## CULTURAL HERITAGE REPORT: EXISTING CONDITIONS AND PRELIMINARY IMPACT ASSESSMENT

KIRBY ROAD WIDENING BETWEEN JANE STREET AND DUFFERIN STREET
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

CITY OF VAUGHAN YORK REGION, ONTARIO

**FINAL REPORT** 

Prepared for:

HDR Inc. 100 York Blvd., Suite 300 Richmond Hill, ON L4B 1J8

ASI File: 19CH-068

December 2019 (Revised April 2020, June 2021 and June 2022)



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# CITY OF VAUGHAN YORK REGION, ONTARIO

#### **EXECUTIVE SUMMARY**

ASI was contracted by HDR Inc. to conduct a Cultural Heritage Resource (CHR) as part of the Kirby Road Widening Municipal Class Environmental Assessment (Jane Street to Dufferin Street). The project involves the widening of Kirby Road between Jane Street and Dufferin Street and the grade separation of the Barrie GO Rail line at Kirby Road in the City of Vaughan. The Kirby Road study area includes a 200 m buffer on either side of Kirby Road and generally consists of agricultural and residential properties.

The purpose of this report is to present an inventory of known and potential built heritage resources (BHRs) and cultural heritage landscapes (CHLs), identify existing conditions of the project study area, provide a preliminary impact assessment, and propose appropriate mitigation measures. This final submission includes the Existing Conditions and Preliminary Impact Assessment components of the assessment.

The results of background historic research and a review of secondary source material, including historical mapping, revealed a study area with a rural land use history dating back to the mid-nineteenth century. In total, eight CHLs were identified in this study. A review of federal registers and municipal and provincial inventories revealed that there are seven previously identified features of cultural heritage value within or adjacent to the Kirby Road Widening Class EA study area. An additional feature was identified during field review.

Based on the results of the assessment, the following recommendations have been developed:

- Construction activities and staging should be suitably planned and undertaken to avoid unintended negative impacts to identified BHRs and CHLs. Avoidance measures may include, but are not limited to: erecting temporary fencing, establishing buffer zones, issuing instructions to construction crews to avoid identified cultural heritage resources, etc.
- 2. Given that adverse indirect impacts are anticipated to the listed property at 2480 Kirby Road (CHL 5), a Cultural Heritage Impact Assessment (CHIA) should be carried out by a qualified heritage consultant as early as possible during Detailed Design, as per the City of Vaughan's Official Plan, Section 6.2.3.1 c (City of Vaughan 2019). This CHIA should follow the Terms of Reference outlined in the City of Vaughan's Guidelines for Cultural Heritage Impact Assessments (City of Vaughan 2016b).
- 3. To ensure the properties at: 2939 Kirby Road (CHL 3), 2480 Kirby Road (CHL 5), and the Barrie GO Rail Corridor (CHL 7) are not adversely impacted during construction, baseline vibration monitoring should be undertaken during detailed design. Should this vibration monitoring



determine that the structures or landscape features within the CHLs will be subject to adverse impacts due to vibration, a vibration monitoring plan should be prepared and implemented as part of the detailed design phase of the project to lessen vibration impacts related to construction.

- 4. Should future work require an expansion of the study area, then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on known and potential heritage resources.
- 5. This existing conditions and preliminary impact assessment report should be submitted to the City of Vaughan and the Ministry of Heritage, Sport, Tourism and Culture Industries for review and comment, and any other local heritage stakeholders that may have an interest in this project. The final report should be submitted to the City of Vaughan for their records.



## **PROJECT PERSONNEL**

Senior Project Manager: Lindsay Graves, MA, CAHP

Senior Cultural Heritage Specialist | Senior Project Manager - Cultural

Heritage Division

Project Coordinator: Katrina Thatch, Hon. BA

Archaeologist | Project Coordinator - Environmental Assessment Division

Project Manager: Johanna Kelly, MSc.

