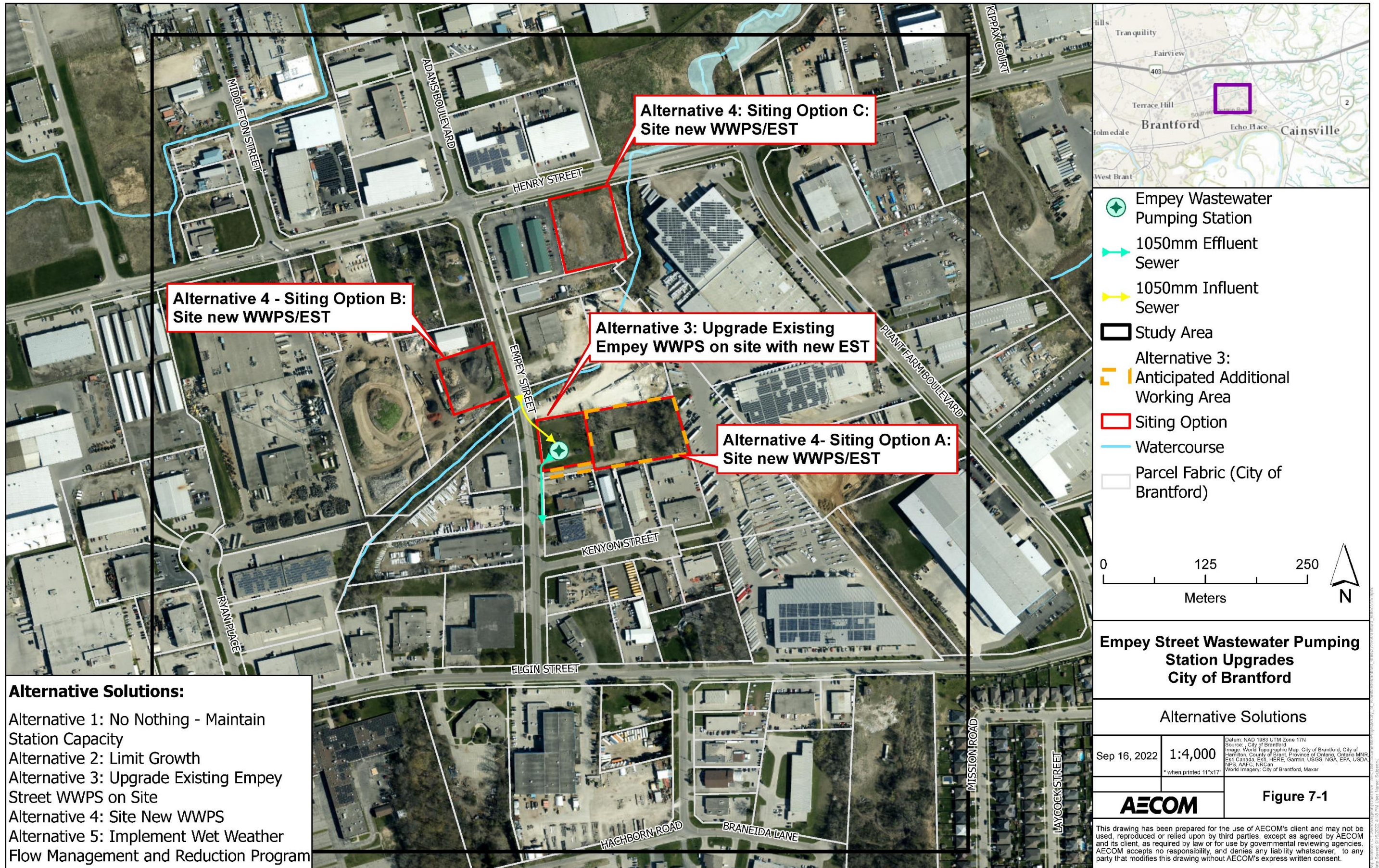
Based on applying the above guidelines, the following siting options, as shown in **Figure 7-1**, were identified and screened as per **Table 3-2** for Alternative 4: Site New WWPS:

- Alternative 4 – Siting Option A. 37 Empey Street
- Alternative 4 – Siting Option B. 26 Empey Street
- Alternative 4 – Siting Option C. South side of Henry Street between Empey Street and Plant Farm Boulevard

As shown in **Table 7-2**, the screening recommended that **Alternative 4 – Siting Option A** be carried forward for detailed evaluation. Alternative 4 – Siting Option A involves siting a new wastewater pumping station, including new EST. The site shown in **Figure 7-1**, located at 37 Empey Street, was selected for further detailed examination as it meets the minimum site size requirement, it is in close-proximity to the existing WWPS, is publicly owned and has the area of vacant land required for construction of a new WWPS and EST.

For this alternative, once the new wastewater pumping station is in service, the existing station would be decommissioned. Decommissioning would require demolition of the existing station, including removal of all above and underground components.

Figure 7-1: Alternatives



**Alternative Solutions:**  
 Alternative 1: No Nothing - Maintain Station Capacity  
 Alternative 2: Limit Growth  
 Alternative 3: Upgrade Existing Empey Street WWPS on Site  
 Alternative 4: Site New WWPS  
 Alternative 5: Implement Wet Weather Flow Management and Reduction Program

**Empey Street Wastewater Pumping Station Upgrades  
 City of Brantford**

Alternative Solutions

Sep 16, 2022	1:4,000 <small>* when printed 11"x17"</small>	<small>Datum: NAD 1983 UTM Zone 17N Source: City of Brantford Image: World Topographic Map: City of Brantford, City of Hamilton, County of Brant, Province of Ontario, Ontario MNR, Esri, Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS, AACFC, NRCAN World Imagery: City of Brantford, Maxar</small>
<b>AECOM</b>		<b>Figure 7-1</b>

This drawing has been prepared for the use of AECOM's client and may not be used, reproduced or relied upon by third parties, except as agreed by AECOM and its client, as required by law or for use by governmental reviewing agencies. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that modifies this drawing without AECOM's express written consent.

**Table 7-2: Alternative 4 – Screening of WWPS Siting Options**

WWPS Siting Option	Description	Screening	Screening Result
<p><b>Siting Option A</b></p>	<ul style="list-style-type: none"> <li>■ <b>Address:</b> 37 Empey Street</li> <li>■ <b>Current Land Use:</b> City Property (Previously Brantford Power Inc.)</li> <li>■ <b>Official Plan:</b> Site designated “General Employment” in the Official Plan (August 2021 Consolidation)</li> <li>■ <b>Zoning:</b> M2 (General Industrial Zone)</li> </ul>	<p><u><b>Advantages</b></u></p> <ul style="list-style-type: none"> <li>■ WWPS is permitted use; considered a “Public Service” under the by-law</li> <li>■ Adjacent to existing Empey Street WWPS site</li> <li>■ Large site</li> <li>■ Requires less extensive infrastructure upgrades to sewer</li> <li>■ Site is publicly owned</li> <li>■ Brantford Power Inc. would like to dispose the lands</li> </ul> <p><u><b>Disadvantages</b></u></p> <ul style="list-style-type: none"> <li>■ None identified based on initial screening</li> </ul>	<ul style="list-style-type: none"> <li>■ Carry forward for further evaluation</li> </ul>
<p><b>Siting Option B</b></p>	<ul style="list-style-type: none"> <li>■ <b>Address:</b> 26 Empey Street</li> <li>■ <b>Current Land Use:</b> T. David Trucking and Landscape Supply. Site used to stockpile materials</li> <li>■ <b>Official Plan:</b> Site designated “General Employment” in the Official Plan (August 2021 Consolidation)</li> <li>■ <b>Zoning:</b> M2-43/M2 (General Industrial – site specific zone)</li> </ul>	<p><u><b>Advantages</b></u></p> <ul style="list-style-type: none"> <li>■ WWPS is permitted use; considered a “Public Service” under the by-law</li> <li>■ Larger site compared to existing Empey Street WWPS property</li> </ul> <p><u><b>Disadvantages</b></u></p> <ul style="list-style-type: none"> <li>■ Requires more extensive infrastructure upgrades to sewer including crossing of regulated watercourse</li> <li>■ Area required for WWPS may negatively impact current business operations.</li> <li>■ Property owner did not confirm interest in participating in the MCEA study (if in agreement with proposed siting option)</li> </ul>	<ul style="list-style-type: none"> <li>■ Do not carry forward for further evaluation</li> </ul>
<p><b>Siting Option C</b></p>	<ul style="list-style-type: none"> <li>■ <b>Address:</b> South side of Henry Street between Empey Street and Plant Farm Boulevard</li> <li>■ <b>Current Land Use:</b> Vacant</li> <li>■ <b>Official Plan:</b> Site designated “General Employment” in the Official Plan (August 2021 Consolidation)</li> <li>■ <b>Zoning:</b> M2-48 (General Industrial – site specific zone)</li> </ul>	<p><u><b>Advantages</b></u></p> <ul style="list-style-type: none"> <li>■ WWPS is permitted use; considered a “Public Service” under the by-law</li> <li>■ Larger site compared to existing Empey Street WWPS property</li> <li>■ Land is vacant</li> </ul> <p><u><b>Disadvantages</b></u></p> <ul style="list-style-type: none"> <li>■ Landowner has had pre-consultation discussions with the City and plans to develop the site</li> <li>■ Site Plan Control may be applicable</li> <li>■ Most extensive infrastructure upgrades to sewer</li> </ul>	<p>Do not carry forward for further evaluation</p>

## 7.2 Evaluation Criteria and Methodology

To identify the recommended preferred WWPS solution, criteria have been developed to evaluate the Phase 2 alternative solutions carried forward for detailed evaluation:

- Alternative 3: Upgrade Existing Empey Street WWPS on Site (33 Empey Street)
- Alternative 4: Site New WWPS:
  - Siting Option A. 37 Empey Street

Alternative 5: Implement Wet Weather Flow Management and Reduction Program will be applied in conjunction with the preferred alternative.

**Table 7-3** presents the criteria used to evaluate the above alternative solutions.

**Table 7-3: Evaluation Criteria**

Category	Criteria
<b>Land Use</b>	<ul style="list-style-type: none"> <li>■ Potential effects on existing or approved/planned land uses</li> <li>■ Potential for conforming with approved plans and policies</li> <li>■ Anticipated Site Plan approval and Land Acquisition Considerations</li> </ul>
<b>Technical</b>	<ul style="list-style-type: none"> <li>■ Constructability</li> <li>■ Impact on operations and maintenance</li> <li>■ Access and maintenance</li> <li>■ Future infrastructure co-ordination opportunities or implementation risks</li> <li>■ Implementation timing-ability to meet fast in-service date</li> <li>■ Traffic impacts during construction, including expected lane/sidewalk closures and disruption to public transit</li> </ul>
<b>Natural Environment</b>	<ul style="list-style-type: none"> <li>■ Potential effects on terrestrial/aquatic habitat and species</li> <li>■ Potential effects on species at risk (SAR) and their habitat</li> <li>■ Potential effects on surface and groundwater</li> <li>■ Potential to encounter soil and water contamination</li> <li>■ Anticipated environmental permitting and approval considerations</li> </ul>
<b>Socio-Economic Environment</b>	<ul style="list-style-type: none"> <li>■ Disruption to residences, institutions, businesses, recreational facilities during construction (noise, vibration, dust, access)</li> <li>■ Potential for disruption of built heritage resources</li> </ul>
<b>Climate Change</b>	<ul style="list-style-type: none"> <li>■ Potential carbon footprint (e.g., energy usage, use of construction materials, construction methods and operations).</li> <li>■ Potential resilience to extreme weather events.</li> </ul>
<b>Cultural Environment</b>	<ul style="list-style-type: none"> <li>■ Potential effects on archaeological resources</li> <li>■ Potential for disruption of built heritage resources.</li> </ul>
<b>Cost</b>	<ul style="list-style-type: none"> <li>■ Cost of construction (including property acquisition)</li> <li>■ Cost of operations/maintenance</li> </ul>

A comparative evaluation has been completed for the alternatives carried forward using the above criteria and were rated based on their potential constraints relative to the other alternatives as follows:

- High Constraints (Less Preferred)
- Medium Constrains (Moderately Preferred)
- Low Constraints (More Preferred)

### **7.3 Evaluation of Empey Street WWPS Alternatives**

**Table 7-4** details the evaluation that was completed for Alternative 3 and Alternative 4 (Siting Option A). The comparative evaluation was completed using professional judgement and has been informed through documentation of existing conditions. Input solicited from the public, agencies, stakeholders and Indigenous communities has also been considered and incorporated, as applicable.



**Table 7-4: Evaluation of Empey Street WWPS Alternatives**

Category	Criteria	Alternative 3: Upgrade Existing Empey Street WWPS on Site (33 Empey Street)	Alternative 4: Site New WWPS. Siting Option A (37 Empey Street)
<b>Details</b>	-	<ul style="list-style-type: none"> <li>Involves upgrading the existing Empey Street Wastewater Pumping Station, including an emergency storage tank with sufficient volume to accommodate one hour of 10-year PWWF.</li> <li>This alternative includes anticipated additional working area on the adjacent property at 37 Empey Street to improve constructability, as needed. On August 24, 2021 Brantford City Council approved the purchase of the entire 37 Empey Street property, subject to conditions and negotiations. The closing date of the sale was December 15, 2021.</li> </ul>	<ul style="list-style-type: none"> <li>Involves siting a new wastewater pumping station at 37 Empey Street, including an emergency storage tank.</li> <li>For this alternative, once the new wastewater pumping station is in service, the existing wastewater pumping station would be decommissioned. Decommissioning would require demolition of the existing station, including removal of all above and underground components.</li> </ul>
<b>Land Use</b>	<ul style="list-style-type: none"> <li>Potential effects on existing or approved/planned land uses.</li> </ul>	<ul style="list-style-type: none"> <li>No potential effects on existing or approved/planned land use</li> </ul>	<ul style="list-style-type: none"> <li>Property is currently underutilized and has the potential to be redeveloped</li> </ul>
<b>Land Use</b>	<ul style="list-style-type: none"> <li>Potential for conforming with approved plans and policies.</li> </ul>	<ul style="list-style-type: none"> <li>Proposed use conforms with approved plans and policies</li> <li>WWPS is permitted use; considered a “Public Service” under the by-law</li> </ul>	<ul style="list-style-type: none"> <li>Proposed use conforms with approved plans and policies</li> <li>WWPS is permitted use; considered a “Public Service” under the by-law</li> </ul>
<b>Land Use</b>	<ul style="list-style-type: none"> <li>Anticipated Site Plan approval and Land Acquisition Considerations.</li> </ul>	<ul style="list-style-type: none"> <li>Site Plan approval related to building expansion may be required</li> <li>Anticipated additional working area may be required. The City purchased the 37 Empey Street property in December 2021 which can be used for construction</li> </ul>	<ul style="list-style-type: none"> <li>Site Plan approval related to siting new WWPS</li> <li>Requires purchase of property</li> <li>No temporary working easement required</li> </ul>
<b>Land Use</b>	<ul style="list-style-type: none"> <li>Land Use Evaluation Ranking</li> </ul>	<ul style="list-style-type: none"> <li>Low Constraints (More Preferred)</li> </ul>	<ul style="list-style-type: none"> <li>Medium Constraints (Moderately Preferred)</li> </ul>
<b>Technical Environment</b>	<ul style="list-style-type: none"> <li>Constructability.</li> </ul>	<ul style="list-style-type: none"> <li>Structures (emergency storage tank) are deep and require extensive shoring construction</li> <li>More constrained construction limits even if temporary easement is granted for material laydown, stockpile, equipment trailer, parking, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Structures (full station drywell and wetwell, gravity sewer, emergency storage tank) are deep and require extensive shoring construction</li> <li>More space available at both sites during construction period for material laydown, stockpile, equipment trailer, parking, etc.</li> </ul>
<b>Technical Environment</b>	<ul style="list-style-type: none"> <li>Impact on operations and maintenance.</li> </ul>	<ul style="list-style-type: none"> <li>Temporary bypass pumping will be required while capacity upgrades are completed</li> <li>Pump capacity may be reduced while pumps, piping and valves are replaced (potentially 2 of 4 at a time)</li> </ul>	<ul style="list-style-type: none"> <li>New construction provides greater flexibility in station drywell design and thereby less restrictive on number and capacity of pumps to convey same flow (opportunity for greater efficiency)</li> <li>Low impact. Existing station remains in operation as is while new station is constructed</li> </ul>
<b>Technical Environment</b>	<ul style="list-style-type: none"> <li>Access and maintenance.</li> </ul>	<ul style="list-style-type: none"> <li>Provides for good access</li> <li>Complete station retrofit; limited need for significant maintenance in short term</li> </ul>	<ul style="list-style-type: none"> <li>Provides for good access and maintenance</li> <li>New station installation; limited need for significant maintenance in short term</li> </ul>
<b>Technical Environment</b>	<ul style="list-style-type: none"> <li>Future infrastructure co-ordination opportunities or implementation risks.</li> </ul>	<ul style="list-style-type: none"> <li>No infrastructure co-ordination opportunities identified</li> <li>Implementation risks related to maintaining existing WWPS during construction</li> <li>Below grade infrastructure installation limited to emergency storage tank; modular approach will allow for future tanks to be constructed as needed to meet greater PWWF storage requirements, if required</li> </ul>	<ul style="list-style-type: none"> <li>No infrastructure co-ordination opportunities identified</li> <li>Lower implementation risks related to maintaining existing WWPS during construction</li> <li>More extensive below grade infrastructure installation; deep inlet sewer must be extended from Empey Street to new station; risk that buried conditions may impact schedule and cost</li> </ul>
<b>Technical Environment</b>	<ul style="list-style-type: none"> <li>Implementation timing-ability to meet fast in-service date.</li> </ul>	<ul style="list-style-type: none"> <li>Less extensive construction (emergency storage tank) requiring less time</li> <li>Anticipate some time to negotiate anticipated additional working area on the adjacent property at 37 Empey Street. <small>See Note 1</small></li> </ul>	<ul style="list-style-type: none"> <li>More time anticipated to be required to accommodate more extensive construction (full station and emergency storage tank)</li> <li>Anticipate more time to negotiate purchase of property. <small>See Note 2</small></li> </ul>

Note: 1. Since the time of the evaluation of the Empey Street WWPS Alternatives, the City has purchased the 37 Empey Street property.  
 2. Since the time of the evaluation of the Empey Street WWPS Alternatives, the City has purchased the 37 Empey Street property.