Cultural Heritage Associate | Project Manager - Cultural Heritage Division

Field Review: Johanna Kelly

Report Production: Johanna Kelly

Graphics Production: Jonas Fernandez, MSc

Lead Archaeologist | Assistant Manager – Fleet & Geomatics Specialist -

**Operations Division** 

Eric Bongelli

Junior Geomatics Specialist – Fleet & Geomatics Specialist - Operations

Division

Report Reviewer(s): John Sleath, MA

Cultural Heritage Specialist | Project Manager - Cultural Heritage Division

**Lindsay Graves** 



## QUALIFIED PERSONS INVOLVED IN THE PROJECT

Lindsay Graves, MA, CAHP Senior Cultural Heritage Specialist | Senior Project Manager - Cultural Heritage Division

The Senior Project Manager for this Cultural Heritage Report is Lindsay Graves (MA, Heritage Conservation), Senior Cultural Heritage Specialist and the Environmental Assessment Coordinator for the Cultural Heritage Division at ASI. She was responsible for: overall project scoping and approach; development and confirmation of technical findings and study recommendations; application of relevant standards, guidelines and regulations; and implementation of quality control procedures. Lindsay is academically trained in the fields of heritage conservation, cultural anthropology, archaeology, and collections management and has over 15 years of experience in the field of cultural heritage resource management. This work has focused on the assessment, evaluation, and protection of above ground cultural heritage resources. Lindsay has extensive experience undertaking archival research, heritage survey work, heritage evaluation and heritage impact assessment. She has also contributed to cultural heritage landscape studies and heritage conservation plans, led heritage commemoration and interpretive programs, and worked collaboratively with multidisciplinary teams to sensitively plan interventions at historic sites/places. In addition, she is a leader in the completion of heritage studies required to fulfill Class EA processes and has served as Project Manager for over 100 heritage assessments during her time at ASI. Lindsay is a member of the Canadian Association of Heritage Professionals.

Johanna Kelly, MSc Cultural Heritage Analyst | Project Manager - Cultural Heritage Division

The Project Manager for this Cultural Heritage Report is **Johanna Kelly** (MSc), who is a Cultural Heritage Analyst and Project Manager within the Cultural Heritage Division with ASI. She was responsible for the day-to-day management activities, including scoping of research activities, and drafting of study findings and recommendations. With over ten years of experience in the field, Johanna has focused on the identification and evaluation of cultural heritage resources both above and below ground. With a background in archaeology, her current focus is the assessment, evaluation, and protection of above ground cultural heritage resources. Johanna has been involved in numerous large scale and high profile projects in various capacities, including built heritage and cultural heritage landscape assessments under the *Ontario Environmental Assessment Act* for Class Environmental Assessments and Individual Environmental Assessments, and as required for various planning studies throughout the Province of Ontario.



## **GLOSSARY**

| Term                                 | Definition   |
|--------------------------------------|--|
| Adjacent                             | "contiguous properties as well as properties that are separated from a heritage property by narrow strip of land used as a public or private road, highway, street, lane, trail, right-of-way, walkway, green space, park, and/or easement or as otherwise defined in the municipal official plan" (Ministry of Tourism, Culture and Sport 2010).  |
| Built Heritage Resource<br>(BHR)     | "a building, structure, monument, installation or any manufactured remnant that contributes to a property's cultural heritage value or interest as identified by a community, including an Indigenous community. Built heritage resources are located on property that may be designated under Parts IV or V of the <i>Ontario Heritage Act</i> , or that may be included on local, provincial, federal and/or international registers" (Government of Ontario 2020:41).   |
| Cultural Heritage<br>Landscape (CHL) | "a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Indigenous community. The area may include features such as buildings, structures, spaces, views, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association. Cultural heritage landscapes may be properties that have been determined to have cultural heritage value or interest under the <i>Ontario Heritage Act</i> , or have been included on federal and/or international registers, and/or protected through official plan, zoning bylaw, or other land use planning mechanisms" (Government of Ontario 2020:42). |
| Cultural Heritage<br>Resource        | Includes above-ground resources such as built heritage resources and cultural heritage landscapes, and built or natural features below-ground including archaeological resources (Government of Ontario 2020).   |
| Known Cultural<br>Heritage Resource  | A known cultural heritage resource is a property that has recognized cultural heritage value or interest. This can include a property listed on a Municipal Heritage Register, designated under Part IV or V of the Ontario Heritage Act, or protected by a heritage agreement, covenant or easement, protected by the Heritage Railway Stations Protection Act or the Heritage Lighthouse Protection Act, identified as a Federal Heritage Building, or located within a UNESCO World Heritage Site (Ministry of Tourism, Culture and Sport 2016).  |
| Impact                               | Includes negative and positive, direct and indirect effects to an identified cultural heritage resource. Direct impacts include destruction of any, or part of any, significant heritage attributes or features and/or unsympathetic or incompatible alterations to an identified resource. Indirect impacts include, but are not limited to, creation of shadows, isolation of heritage attributes, direct or indirect obstruction of significant views, change in land use, land disturbances (Ministry of Tourism and Culture 2006). Indirect impacts also include potential vibration impacts  |