Category	Criteria	Alternative 3: Upgrade Existing Empey Street WWPS on Site (33 Empey Street)	Alternative 4: Site New WWPS. Siting Option A (37 Empey Street)
<b>Technical Environment</b>	<ul style="list-style-type: none"> <li>Traffic impacts during construction, including expected lane/sidewalk closures and disruption to public transit.</li> </ul>	<ul style="list-style-type: none"> <li>May require temporary full road closure (no through traffic, access to properties will be maintained) on Empey Street during temporary bypass pumping</li> </ul>	<ul style="list-style-type: none"> <li>Requires temporary full road closure (no through traffic, access to properties to be maintained) on Empey Street during temporary bypass pumping</li> </ul>
<b>Technical Environment</b>	<ul style="list-style-type: none"> <li>Technical Environment Evaluation Ranking</li> </ul>	<ul style="list-style-type: none"> <li>Low Constraints (More Preferred)</li> </ul>	<ul style="list-style-type: none"> <li>Medium Constraints (Moderately Preferred)</li> </ul>
<b>Natural Environment</b>	<ul style="list-style-type: none"> <li>Potential effects on terrestrial/aquatic habitat and species.</li> </ul>	<ul style="list-style-type: none"> <li>No potential for effects to aquatic habitat</li> <li>Low potential for effects to terrestrial habitat on existing property</li> <li>Low potential for effects to terrestrial habitat as a result of vegetation removals within the proposed additional working area at 37 Empey Street</li> </ul>	<ul style="list-style-type: none"> <li>No potential effects to aquatic habitat</li> <li>Low potential for effects to terrestrial habitat as a result of vegetation removals within the property</li> <li>Requires slightly more vegetation removal compared to Alternative 3</li> </ul>
<b>Natural Environment</b>	<ul style="list-style-type: none"> <li>Potential effects on species at risk (SAR) and SAR habitat.</li> </ul>	<ul style="list-style-type: none"> <li>No potential to effect SAR or SAR habitat on the existing property or within the proposed additional working area</li> <li>Low potential to impact SAR or SAR habitat in the nearby riparian areas</li> </ul>	<ul style="list-style-type: none"> <li>No potential to impact SAR or SAR habitat</li> <li>Low potential to impact SAR or SAR habitat in the nearby riparian areas</li> </ul>
<b>Natural Environment</b>	<ul style="list-style-type: none"> <li>Potential to encounter soil and water contamination and waste disposal.</li> </ul>	<ul style="list-style-type: none"> <li>Low potential to encounter soil and water contamination and waste disposal based on past and current land use on existing Empey WWPS site.</li> <li>Anticipated additional working area has potential to encounter soil and water contamination</li> </ul>	<ul style="list-style-type: none"> <li>Potential to encounter soil and water contamination and waste disposal based on past and current land use</li> </ul>
<b>Natural Environment</b>	<ul style="list-style-type: none"> <li>Anticipated environmental permitting and approval considerations.</li> </ul>	<ul style="list-style-type: none"> <li>No ecological related permitting required for the existing Empey WWPS property</li> <li>Refer to Section 8.3 for a list of anticipated permits and approvals</li> </ul>	<ul style="list-style-type: none"> <li>No ecological related permitting required</li> </ul>
<b>Natural Environment</b>	<ul style="list-style-type: none"> <li>Potential effects on surface water and groundwater.</li> </ul>	<ul style="list-style-type: none"> <li>No impacts on surface water anticipated</li> <li>Potential for dewatering during construction</li> </ul>	<ul style="list-style-type: none"> <li>No impacts on surface water anticipated</li> <li>Potential for dewatering during construction</li> </ul>
<b>Natural Environment</b>	<ul style="list-style-type: none"> <li>Natural Environment Evaluation Ranking</li> </ul>	<ul style="list-style-type: none"> <li>Low Constraints (More Preferred)</li> </ul>	<ul style="list-style-type: none"> <li>Low Constraints (More Preferred)</li> </ul>
<b>Socio-Economic Environment</b>	<ul style="list-style-type: none"> <li>Disruption to residences, institutions, businesses, recreational facilities during construction (noise, vibration, dust, access).</li> </ul>	<ul style="list-style-type: none"> <li>Temporary disruptions – may require temporary full road closure on Empey Street during temporary bypass pumping (no through traffic, access to properties maintained)</li> </ul>	<ul style="list-style-type: none"> <li>Temporary disruptions – requires temporary full road closure on Empey Street during temporary bypass pumping (no through traffic, access to properties maintained)</li> </ul>
<b>Socio-Economic Environment</b>	<ul style="list-style-type: none"> <li>Socio-Economic Environment Evaluation Ranking</li> </ul>	<ul style="list-style-type: none"> <li>Medium Constraints (Moderately Preferred)</li> </ul>	<ul style="list-style-type: none"> <li>Medium Constraints (Moderately Preferred)</li> </ul>
<b>Climate Change</b>	<ul style="list-style-type: none"> <li>Potential carbon footprint (e.g., energy usage, use of construction materials, construction methods and operations).</li> </ul>	<ul style="list-style-type: none"> <li>Smaller carbon footprint related to less construction materials</li> </ul>	<ul style="list-style-type: none"> <li>Higher carbon footprint related to use of more construction materials</li> </ul>
<b>Climate Change</b>	<ul style="list-style-type: none"> <li>Potential resilience to extreme weather events.</li> </ul>	<ul style="list-style-type: none"> <li>Proposed works are outside of regulated floodplain – low risk of flooding</li> <li>Includes replacement of stand by power generator</li> </ul>	<ul style="list-style-type: none"> <li>Proposed works are outside of regulated floodplain – low risk of flooding</li> <li>Includes replacement of stand by power generator</li> </ul>
<b>Climate Change</b>	<ul style="list-style-type: none"> <li>Climate Change Evaluation Ranking</li> </ul>	<ul style="list-style-type: none"> <li>Low Constraints (More Preferred)</li> </ul>	<ul style="list-style-type: none"> <li>Low Constraints (More Preferred)</li> </ul>
<b>Cultural Heritage Environment</b>	<ul style="list-style-type: none"> <li>Potential effects on archaeological resources</li> </ul>	<ul style="list-style-type: none"> <li>Stage 2 archaeological assessment (and further assessment, if recommended) to be undertaken prior to any ground disturbing activities</li> </ul>	<ul style="list-style-type: none"> <li>Stage 2 archaeological assessment (and further assessment, if recommended) to be undertaken prior to any ground disturbing activities</li> </ul>
<b>Cultural Heritage Environment</b>	<ul style="list-style-type: none"> <li>Potential effects on built heritage resources and cultural heritage landscapes</li> </ul>	<ul style="list-style-type: none"> <li>No direct impacts anticipated to built heritage resources or cultural heritage landscapes</li> </ul>	<ul style="list-style-type: none"> <li>No direct impacts anticipated to built heritage resources or cultural heritage landscapes</li> </ul>
<b>Cultural Heritage Environment</b>	<ul style="list-style-type: none"> <li>Cultural Heritage Environment Evaluation Ranking</li> </ul>	<ul style="list-style-type: none"> <li>Low Constraints (More Preferred)</li> </ul>	<ul style="list-style-type: none"> <li>Low Constraints (More Preferred)</li> </ul>

Category	Criteria	Alternative 3: Upgrade Existing Empey Street WWPS on Site (33 Empey Street)	Alternative 4: Site New WWPS. Siting Option A (37 Empey Street)
Cost	<ul style="list-style-type: none"> <li>Cost of construction (including property acquisition)</li> </ul>	<ul style="list-style-type: none"> <li>Station upgrades estimate: \$7.0M</li> <li>Emergency storage tank estimate: \$8.5M</li> </ul>	<ul style="list-style-type: none"> <li>New station estimate: \$9.2M</li> <li>Emergency storage tank estimate: \$8.5M</li> <li>Plus cost of property acquisition</li> </ul>
Cost	<ul style="list-style-type: none"> <li>Cost of operation / maintenance.</li> </ul>	<ul style="list-style-type: none"> <li>Lifetime O&amp;M in Present \$CAD estimate: \$7.1M over 40-year period</li> <li>Includes operation costs and asset renewal</li> </ul>	<ul style="list-style-type: none"> <li>Lifetime O&amp;M in Present \$CAD estimate: \$7.1M over 40-year period</li> <li>Includes operation costs and asset renewal</li> </ul>
Cost	<ul style="list-style-type: none"> <li>Cost Evaluation Ranking</li> </ul>	<ul style="list-style-type: none"> <li>Low Constraints (More Preferred)</li> </ul>	<ul style="list-style-type: none"> <li>High Constraints (Less Preferred)</li> </ul>
<b>Preferred Alternative</b>	<b>(Yes or No)</b>	<b>Yes</b>	<b>No</b>

## 7.4 Preferred Solution and Rationale – Alternative 3

The recommended preferred solution, as conceptually shown in **Figure 7-2** is Alternative 3, which involves upgrades to the existing Empey Street WWPS on site. The rationale for selecting Alternative 3 as the preferred solution is described below:

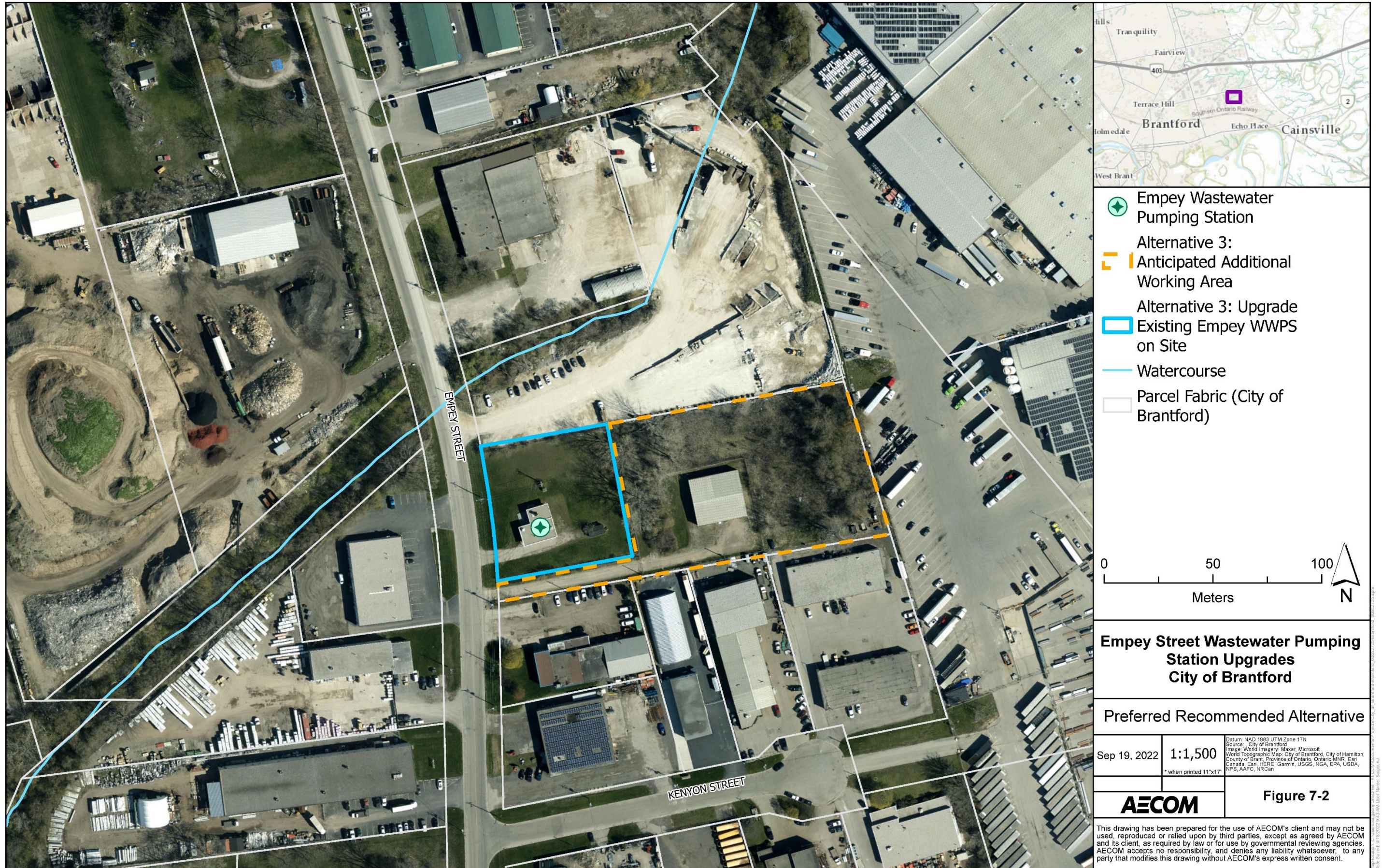
- Requires less tree and vegetation removal and has a smaller carbon footprint due to less construction materials
- Shorter construction schedule, which allows the City to meet an anticipated 2024 in-service date
- Significantly lower construction cost, in order of \$2.2 million less compared to siting and building a new wastewater pumping station

While upgrading the station compared to building a new station is less flexible in terms of process layout, the existing land area at the Empey WWPS is sufficient to construct the proposed works.

As stated previously, Alternative 3 is also anticipated to include additional working area on the adjacent property at 37 Empey Street to improve constructability. This area is subject to successful purchase of the entire adjacent property at 37 Empey Street by the City or temporary working easement if the entire property is not purchased. On August 24, 2021 Brantford City Council approved the purchase of the entire 37 Empey Street property, subject to conditions and negotiations. The closing date of the sale was December 15, 2021. This proposed working area also recognizes that additional land for an EST expansion could be required if the Empey WWPS catchment area ever expands in the future. It would also allow the City the ability to ensure that incompatible land uses are not developed beside the station.

As noted in the evaluation, the upgrade of the existing Empey Street WWPS will also require temporary bypass pumping of sanitary sewer flows during construction. Temporary bypass pumping methods within the station property which minimize impact to traffic are preferred and to be fully investigated during project implementation, however it is noted that a temporary full road closure on Empey Street (no through traffic, however access to properties will be maintained) may be required. Temporary bypass pumping duration may be required for several months. Additional project impacts are discussed in more detail in **Section 9**.

Figure 7-2: Preferred Solution



## **8. Preferred Undertaking – Project Description**

### **8.1 Design Considerations**

#### **8.1.1 Empey Street WWPS Upgrades**

##### **8.1.1.1 Emergency Storage Tank**

In accordance with the City of Brantford Vertical Municipal Infrastructure Standards, emergency storage volume is to provide one hour storage during a 10-year PWWF event. The EST will be designed and constructed in a modular approach so that it may be expanded in the future as the 10-year PWWF increases. The current upgrades will include an EST with sufficient capacity to provide storage for the existing 10-year PWWF (1,014 L/s).

##### **8.1.1.2 Gravity Sewer Connection**

The virtual Public Information Centre presented as part of the preferred solution that the existing gravity trough and sewer would be replaced with twin forcemains providing adequate capacity and redundancy to convey flows from the WWPS to the Elgin Street sanitary trunk sewer. However, after further review of the hydraulics and sewer condition assessment, twin forcemains are no longer being recommended as part of the preferred solution. The existing gravity trough which conveys sewage from the pump discharge piping to the existing gravity sewer will be decommissioned. The part of the existing gravity sewer within property boundaries will be decommissioned and removed. New discharge piping will exit the building and discharge to a maintenance hole on the Empey St WWPS property. Sewage will flow via gravity to the connection point. The connection point for new discharge piping to the existing gravity sewer will be installed within the boulevard immediately north of the 37 Empey Street driveway. The existing gravity sewer will be able to convey peak flows to 2041. It is anticipated that efforts to reduce inflow and infiltration (I&I) will reduce forecasted flows to 2051, allowing the existing gravity sewer to meet 2051 flow capacities. If required, the potential construction of a new relief sewer extending to the Elgin Street trunk sewer may be considered in the future to allow for additional capacity. It is assumed that the relief sewer will be installed within the existing Empey Street right-of-way and not trigger a MCEA Addendum. This would be confirmed if the City decides to pursue the relief sewer.

##### **8.1.1.3 Twinned Wetwell**

In the MSP, a twinned wetwell is proposed to accommodate anticipated 2051 average daily flows. It has been determined that the existing wetwell is sufficiently sized for 2051

average daily flows and is in compliance with MECP's Design Guidelines for Sewage Works. The wetwell capacity is not proposed to be increased at this time. Expanding the wetwell may be considered in the future.

#### **8.1.1.4 Review of Overflow to Environment Feasibility**

An overflow is not proposed considering the provision of adequate emergency storage volume and operational redundancy (spare pumping capacity and standby power generation). It is also noted that the elevation of the overflow discharge would be much higher than the wetwell sewer inlet which would result in high water levels within the upstream sanitary sewer before the overflow would discharge.

#### **8.1.2 Property Requirements/Easement Requirements**

No easements are anticipated related to the Empey Street WWPS upgrades. However, for ease of construction, additional working area on the adjacent property at 37 Empey Street has been identified, as needed. On August 24, 2021 Brantford City Council approved the purchase of the entire 37 Empey Street property, subject to conditions and negotiations. The closing date of the sale was December 15, 2021.

### **8.2 Cost Estimate**

The cost estimate for upgrades to the Empey St WWPS is approximately \$15.5 million. Approximately \$7 million is anticipated to be required to complete upgrades to the wastewater pump station (new pumps, piping and valves, new electrical systems including new motor control centre and standby generator, new mechanical systems, and miscellaneous building upgrades). The cost of the EST including a substantial excavation, shoring and cast-in-place structure is estimated to be \$8.5 million.

### **8.3 Permits and Approvals**

**Table 8-1** details the anticipated permits and approvals for the proposed Empey Street WWPS Upgrades.

**Table 8-1: Anticipated Permits and Approvals**

Anticipated Permit and Approval Requirements	Timing
Site Plan approval may be required to capture proposed changes to the Empey Street WWPS property.	Detailed Design
Due to the increased firm capacity, an Environmental Compliance Approval (ECA) amendment will be required which includes sewage application.	Detailed Design
A building permit will be required for the wetwell expansion, emergency storage tank, and control building upgrades.	Detailed Design
A Source Protection Restricted Land Use Declaration Form will be required based on the Project’s location in the Intake Protection Zone 3 (IPZ-3). Once the form is reviewed, a notice under the Clean Water Act is issued that will state any requirements that are necessary for the application to proceed.	Detailed Design
A Permit to Take Water (PTTW) under the Ontario Water Resources Act (OWRA) may be required. A PTTW is required for any water takings that exceed 50,000 L/day, except for certain water taking activities that have been prescribed by the Water Taking EASR Regulation – O. Reg. 63/16. These prescribed water-taking activities require registration in the Environmental Activity and Sector Registry (EASR) instead of a PTTW.	Detailed Design
There are no permits to be obtained under the PPS; however, mitigation measures and best management practices (as described in <b>Section 9.1</b> ) will reduce the likelihood of or minimize effects on identified Significant Wildlife Habitat.	Detailed Design
<p>Authorization under the Endangered Species Act may be required for the following SAR if habitat identified in the community classified as a Fresh – Moist Lowland Deciduous Forest Ecosite (FOD7) cannot be avoided in the riparian area along the unnamed tributary located north of the Empey Street WWPS property:</p> <ul style="list-style-type: none"> <li>■ Northern Myotis</li> <li>■ Little Brown Myotis</li> <li>■ Tri-colored Bat</li> </ul> <p>The proposed Empey WWPS upgrades are not anticipated to impact the FOD7 community, as shown in <b>Figure 4-1</b>.</p>	Detailed Design
Contravention of the Migratory Birds Convention Act is not anticipated provided any vegetation removal occurs outside of the breeding bird season (April 1 to August 31). This would apply if there is tree removal around the fence line or the 37 Empey Street property is used to facilitate construction and tree removals are required.	Construction
A Technical Standards and Safety Authority (TSSA) review of the installation is required for the replacement of the standby power generator.	Construction



## 8.4 Project Phasing

### 8.4.1 Temporary Bypass Pumping

In order to minimize the amount of risk during construction and limit potential impacts to traffic, the duration of temporary bypass pumping will be minimized as much as possible. Existing pumps could be used to provide continued operation while half of the wetwell is upgraded. An additional bypass pump may be used to ensure desired capacity is reached. To reduce the duration and complexity of temporary bypass pumping, consideration may be given to phasing the work in the wetwell cells. For example, while one half of the wetwell is upgraded, the other half could remain in service. When a complete shutdown of the WWPS is required for short durations (i.e. completing some electrical connections), work shall take place in dry conditions when there is no anticipated precipitation (rain, snow, hail, etc.), and during low peak flow times between 12:00 AM to 7:00 AM. Similarly, when bypass pumping is required for a longer duration, the pumps could be placed in the upgraded well to convey sewage. Timing and methods will be considered and incorporated into the detailed design.