|   | (See Section 2.5 for complete definition and discussion of potential impacts).  |
|---|---|
| Mitigation                              | Mitigation is the process of lessening or negating anticipated adverse impacts to cultural heritage resources and may include, but are not limited to, such actions as avoidance, monitoring, protection, relocation, remedial landscaping, and documentation of the cultural heritage landscape and/or built heritage resource if to be demolished or relocated.   |
| Potential Cultural<br>Heritage Resource | A potential cultural heritage resource is a property that has the potential for cultural heritage value or interest. This can include properties/project area that contain a parcel of land that is the subject of a commemorative or interpretive plaque, is adjacent to a known burial site and/or cemetery, is in a Canadian Heritage River Watershed, or contains buildings or structures that are 40 or more years old (Ministry of Tourism, Culture and Sport 2016).  |
| Significant                             | With regard to cultural heritage and archaeology resources, significant means "resources that have been determined to have cultural heritage value or interest. Processes and criteria for determining cultural heritage value or interest are established by the Province under the authority of the <i>Ontario Heritage Act</i> . While some significant resources may already be identified and inventoried by official sources, the significance of others can only be determined after evaluation" (Government of Ontario 2020:51).  |
| Vibration Zone of<br>Influence          | Area within a 50 m buffer of construction-related activities in which there is potential to affect an identified cultural heritage resource. A 50 m buffer is applied in the absence of a project-specific defined vibration zone of influence based on existing secondary source literature and direction provided from the MHSTCI (Wiss 1981; Rainer 1982; Ellis 1987; Crispino and D'Apuzzo 2001; Carman et al. 2012). This buffer accommodates the additional threat from collisions with heavy machinery or subsidence (Randl 2001). |



## **TABLE OF CONTENTS**

| <b>EXECU</b> | TIVE SUMMARY   | i   |
|--------------|--|-----|
| PROJE        | CT PERSONNEL   | iii |
| QUALI        | FIED PERSONS INVOLVED IN THE PROJECT   | iv  |
| GLOSS        | ARY  | v   |
| TABLE        | OF CONTENTS  | vii |
| 1.0          | INTRODUCTION   | 1   |
| 1.1          | Report Purpose   | 1   |
| 1.2          | Project Overview   | 1   |
| 1.3          | Description of Study Area  | 1   |
| 2.0          | METHODOLOGY  | 2   |
| 2.1          | Regulatory Requirements  | 2   |
| 2.2          | Municipal/Regional Heritage Policies   | 3   |
| 2.3          | Identification of Built Heritage Resources and Cultural Heritage Landscapes  | 3   |
| 2.4          | Background Information Review  | 4   |
| 2            | 2.4.1 Review of Existing Heritage Inventories  | 4   |
| 2            | 2.4.2 Review of Previous Heritage Reporting  |     |
| 2            | 2.4.3 Stakeholder Data Collection  |     |
| 2.5          | 7  |     |
| 3.0          | SUMMARY OF HISTORICAL DEVELOPMENT WITHIN THE STUDY AREA  |     |
| 3.1          | Physiography   |     |
| 3.2          | . , . , . , ,  |     |
| 3.3          |  |     |
| 3            | 3.3.1 Township of Vaughan  |     |
| 3            | 3.3.2 Village of Hope  | 11  |
|              | 3.3.3 Northern Railway   |     |
| 3.4          | Review of Historical Mapping   | 11  |
| 4.0          | EXISTING CONDITIONS  |     |
| 4.1          | and the second s |     |
| 4.2          |  |     |
| 5.0          | PRELIMINARY IMPACT ASSESSMENT  |     |
| 5.1          | Description of Proposed Undertaking  |     |
| 5.2          | , i  |     |
| 6.0          | SUMMARY OF COMMUNITY DATA COLLECTION   |     |
| 7.0          | RESULTS AND MITIGATION RECOMMENDATIONS   |     |
| 7.1          | - 1 - 0-   |     |
| 7.2          |  |     |
| 8.0          | REFERENCES   | 43  |
|              |  |     |
|              | List of Tables   |     |
|              |  |     |
|              | 1: Inventory of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within the   |     |
|              | Area   |     |
| Table 2      | 2: Preliminary Impact Assessment and Recommended Mitigation Measures   | 37  |





| Figure 1: Location of the study area  |    |
|---|----|
| Figure 2: The study area overlaid on the 1860 Map of the County of York   |    |
| Figure 3: The study area overlaid on the 1878 Historical Atlas of the County of York                              |    |
| Figure 4: The study area overlaid on the 1926 and 1930 topographic maps of Vaughan                                |    |
| Figure 5: The study area overlaid on the 1954 aerial photograph of Vaughan  |    |
| Figure 6: The study area overlaid on the 1972 and 1973 topographic maps of Vaughan                                |    |
| Figure 7: The study area overlaid on the 1994 NTS map of Vaughan  |    |
| Figure 8: Location of Cultural Heritage Resources and Photographic Plates in the Kirby Road Widening Municipa     |    |
| Class EA study area   | 25 |
| Figure 9: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road       |    |
| Widening Municipal Class EA study area (Key Plan).  | 27 |
| Figure 10: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road      |    |
| Widening Municipal Class EA study area (Sheet 1).   | 28 |
| Figure 11: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road      |    |
| Widening Municipal Class EA study area (Sheet 2).   | 29 |
| Figure 12: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road      |    |
| Widening Municipal Class EA study area (Sheet 3).   | 30 |
| Figure 13: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road      |    |
| Widening Municipal Class EA study area (Sheet 4).   | 31 |
| Figure 14: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road      |    |
| Widening Municipal Class EA study area (Sheet 5).   | 32 |
| Figure 15: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road      |    |
| Widening Municipal Class EA study area (Sheet 6).   | 33 |
| Figure 16: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road      | _  |
| Widening Municipal Class EA study area (Sheet 7).   | 34 |
| Figure 17: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road      |    |
| Widening Municipal Class EA study area (Sheet 8).   | 35 |
| List of Plates  |    |
| Plate 1: Looking southwest across CHL 2 (CHL 1 is visible in the background)                                      | 16 |
| Plate 2: Looking west along Kirby Road across agricultural fields.  |    |
| Plate 3: Looking east along Kirby Road  |    |
| Plate 4: View south across the at grade crossing of the Barrie GO Rail Corridor across Kirby Road                 | 18 |
| Plate 5: View east across the intersection of Kirby Road and Keele Street, residential subdivision visible at the |    |
| southeast corner  | 18 |
| Plate 6: View east along Kirby Road, residential subdivisions are visible on the left (south side of Kirby Road)  | 19 |
| Plate 7: View east along gently undulating topography of Kirby Road, east of Keele Street                         | 19 |
| Plate 8: View west along gently undulating topography of Kirby Road, east of Keele Street                         | 20 |
| Plate 9: Looking northwest across agricultural fields towards the farmstead (ASI 2019)                            | 21 |
| Plate 10: Looking northeast towards the residence at 11451 Jane Street (ASI 2019)                                 | 21 |
| Plate 11: North elevation of the residence at 2939 Kirby Road (ASI 2019)  | 22 |
| Plate 12: North and west elevations of the residence at 11665 Jane Street (ASI 2019)                              | 22 |
| Plate 13: Looking northeast towards the historical residence at 2480 Kirby Road (ASI 2019)                        | 23 |
| Plate 14: Aerial view of the property at 11390 Keele Street (Google Earth 2018)                                   | 23 |
| Plate 15: At grade crossing of the Barrie GO Rail Corridor with Kirby Road, looking south (ASI 2019)              | 24 |
| Plate 16: Agrial view of the property at 11724 Dufferin Street (Google Farth 2019)                                | 2/ |



## 1.0 INTRODUCTION

## 1.1 Report Purpose

ASI was contracted by HDR Inc. to conduct a Cultural Heritage Resource (CHR) as part of the Kirby Road Widening Municipal Class Environmental Assessment (Jane Street to Dufferin Street). The purpose of this report is to present an inventory of known and potential built heritage resources (BHRs) and cultural heritage landscapes (CHLs), identify existing conditions of the project study area, provide a preliminary impact assessment, and propose appropriate mitigation measures. This final submission includes the Existing Conditions and Preliminary Impact Assessment components of the assessment.