### 8.4.2 Proposed Construction Sequencing

The construction technical specifications will include proposed construction sequencing. For instance, key upgrades to the Empey Street WWPS could be completed in the following sequence:

- Install and test temporary bypass pumping system (if required depending on duration required for electrical connections)
- Install temporary generator (connect at existing ATS in place of existing generator), new switchboard, new grounding, new secondary cabling, and new telecommunications link
- Connect cabling at new switchboard for connection to existing ATS (to be able to feed existing MCC)
- Brantford Power Inc. (now Grandbridge Energy Inc.) to install new utility power service (including underground primary cables and transformer) on west side of WWPS
- Connect new primary connections and secondary cabling at new transformer and feed utility power through new switchboard (through existing ATS to existing MCC) with temporary generator as backup
- Remove temporary bypass pumping system
- Remove the existing generator, fuel tank, shed, and appurtenances

- Grandbridge Energy to decommission existing incoming utility power at existing location north of WWPS
- Build new North Entrance, complete with gates, driveway base, and foundation for new generator
- Construct new emergency storage tank
- Isolate wetwell east cell and associated pumps, piping and valves; all flow to be pumped via operating west cell. An additional bypass pump may be used to ensure desired capacity is available.
- Upgrades within east cell
- Isolate wetwell west cell and associated pumps, piping and valves; all flow to be pumped via operating east cell. An additional bypass pump may be used to ensure desired capacity is available.
- Upgrades within west cell
- Install temporary full bypass pumping system
- Upgrades to the station electrical and controls including and standby generator
- Construct new discharge maintenance holes, discharge chamber, and discharge piping
- Complete the remaining process equipment removals, including installing new pumps, valves, and discharge piping with connection to existing gravity sewer.
- Addition of a dividing wall to separate the unclassified electrical room and access to the drywell
- Complete other miscellaneous upgrades to structural, HVAC, and plumbing systems.
- Start-up, testing, and commissioning of all new systems (i.e., new pumps, new MCC starters, and control panels, standby generator, ATS, tipping buckets, etc.)
- Decommission and remove temporary full bypass pumping system.
- Site upgrades, station clean-up, demobilization and restoration.

## **8.5 Preliminary Project Schedule**

The design phase for the Empey Street WWPS upgrades will be completed following the confirmation of MCEA findings. Construction is anticipated to commence in Spring 2023. Empey Street road impacts are expected to occur in Spring to Fall 2023. Upgrades are anticipated to be completed and commissioned by Summer 2024.

## 9. Anticipated Environmental Effects, Mitigation Measures and MCEA Commitments

### 9.1 Anticipated Effects and Mitigation Measures

Potential effects related to construction of the Empey Street WWPS Upgrades (Alternative 3) will be limited to the duration and location of construction. Based on the preferred solution and the preliminary proposed construction techniques, construction is expected to have varied environmental effects. By incorporating proper best management practices and construction techniques, adverse construction related effects can be minimized. In order to address potential effects, the following approach was taken:

- **Avoidance:** The first priority is to prevent the occurrence of negative or adverse environmental effects associated with construction of the Empey Street WWPS Upgrades.
- **Mitigation:** Where adverse environmental effects cannot be avoided, it will be necessary to develop appropriate measures to eliminate, or reduce to some degree, the negative effects associated with construction of the proposed Empey Street WWPS Upgrades.
- **Compensation:** In situations where appropriate mitigation measures are not available, or significant net adverse effects will remain following the application of mitigation measures, compensation measures may be required to counterbalance the negative effect through replacement in kind, or provision of a substitute or reimbursement.

The existing conditions (**Section 4**) were used as baseline conditions against which changes due to the project (effects) were assessed. Based on the project description for the preferred undertaking discussed in **Section 8**, avoidance measures can be applied in many cases, thereby reducing the extent of potential adverse environmental effects requiring the application of mitigation measures. The mitigation measures summarized below (**Tables 9-1 and 9-2**) are recommended to ensure that any short and long-term disturbances are managed efficiently through a variety of measures. These measures will be further confirmed and refined as part of the completion of the design phase.

**Table 9-1: Potential Construction-Related Effects and Mitigation Measures**

Indicator	Potential Effects	Potential Mitigation, Compensation Measures
<b>Vehicular Traffic, Travelling Public and Property Access</b>	<ul style="list-style-type: none"> <li>■ Temporary road closure on Empey Street resulting from temporary bypass pumping of sanitary sewer flows during construction</li> <li>■ Traffic and access to properties and business during construction</li> </ul>	<p><b>During Design Phase:</b></p> <ul style="list-style-type: none"> <li>■ Consult GRCA, as needed, to review the approach to bypass pumping in the area of the watercourse/stormwater infrastructure in addition to dewatering discharge.</li> </ul> <p><b>During Construction, In Advance of Traffic Disruptions:</b></p> <ul style="list-style-type: none"> <li>■ Prepare a Traffic Management Plan and maintain access to existing businesses</li> <li>■ Notification for emergency responders</li> <li>■ Undertake notification to area residents and businesses</li> <li>■ Erect signs advising of traffic disruptions</li> </ul> <p><b>During Construction:</b></p> <ul style="list-style-type: none"> <li>■ Minimize construction duration (working days)</li> <li>■ Minimize access disruption to affected property owners</li> <li>■ Affected road users and property owners will be notified in advance (e.g., signage, notices), as to construction schedule/duration</li> <li>■ Restore access once construction is complete</li> </ul>
<b>Utilities</b>	<ul style="list-style-type: none"> <li>■ Potential need to relocate or protect existing utilities and infrastructure</li> </ul>	<p><b>During Design and Construction:</b></p> <ul style="list-style-type: none"> <li>■ All subsurface utilities surveyed during the design phase will be included in the base map of the contract drawings and Contractor will be required to engage Ontario OneCall and private utility locating services, as required, to confirm utilities prior to breaking ground</li> </ul>
<b>Cultural Heritage Environment</b>	<ul style="list-style-type: none"> <li>■ Loss or disruption to archaeological resources</li> </ul>	<p><b>During the Design Phase:</b></p> <ul style="list-style-type: none"> <li>■ A Stage 2 Archaeological Assessment (and further assessments, if recommended) will be undertaken as early as possible during the design phase prior to any ground disturbing activities</li> <li>■ Should archaeological material be encountered during construction, all activities impacting archaeological resources will cease immediately, MCM will be contacted, and a licensed archaeologist will be engaged to carry out an archaeological assessment in accordance with the Ontario Heritage Act and the Standards and Guidelines for Consultant Archaeologists. Further, if human remains are encountered, all activities must cease immediately and the local police as well as the coroner must be contacted</li> </ul>
<b>Odour</b>	<ul style="list-style-type: none"> <li>■ Odours from the Empey Street WWPS</li> </ul>	<p><b>During Operation:</b></p> <ul style="list-style-type: none"> <li>■ Odours have not historically been an issue at the Empey Street WWPS. Upon implementation, if odour issues are raised, mitigation measures will be reviewed.</li> </ul>
<b>Air Quality</b>	<ul style="list-style-type: none"> <li>■ Dust emissions during construction</li> </ul>	<p><b>During Construction:</b></p> <ul style="list-style-type: none"> <li>■ Require contractor to implement provisions for dust control. It is recommended that non-chloride dust suppressants be applied during construction</li> <li>■ Require contractor to temporarily halt work in event that dust emissions are found to be excessively high. Contractor will not be permitted to continue operations until dust has been dealt with</li> </ul>
<b>Noise</b>	<ul style="list-style-type: none"> <li>■ Disruption to residents, businesses</li> </ul>	<p><b>During Construction:</b></p> <ul style="list-style-type: none"> <li>■ Require Contractor to conform to the latest version of the City's Noise Control By-Law (Chapter 554 of the City of Brantford Municipal Code)</li> </ul>
<b>Contaminated Soils and Groundwater</b>	<ul style="list-style-type: none"> <li>■ Potential for encountering contaminated soils and groundwater</li> </ul>	<p><b>During Design</b></p> <ul style="list-style-type: none"> <li>■ A Phase 1 Environmental Site Assessment (ESA) followed by a Phase 2 ESA have been undertaken for the site at 37 Empey Street to address the potential for encountering contaminated soils and groundwater</li> <li>■ All contaminated excavated materials will be managed in compliance with current regulations and sent to an approved waste disposal facility</li> </ul>

Indicator	Potential Effects	Potential Mitigation, Compensation Measures
<b>Excess Materials Management</b>	<ul style="list-style-type: none"> <li>■ Discharge of a contaminant into the natural environment</li> </ul>	<p><b>During Construction:</b></p> <ul style="list-style-type: none"> <li>■ Follow MECP regulations in regard to excess materials management. In December 2019, MECP released a new regulation under the Environmental Protection Act, titled “On-Site and Excess Soil Management” (O. Reg. 406/19). This regulation is a key step to support proper management of excess soils, ensuring valuable resources don’t go to waste and to provide clear rules on managing and reusing excess soil. New risk-based standards referenced by this regulation help to facilitate local beneficial reuse which in turn will reduce greenhouse gas emissions from soil transportation, while ensuring strong protection of human health and the environment. The new regulation is being phased in over time, with the first phase coming into effect on January 1, 2021. Details are available online: <a href="https://www.ontario.ca/page/handling-excess-soil">https://www.ontario.ca/page/handling-excess-soil</a></li> <li>■ Activities involving the management of excess soil should be completed in accordance with the MECP’s current guidance document titled “Management of Excess Soil – A Guide for Best Management Practices” (2014) available online (<a href="http://www.ontario.ca/document/management-excess-soil-guide-best-management-practices">http://www.ontario.ca/document/management-excess-soil-guide-best-management-practices</a>).</li> <li>■ All waste generated during construction must be disposed of in accordance with ministry requirements</li> </ul>
<b>Erosion and Sedimentation</b>	<ul style="list-style-type: none"> <li>■ Potential for erosion and sedimentation.</li> </ul>	<p><b>During Design:</b></p> <ul style="list-style-type: none"> <li>■ Develop an Erosion and Sediment Control Plan, including the protection of terrestrial and aquatic natural areas</li> </ul> <p><b>During Construction:</b></p> <ul style="list-style-type: none"> <li>■ Implement and monitor erosion and sedimentation control strategy</li> <li>■ Any areas disturbed by construction will be restored and stabilized as soon as practically possible</li> </ul>
<b>Control of Inadvertent Spills</b>	<ul style="list-style-type: none"> <li>■ Potential inadvertent spill of hazardous materials during construction.</li> </ul>	<p><b>During Construction, require contractor to:</b></p> <ul style="list-style-type: none"> <li>■ Store all oils, lubricants, fuels and chemicals in secure areas</li> </ul>

**Table 9-2: Natural Environment Mitigation Measures**

Indicator	Potential Mitigation, Compensation Measures
<b>Sediment and Erosion Control Fencing</b>	<ul style="list-style-type: none"> <li>■ Mitigation measures are recommended to be used for erosion and sediment control to prohibit sediment from entering the identified vegetation communities and watercourses (<b>Figure 4-1</b>) during construction. The primary principles associated with sedimentation and erosion protection measures are to:                             <ul style="list-style-type: none"> <li>– minimize the duration of soil exposure</li> <li>– retain existing vegetation, where feasible</li> <li>– encourage re-vegetation</li> <li>– divert runoff away from exposed soils</li> <li>– keep runoff velocities low</li> <li>– trap sediment as close to the source as possible</li> </ul> </li> <li>■ As noted in <b>Table 9-1</b>, details of the type and placement of sediment and erosion control to be used will be outlined in an Erosion and Sediment Control Plan to be drafted during design</li> </ul>
<b>Peripheral Vegetation Protection</b>	<ul style="list-style-type: none"> <li>■ During construction, adjacent to the identified vegetation communities, heavy equipment could damage peripheral vegetation from contact, excavation and/or soil compaction. Dust coated vegetation can reduce photosynthesis, increase susceptibility to disease and lead to death. It is anticipated that perimeter plants would be most susceptible to such effects. The following recommendations are made to mitigate these potential impacts:                             <ul style="list-style-type: none"> <li>– Prior to heavy machinery working adjacent to the identified vegetation communities, a fence barrier for tree protection should be installed outside the drip-line of trees identified for protection and in the vicinity of exposure to damage by machinery</li> </ul> </li> </ul>
<b>Dust Suppressant Treatment</b>	<ul style="list-style-type: none"> <li>● Dust suppressants during dry periods should be applied to those areas which generate large amounts of dust</li> <li>■ Restrict earth movement immediately adjacent to woodlands or water features during periods of high dust generation</li> </ul>
<b>Controlled Construction Vehicle Access</b>	<ul style="list-style-type: none"> <li>■ Construction vehicle access should be limited to areas outside of the drip-line of the tree being protected to prevent soil compaction and/or the initiation of soil erosion events</li> <li>■ Construction vehicle re-fueling stations should be centralized away from vegetation communities and watercourses</li> <li>■ The following recommendations are provided to address these potential sources of impacts                             <ul style="list-style-type: none"> <li>– Construction vehicle access should be limited to existing roadways and construction paths</li> <li>– For areas immediately adjacent to the work limits and vegetation to be retained, periodic supervision of the construction is recommended</li> </ul> </li> </ul>
<b>Construction Vehicle Re-fueling Stations</b>	<ul style="list-style-type: none"> <li>■ Re-fueling stations should be located within a centralized location on-site a minimum of 30 m from vegetation communities, and watercourses</li> <li>■ Re-fueling stations should be constructed in a manner to prevent soil and/or surface and groundwater contamination from any leaks or spills</li> <li>■ An emergency response kit should be made available at each re-fueling station in case of a spill</li> <li>■ All on-site crew members operating construction vehicles should be appropriately trained in handling a potential spill and have WHMIS Training</li> <li>■ All chemical transfer/maintenance should be conducted within the refueling station areas</li> </ul>
<b>Damage to Rooting Zones during Removals</b>	<ul style="list-style-type: none"> <li>■ During grading and construction in areas immediately adjacent to identified vegetation communities and planted trees, roots may be damaged by machinery and soils may be compacted, thereby affecting the trees' ability to grow and absorb nutrients and water. In order to address root damage, it will be necessary to prune roots of adjacent trees during grading and excavation. To avoid compaction of soils, root zones around trees within natural heritage features will need to be fenced. Most areas could be avoided by restricting construction to areas outside the features</li> </ul>
<b>Wildlife Habitat Protection and Mitigation Measures</b>	<ul style="list-style-type: none"> <li>■ Construction activities within the Study Area have the potential to disturb breeding birds and other resident wildlife. A certain degree of disturbance can be avoided by the proper scheduling of construction periods. The following mitigation measures are recommended to minimize impacts to wildlife. Upon the first encounter of any wildlife including SAR (Endangered, Threatened or Special Concern) the following steps are to be taken:                             <ul style="list-style-type: none"> <li>– Work in the immediate vicinity of the observation is to come to a stop</li> <li>– If the animal is uninjured it should be allowed to leave the work zone under its own power and a record made of the observation</li> <li>– Should the animal be injured or need assistance removing it from site an Ecologist/Biologist should be contacted immediately</li> <li>– Ecologist/Biologist will notify the District MNRF Biologist within 48 hours of any observation of Endangered and Threatened species and/or immediately for any species going to a wildlife custodian</li> <li>– It is not necessary to notify the District MNRF Biologist with observations of Special Concern species (i.e., Snapping Turtle) or general wildlife sightings (i.e., deer, raccoon, etc.)</li> </ul> </li> </ul>
<b>Breeding Birds, Bats and Vegetation Removals</b>	<ul style="list-style-type: none"> <li>■ Removal of vegetation for construction purposes can occur between the months of September to April, which is outside of the typical breeding bird period (April 1st to August 31st) within southern Ontario. If removal of vegetation is to occur during the breeding bird window, the area will be searched by a qualified ecologist for the presence of nesting birds to avoid contravening the Migratory Birds Convention Act. Clearing shall only be undertaken if the ecologist is satisfied that there are no breeding/nesting pairs within the affected area.</li> <li>■ This would only apply to the fence line on the Empey Street WWPS property, as well as the 37 Empey Street property, if it is used for additional temporary working area.</li> </ul>
<b>Construction Mitigation – Noise Disturbance to Resident Wildlife</b>	<ul style="list-style-type: none"> <li>■ Limit normal construction activity to a period after 7 am and before 7 pm daily</li> </ul>

## 9.2 Climate Change

Climate change is now being integrated into infrastructure planning and design as a way of building more resilient and robust systems. Incorporating sustainability and resiliency early on in the decision-making process provides a level of flexibility to allow for changes in the future weather and climate uncertainty into the project design.

Climate change trends across Ontario show that temperatures are increasing across all seasons, precipitation patterns are changing, and extreme weather events are becoming more intense and frequent. Planning to account for these changes in historical averages, as well as shorter-term more extreme events, is challenging but essential.

### 9.2.1 Potential Construction Effects

Potential effects to consider include the greenhouse gas (GHG) emissions associated with the construction period including the physical machinery and equipment, travel distance and time for construction workers to get to and from the site, and the sourcing of construction materials.

### 9.2.2 Potential Operation Effects

Climate change impacts for this project are also related to operations and maintenance. Once the preferred alternative is in-service, ongoing maintenance will be needed to ensure compliance with legislative regulations associated with the operation of wastewater systems.

### 9.2.3 Mitigation

To minimize potential effects during construction, the idling of construction equipment will be avoided, and equipment will be in good working order to reduce inefficiencies in the operation of the equipment. The Empey Street WWPS upgrades are located outside of the GRCA regulated floodplain and new standby power equipment is included with the proposed WWPS upgrades.

## 9.3 MCEA Commitments

This report identifies commitments to be completed, reviewed and confirmed during the design and construction phases of the Empey Street WWPS Upgrades.