## 1.2 Project Overview

The Kirby Road Widening Municipal Class Environmental Assessment involves the widening of Kirby Road between Jane Street and Dufferin Street, the grade separation of the Barrie GO Rail line at Kirby Road, and the elimination of the jog at the intersection of Kirby Road and Jane Street in the City of Vaughan.

## 1.3 Description of Study Area

This Cultural Heritage Report will focus on the project study area, which includes Kirby Road and a 200 m buffer on either side (Figure 1). This project study area has been defined as inclusive of those lands that may contain BHRs or CHLs that may be subject to direct or indirect impacts as a result of the proposed undertaking. Properties within the study area are located in the City of Vaughan.





Figure 1: Location of the study area

Base Map: ©OpenStreetMap and contributors, Creative Commons-Share Alike License (CC-BY-SA)

## 2.0 METHODOLOGY

## 2.1 Regulatory Requirements

The *Ontario Heritage Act* (OHA) (Ministry of Culture 1990) is the primary piece of legislation that determines policies, priorities and programs for the conservation of Ontario's heritage. There are many other provincial acts, regulations and policies governing land use planning and resource development support heritage conservation including:

- The Planning Act (Ministry of Municipal Affairs and Housing 1990), which states that
   "conservation of features of significant architectural, cultural, historical, archaeological or
   scientific interest" (cultural heritage resources) is a "matter of provincial interest". The
   Provincial Policy Statement (Government of Ontario 2020), issued under the Planning Act, links
   heritage conservation to long-term economic prosperity and requires municipalities and the
   Crown to conserve significant cultural heritage resources.
- The Environmental Assessment Act (Ministry of the Environment 1990), which defines
   "environment" to include cultural conditions that influence the life of humans or a community.
   Cultural heritage resources, which includes archaeological resources, built heritage resources
   and cultural heritage landscapes, are important components of those cultural conditions.



The Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) is charged under Section 2.0 of the OHA with the responsibility to determine policies, priorities, and programs for the conservation, protection, and preservation of the heritage of Ontario. The Ministry of Tourism, Culture and Sport (now administered by MHSTCI) published *Standards and Guidelines for Conservation of Provincial Heritage Properties* (Ministry of Tourism, Culture and Sport 2010) (hereinafter "Standards and Guidelines"). These Standards and Guidelines apply to properties the Government of Ontario owns or controls that have cultural heritage value or interest (CHVI). The Standards and Guidelines provide a series of guidelines that apply to provincial heritage properties in the areas of identification and evaluation; protection; maintenance; use; and disposal. For the purpose of this report, the Standards and Guidelines provide points of reference to aid in determining potential heritage significance in identification of BHRs and CHLs. While not directly applicable for use in properties not under provincial ownership, the Standards and Guidelines are regarded as best practice for guiding heritage assessments and ensure that additional identification and mitigation measures are considered.

Similarly, the *Ontario Heritage Tool Kit* (Ministry of Culture 2006) provides a guide to evaluate heritage properties. To conserve a BHR or CHL, the *Ontario Heritage Tool Kit* states that a municipality or approval authority may require a heritage impact assessment and/or a conservation plan to guide the approval, modification, or denial of a proposed development.

## 2.2 Municipal/Regional Heritage Policies

The study area is located within the City of Vaughan, in York Region. Policies relating to cultural heritage resources were reviewed from the following sources:

- City of Vaughan's Official Plan (2019)
- York Region's Official Plan (2019)
- Proposed Block 27 Secondary Plan (City of Vaughan 2016a) (awaiting approval as a Secondary Plan by the Local Planning Appeal Tribunal)

## 2.3 Identification of Built Heritage Resources and Cultural Heritage Landscapes

This Cultural Heritage Report follows guidelines presented in the *Ontario Heritage Tool Kit* (Ministry of Culture 2006) and *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* (Ministry of Tourism, Culture and Sport 2016). The objective of this report is to present an inventory of known and potential BHRs and CHLs, and to provide a preliminary understanding of known and potential BHRs and CHLs located within areas anticipated to be directly or indirectly impacted by the proposed project.

In the course of the cultural heritage assessment process, all potentially affected BHRs and CHLs are subject to identification and inventory. Generally, when conducting an identification of BHRs and CHLs within a study area, three stages of research and data collection are undertaken to appropriately establish the potential for and existence of BHRs and CHLs in a geographic area: background research and desktop data collection; field review; and identification.