The following additional natural environment work should be completed during the design for the preferred alternative:

- Development of an Erosion and Sediment Control Plan should be prepared during detailed design for the works which includes monitoring of the protective measures
- The development of a detailed environmental monitoring plan for the proposed work of the area is not anticipated to be required based on initial assessments
- A tree inventory to document required removals based on the construction footprint and for use in consideration of replacement plantings, if any
- Consider dewatering and discharge options
- Obtain all permits and approvals as described in **Section 8.3**

In addition, the City will be engaging with the Mississaugas of the Credit First Nation (MCFN) and Six Nations of the Grand River (Elected Council) to participate in the Stage 2 Archaeological Assessment (and further assessments, if recommended).

## 9.4 Proposed Construction Monitoring

Contract tender documents will address mitigation in an explicit manner to ensure that compliance is maintained. The provision of an experienced field representative to review construction will ensure that the Empey Street WWPS Upgrades follows contract specifications and does not unnecessarily impact the aquatic and terrestrial environment and the surrounding community.

## 9.5 Post-Construction Monitoring

Following construction, the operation of the proposed Empey Street WWPS Upgrades are not expected to result in any negative impacts. Post-construction monitoring will be required following construction to ensure that any disturbances have been properly restored (e.g., grading, seeding and planting). Post-construction monitoring details will be developed during detailed design.



## 10. Consultation Summary

### 10.1 Notifications

#### 10.1.1 Notice of Commencement

The Notice of Commencement was first issued on March 4, 2021 introducing the MCEA study and included contact information for the City and Consultant project managers. The following describes the methods by which the notice was distributed:

- Advertised in three local newspapers: Civic News (Brantford Expositor), Two Row Times and Turtle Island News
- Posted on the City's project webpage and social media platforms
- Issued to the study's contact list, including relevant agencies, stakeholders and Indigenous Communities
- Issued to property owners within 500 m of the existing Empey Street WWPS site

Refer to **Appendix E** for a copy of the Notice of Commencement.

#### 10.1.2 Notice of Public Information Centre

The Notice of Public Information Centre (PIC) was first issued on May 6, 2021 providing details of the virtual PIC and included contact information for the City and Consultant project managers. The following describes the methods by which the notice was distributed:

- Advertised in three local newspapers: Civic News (Brantford Expositor), Two Row Times and Turtle Island News
- Posted on the City's project webpage and social media platforms
- Issued to the study's contact list, including relevant agencies, stakeholders and Indigenous Communities
- Issued to property owners within 500 m of the existing Empey Street WWPS site

Refer to **Appendix E** for a copy of the Notice of PIC.

### 10.1.3 Notice of Completion

The Notice of Completion was first issued on November 17, 2022. The Project File documenting the MCEA planning process was available for public review and comment for a period of at least 30 calendar days starting on November 24, 2022 and ending on December 24, 2022. The notice identified the preferred solution and specified where to access the documentation during the 30-day comment period. The procedure for submitting comments and Section 16 Orders was also included in the notice, as well as in **Section 3.4** of this report. The following describes the methods by which the notice was distributed:

- Advertised in three local newspapers: Civic News (Brantford Expositor), Two Row Times and Turtle Island News
- Posted on the City's project webpage and social media platforms
- Issued to the study's contact list, including relevant agencies, stakeholders and Indigenous Communities
- Issued to property owners within 500 m of the existing Empey Street WWPS site

Refer to **Appendix E** for a copy of the Notice of Completion.

## 10.2 Public Information Centre

A virtual presentation was held in place of holding an in-person Public Information Centre (PIC), recognizing the current COVID-19 protocols. A copy of the material presented was made available starting May 27, 2021 on the City of Brantford's website: [Brantford.ca/EmpeyWWPS](https://brantford.ca/EmpeyWWPS). A fillable comment form was included to solicit inputs. Comments were collected until 4:30 PM on June 11, 2021. No comments were received via the comment form. **Table 10-2** details the agency and stakeholder correspondence received during this study.

The purpose of the virtual PIC was to present an overview of the Empey Street WWPS project background and Study Area, Municipal Class Environmental Assessment planning process, existing conditions within the Study Area, identification and evaluation of alternatives, including the recommended preferred solution, as well as preliminary mitigation measures and next steps.

## 10.3 Agency and Stakeholder Consultation

Key agencies and stakeholders were notified at key milestones over the course of the study. The study's agency and stakeholder contact list is included in **Appendix F**. A

summary of the meetings held is provided in **Table 10-1**. The detailed meeting minutes are included in **Appendix F**.

**Table 10-1: Agency and Stakeholder Meetings – MCEA Phases 1 and 2**

Agency/ Stakeholder	Date of Meeting	Purpose and Key Considerations
<b>Brantford Power Inc. (BPI)</b>	April 22, 2021	<ul style="list-style-type: none"> <li>■ Introduced the Project and alternatives being considered, including the site owned by Brantford Power Inc. at 37 Empey Street:                             <ul style="list-style-type: none"> <li>– Alternative 3: Upgrade existing WWPS on site (33 Empey Street) with emergency storage and temporary easements</li> <li>– Alternative 4: Site new WWPS with emergency storage at another location</li> </ul> </li> <li>■ Explained Alternative 3 would require a temporary easement and Alternative 4 (Siting Option A) would require the purchase of the property</li> <li>■ Brantford Power is not actively using the 37 Empey Street and is planning to dispose of it. The building on site is likely being used for material storage</li> <li>■ The Study Team will reach out to Brantford Power once the preferred solution is confirmed to discuss land requirements</li> </ul>
<b>Brantford Power Inc. (BPI)</b>	July 16, 2021	<ul style="list-style-type: none"> <li>■ Reviewed the status of the Project and BPI engagement to date</li> <li>■ Discussed the requirements for the requested temporary working easement at 37 Empey Street; AECOM/City to review and confirm the limits of the easement</li> <li>■ BPI to provide response to the City regarding whether a temporary working easement will be granted for the Project</li> <li>■ The City will schedule an additional meeting with BPI prior to the public review period of the Project File to answer any outstanding concerns from BPI</li> <li>■ The City, AECOM and BPI conducted a site visit at 37 Empey Street on July 20, 2021 to better understand site conditions in relation to construction and potential working areas.</li> </ul>

**Table 10-2** summarizes the key incoming agency and stakeholder correspondence received by the Study Team. The detailed correspondence between the Study Team and all agencies and stakeholders is included in **Appendix F**.

**Table 10-2: Key Agency and Stakeholder Correspondence – MCEA Phases 1 and 2**

Agency / Stakeholder	Date	Summary of Correspondence	Study Team Response
Ministry of Citizenship and Multiculturalism (MCM)	February 26, 2021	<ul style="list-style-type: none"> <li>In response to the notice of commencement, noted no comments at that time</li> </ul>	<ul style="list-style-type: none"> <li>Comments noted</li> </ul>
Ministry of Citizenship and Multiculturalism (MCM)	March 26, 2021	<ul style="list-style-type: none"> <li>Letter outlining MCM's interest in the MCEA, including archaeological resources, built heritage resources, and cultural heritage landscapes</li> </ul>	<ul style="list-style-type: none"> <li>A Stage 1 archaeological assessment and desktop cultural heritage screening have been completed</li> </ul>
Ministry of Citizenship and Multiculturalism (MCM)	February 3, 2022	<ul style="list-style-type: none"> <li>Letter identifying comments on the Draft Project File related to the Cultural Heritage Environment (Section 4.5), Table 7-4 (Evaluation of Alternatives) and Table 9-1 (Potential Construction Related Effects and Mitigation Measures)</li> </ul>	<ul style="list-style-type: none"> <li>Revisions made to Project File (Section 4.5, Table 7-4 and Table 9-1) to address comments</li> </ul>
Infrastructure Ontario (IO)	March 2, 2021	<ul style="list-style-type: none"> <li>IO indicated that there are no properties owned by the Minister of Government and Consumer Services with the Study Area; however it is the proponent's responsibility to verify if any provincial government property is within the Study Area</li> </ul>	<ul style="list-style-type: none"> <li>The proposed Empey Street WWPS Upgrades does not require provincial government property</li> </ul>
Hydro One	March 18, 2021	<ul style="list-style-type: none"> <li>Preliminary assessment confirmed that Hydro One has existing high voltage transmission facilities within the Study Area</li> </ul>	<ul style="list-style-type: none"> <li>Comments noted</li> </ul>
Grand River Conservation Authority (GRCA)	April 6, 2021	<ul style="list-style-type: none"> <li>GRCA indicated there are no features of interest to the GRCA on or adjacent to the pumping station</li> </ul>	<ul style="list-style-type: none"> <li>The Study Team followed up with GRCA to confirm participation and noted that in addition to upgrading the existing Empey Street WWPS, other alternative locations are being reviewed and may have pipe crossing regulated area</li> </ul>
Grand River Conservation Authority (GRCA)	April 12, 2021	<ul style="list-style-type: none"> <li>Requested to remain on study contact list as alternatives are still being developed</li> </ul>	<ul style="list-style-type: none"> <li>GRCA was circulated on all notifications</li> </ul>
Grand River Conservation Authority (GRCA)	May 31, 2021	<ul style="list-style-type: none"> <li>GRCA is interested in the means of discharge to the watercourse during dewatering, but any comments would be resulting from the detailed design review prior to time of construction</li> </ul>	<ul style="list-style-type: none"> <li>Comments noted</li> </ul>
Grand River Conservation Authority (GRCA)	November 15, 2021	<ul style="list-style-type: none"> <li>GRCA confirmed that the comments for source water protection are handled by the municipality</li> </ul>	<ul style="list-style-type: none"> <li>Comments noted</li> <li>The City has provided direction on source water protection requirements (Refer to <b>Section 5.5</b>)</li> </ul>
Grand River Conservation Authority (GRCA)	December 15, 2021	<ul style="list-style-type: none"> <li>The GRCA has no objection to the Project proceeding with the selected "alternative 3" option to upgrade the existing facility</li> <li>The watercourse north of the site is the nearest feature of interest to the GRCA and no negative impacts are anticipated as a result of the preferred alternative</li> <li>As noted in the Project File report, sediment controls and dewatering options should be considered at detailed design</li> </ul>	<ul style="list-style-type: none"> <li>Comments noted</li> </ul>
Brantford Power Inc. (BPI)	April 29, 2021	<ul style="list-style-type: none"> <li>Following the April 22, 2021 meeting, Brantford Power requested a formal letter from the City addressing the following points:               <ul style="list-style-type: none"> <li>The purpose and drivers of the work on Empey Street and how this impacts the Brantford Power property</li> <li>Why access is required and the nature of the work to be completed on our property</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The City issued a response letter to Brantford Power on May 21, 2021</li> <li>Requested a follow-up meeting, as needed, to receive comments related to the PIC and the possibility of obtaining a temporary working easement, which would help facilitate construction of the Empey Street WWPS upgrades</li> </ul>
Brantford Power Inc. (BPI)	January 10, 2022	<ul style="list-style-type: none"> <li>BPI confirmed there were no comments on the draft Project File</li> </ul>	<ul style="list-style-type: none"> <li>Comments noted</li> </ul>
Ontario Ministry of Transportation (MTO)	May 26, 2021	<ul style="list-style-type: none"> <li>The property is located outside of the MTO permit control area, and as such, MTO permits are not required</li> </ul>	<ul style="list-style-type: none"> <li>Comments noted</li> </ul>