Background historical research, which includes consultation of primary and secondary source research and historical mapping, is undertaken to identify early settlement patterns and broad agents or themes of change in a study area. This stage in the data collection process enables the researcher to determine the presence of sensitive heritage areas that correspond to nineteenth- and twentieth-century settlement and development patterns. To augment data collected during this stage of the research process, federal, provincial, and municipal databases and/or agencies are consulted to obtain information about specific properties that have been previously identified and/or designated as having cultural heritage value. Typically, resources identified during these stages of the research process are reflective of particular architectural styles or construction methods, associated with an important person, place, or event, and contribute to the contextual facets of a particular place, neighbourhood, or intersection.

A field review is then undertaken to confirm the location and condition of previously identified BHRs and CHLs. The field review is also used to identify potential BHRs or CHLs that have not been previously identified on federal, provincial, or municipal databases or through other appropriate agency data sources.

During the cultural heritage assessment process, a property is identified as a potential BHR or CHL based on research, the MHSTCI screening tool, and professional expertise. In addition, use of a 40-year-old benchmark is a guiding principle when conducting a preliminary identification of BHRs and CHLs. While identification of a resource that is 40 years old or older does not confer outright heritage significance, this benchmark provides a means to collect information about resources that may retain heritage value. Similarly, if a resource is slightly younger than 40 years old, this does not preclude the resource from having cultural heritage value or interest.

#### 2.4 Background Information Review

To make an identification of previously identified known or potential BHRs and CHLs within the study area, the following resources were consulted as part of this Cultural Heritage Report.

## 2.4.1 Review of Existing Heritage Inventories

A number of resources were consulted in order to identify previously identified BHRs and CHLs within the study area. These resources, reviewed on 1 November 2019, include:

- The City of Vaughan's Heritage Inventory (City of Vaughan n.d.);
- The Ontario Heritage Act Register (Ontario Heritage Trust n.d.);
- The Places of Worship Inventory (Ontario Heritage Trust n.d.);
- The inventory of Ontario Heritage Trust easements (Ontario Heritage Trust n.d.);
- The Ontario Heritage Trust's Ontario Heritage Plaque Guide: an online, searchable database of Ontario Heritage Plaques (Ontario Heritage Trust n.d.);
- Inventory of known cemeteries/burial sites in the Ontario Genealogical Society's online databases (Ontario Genealogical Society n.d.);



- Canada's Historic Places website: available online, the searchable register provides information
  on historic places recognized for their heritage value at the local, provincial, territorial, and
  national levels (Parks Canada n.d.);
- Directory of Federal Heritage Designations: a searchable on-line database that identifies
   National Historic Sites, National Historic Events, National Historic People, Heritage Railway
   Stations, Federal Heritage Buildings, and Heritage Lighthouses (Parks Canada n.d.);
- Canadian Heritage River System: a national river conservation program that promotes, protects and enhances the best examples of Canada's river heritage (Canadian Heritage Rivers Board and Technical Planning Committee n.d.); and,
- United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Sites (UNESCO World Heritage Centre n.d.).

### 2.4.2 Review of Previous Heritage Reporting

Additional documents relating to the study area were also reviewed. These include:

Memo between the City of Vaughan and HDR Inc. (September 19, 2019) indicating that the
following properties have been previously identified and should be considered during this
assessment: 11451 Jane Street, 11390 Keele Street, 2939 Kirby Road, and 2480 Kirby Road.

#### 2.4.3 Stakeholder Data Collection

The following individuals, groups, and/or organizations were contacted to gather information on known and potential BHRs and CHLs, active and inactive cemeteries, and areas of identified Indigenous interest within the study area:

- Katrina Guy, Cultural Heritage Coordinator, City of Vaughan (email communication November 11 and December 11, 2019). A response provided documentation relating to earlier studies completed within the study area, including those for Block 27 and Block 34E. A newspaper article relating to the construction of 2939 Kirby Road was included and comments highlighting the vulnerability of 2480 Kirby Road were relayed.
- The MHSTCI (email communication November 11 and 18, 2019)<sup>1</sup>. Email correspondence confirmed that there are no additional properties designated by the Minister. One previously identified Provincial Heritage Property (of local significance) was identified, the Stone Culvert, located at Mile 20.86 of the Barrie GO Rail Corridor. This culvert is located outside of the study area and so was not included in this report as a cultural heritage resource.
- The Ontario Heritage Trust (email communications November 11 and December 11, 2019). A
  response confirmed that there are no additional previously identified heritage resources or
  heritage easements within or adjacent to the study area.