Agency / Stakeholder	Date	Summary of Correspondence	Study Team Response
<b>Ontario Ministry of the Environment, Conservation and Parks (MECP)</b>	June 7, 2021	<ul style="list-style-type: none"> <li>■ Confirmed MECP contact moving forward for the Empey Street WWPS Upgrades MCEA</li> </ul>	<ul style="list-style-type: none"> <li>■ Added to study contact list</li> </ul>
<b>Ontario Ministry of the Environment, Conservation and Parks (MECP)</b>	October 15, 2021	<ul style="list-style-type: none"> <li>■ MECP circulated acknowledgement letter and attachments</li> <li>■ Request copy of draft Project File</li> <li>■ Final notice should be sent to the ministry's West Central Region notification email account after the draft report is reviewed and finalized</li> </ul>	<ul style="list-style-type: none"> <li>■ The study team requested clarification on items in the Areas of Interest letter. MECP followed up by phone and indicated that staff will review the Project File and provide comments</li> <li>■ The draft project file will be circulated to MECP prior to issuance of the notice of completion</li> </ul>
<b>Ontario Ministry of the Environment, Conservation and Parks (MECP)</b>	January 14, 2022	<ul style="list-style-type: none"> <li>■ Recommended that the City of Brantford contact the Haudenosaunee Confederacy Chiefs Council to share information about the Project</li> </ul>	<ul style="list-style-type: none"> <li>■ The City has been in contact with MECP to discuss Indigenous Consultation requirements</li> <li>■ The City has directed notifications to Six Nations of the Grand River Elected Council as the elected body representing the Haudenosaunee people, and on the understanding that the Elected Council will ensure that the interests of the Haudenosaunee people are represented in the MCEA planning process</li> </ul>
<b>Ontario Ministry of the Environment, Conservation and Parks (MECP)</b>	February 24, 2022	<ul style="list-style-type: none"> <li>■ Letter providing comments on the Draft Project File related to the contact list, Indigenous consultation and Species at Risk</li> </ul>	<ul style="list-style-type: none"> <li>■ Comments addressed to the extent possible in a response letter dated August 25, 2022</li> <li>■ The Ministry will be circulated on the Notice of Completion</li> </ul>

## 10.4 Indigenous Community Consultation

The following Indigenous communities were notified as part of this MCEA study:

- Mississaugas of the Credit First Nation (MCFN)
- Six Nations of the Grand River (Elected Council)

At the onset of the study, a letter requesting the level of interest in the Project was issued to each of the identified communities. A status letter update was also issued prior to the virtual PIC.

**Table 10-3** summarizes the correspondence received. Refer to **Appendix G** for the detailed correspondence.

The City met with Six Nations of the Grand River on August 15, 2022 to share information regarding the City's capital infrastructure projects, including this Municipal Class Environmental Assessment study.

The City will reach out to Mississaugas of the Credit First Nation (MCFN) and Six Nations of the Grand River (Elected Council) if there any substantial changes to the project/process or if applying for subsequent permits from the Ministry of the Environment, Conservation and Parks that may be of interest or concern to the identified communities.

In addition, the City will be engaging with the Mississaugas of the Credit First Nation (MCFN) and Six Nations of the Grand River (Elected Council) to participate in the Stage 2 Archaeological Assessment (and further assessments, if recommended).

**Table 10-3: Indigenous Community Correspondence – MCEA Phases 1 and 2**

Indigenous Community/ Organization	Date	Summary of Correspondence	Study Team Response
<b>MCFN</b>	April 16, 2021	<ul style="list-style-type: none"> <li>■ Confirmed receipt of letter dated March 17, 2021</li> <li>■ Provided outline of MCFN rights and territory, duty to consult and accommodate, Department of Consultation and Accommodation (DOCA) project registration and contacts for follow-up, and request for further information beyond that identified in the project introduction letter</li> </ul>	<ul style="list-style-type: none"> <li>■ Official response letter issued by the City on May 28, 2021</li> <li>■ Provided details on outstanding project information</li> </ul>
<b>MCFN</b>	April 30, 2021	<ul style="list-style-type: none"> <li>■ MCFN provided field data portal to submit field observations as the compressed project schedule did not allow for a field liaison representative to participate in the ecological inventory field investigations</li> </ul>	<ul style="list-style-type: none"> <li>■ Site visit report completed by AECOM's ecologist was submitted to MCFN-DOCA using the Field Data Portal for May 5, 2021 and September 8, 2021 field investigations</li> </ul>
<b>MCFN</b>	June 3, 2021	<ul style="list-style-type: none"> <li>■ In response to the letter issued by the City on May 28, 2021, MCFN confirmed that once all reports are sent, MCFN will review and provide feedback where necessary</li> </ul>	<ul style="list-style-type: none"> <li>■ Draft Project File, including support studies will be circulated to MCFN</li> </ul>
<b>MCFN</b>	January 14, 2022	<ul style="list-style-type: none"> <li>■ MCFN has no comments or concerns at this time regarding the Stage 1 Archeological Assessment</li> <li>■ Requested Field Liaison Representative for participation in the Stage 2 Archeological Assessment</li> </ul>	<ul style="list-style-type: none"> <li>■ City to keep MCFN informed of the Stage 2 Archeological Assessment and provide the opportunity to participate in the field investigations</li> </ul>

Indigenous Community/ Organization	Date	Summary of Correspondence	Study Team Response
<b>Six Nations of the Grand River (Elected Council)</b>	March 17, 2021	<ul style="list-style-type: none"> <li>■ Confirmed receipt of project introduction letter, which included the Notice of Commencement and would like to be involved</li> <li>■ Interested in the natural environment report, the cultural heritage screening memorandum and the Stage 1 Archaeological Assessment report</li> </ul>	<ul style="list-style-type: none"> <li>■ Supporting studies (natural environment report, cultural heritage screening memorandum, and Stage 1 Archaeological Assessment report) will be circulated to Six Nations of the Grand River</li> </ul>
<b>Six Nations of the Grand River (Elected Council)</b>	January 17, 2022	<ul style="list-style-type: none"> <li>■ Six Nations of the Grand River has no comments or concerns at this time regarding the Stage 1 Archaeological Assessment</li> <li>■ Requested participation in the Stage 2 Archaeological Assessment</li> </ul>	<ul style="list-style-type: none"> <li>■ City to keep Six Nations of the Grand River informed of the Stage 2 Archeological Assessment and provide the opportunity to participate in the field investigations</li> </ul>



## 11. Conclusions and Recommendations

This Project File covers the process required to ensure that the proposed Empey Street WWPS Upgrades comply with the Environmental Assessment Act. The MCEA planning process has not identified any significant environmental concerns that cannot be addressed by incorporating best management practices and established mitigation measures during construction.

The preferred solution (Alternative 3) for the Empey Street WWPS Upgrades described in **Section 8** involves upgrades to the existing Empey Street WWPS on site. Implementation of this alternative includes upgrades to the existing station, and construction of an emergency storage tank. This involves temporary bypass pumping while the WWPS upgrades are constructed.

Alternative 3 is also anticipated to include additional working area on the adjacent property at 37 Empey Street to improve constructability (refer to **Section 8.1.2**). On August 24, 2021 Brantford City Council approved the purchase of the entire 37 Empey Street property, subject to conditions and negotiations. The closing date of the sale was December 15, 2021.

The preferred solution resolves the problem or opportunity statement (**Section 6**) identified in this report. A preliminary evaluation of potential effects indicates minor to moderate and predictable impacts that can be addressed by recommended mitigation measures as presented in **Section 9**. The anticipated effects and proposed mitigation measures will further be developed as part of the design phase of the Project and will form commitments that will be adhered to by the City.

Subject to receiving MCEA clearance, the City will complete the design, which includes permitting-approvals and proceed to tender and construction as per the preliminary project schedule to meet the anticipated 2024 in-service date.