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<sup>&</sup>lt;sup>1</sup> Contacted 11 November 2019 at <u>registrar@ontario.ca</u>.

## 2.5 Preliminary Impact Assessment Methodology

To assess the potential impacts of the undertaking, identified BHRs and CHLs are considered against a range of possible negative impacts, based on the *Ontario Heritage Tool Kit InfoSheet #5: Heritage Impact Assessments and Conservation Plans* (Ministry of Tourism and Culture 2006). These include:

## Direct impacts:

- Destruction of any, or part of any, significant heritage attributes or features; and
- Alteration that is not sympathetic, or is incompatible, with the historic fabric and appearance.

#### Indirect impacts

- Shadows created that alter the appearance of a heritage attribute or change the viability of a natural feature or plantings, such as a garden;
- Isolation of a heritage attribute from its surrounding environment, context or a significant relationship;
- Direct or indirect obstruction of significant views or vistas within, from, or of built and natural features;
- A change in land use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces; and
- Land disturbances such as a change in grade that alters soils, and drainage patterns that adversely affect an archaeological resource.

Indirect impacts from construction-related vibration have the potential to negatively affect BHRs or CHLs depending on the type of construction methods and machinery selected for the project and proximity and composition of the identified resources. Potential vibration impacts are defined as having potential to affect an identified BHRs and CHLs where work is taking place within 50 m of features on the property. A 50 m buffer is applied in the absence of a project-specific defined vibration zone of influence based on existing secondary source literature and direction provided from the MHSTCI (Wiss 1981; Rainer 1982; Ellis 1987; Crispino and D'Apuzzo 2001; Carman et al. 2012). This buffer accommodates any additional or potential threat from collisions with heavy machinery or subsidence (Randl 2001).

Several additional factors are also considered when evaluating potential impacts on identified BHRs and CHLs. These are outlined in a document set out by the Ministry of Culture and Communications (now MHSTCI) and the Ministry of the Environment entitled *Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments* (1992) and include:

- Magnitude: the amount of physical alteration or destruction which can be expected;
- Severity: the irreversibility or reversibility of an impact;
- Duration: the length of time an adverse impact persists;
- Frequency: the number of times an impact can be expected;
- Range: the spatial distribution, widespread or site specific, of an adverse impact; and
- Diversity: the number of different kinds of activities to affect a heritage resource.

The proposed undertaking should endeavor to avoid adversely affecting known and potential BHRs and CHLs and interventions should be managed in such a way that identified significant cultural heritage resources are conserved. When the nature of the undertaking is such that adverse impacts are



unavoidable, it may be necessary to implement alternative approaches or mitigation strategies that alleviate the negative effects on identified BHRs and CHLs. Mitigation is the process of lessening or negating anticipated adverse impacts to cultural heritage resources and may include, but are not limited to, such actions as avoidance, monitoring, protection, relocation, remedial landscaping, and documentation of the BHR or CHL if to be demolished or relocated.

Various works associated with infrastructure improvements have the potential to affect BHRs and CHLs in a variety of ways, and as such, appropriate mitigation measures for the undertaking need to be considered.

## 3.0 SUMMARY OF HISTORICAL DEVELOPMENT WITHIN THE STUDY AREA

This section provides a brief summary of historical research. A review of available primary and secondary source material was undertaken to produce a contextual overview of the study area, including a general description of physiography, Indigenous land use, and Euro-Canadian settlement.

## 3.1 Physiography

The study area is situated within the South Slope and transects into the Oak Ridges Moraine physiographic regions of southern Ontario. The South Slope physiographic region (Chapman and Putnam 1984) is the southern slope of the Oak Ridges Moraine. The South Slope meets the Moraine at heights of approximately 300 metres above sea level, and descends southward toward Lake Ontario, ending, in some areas, at elevations below 150 metres above sea level. Numerous streams descend the South Slope, having cut deep valleys in the till. In the vicinity of the study area, the South Slope is ground moraine of limited relief. The Oak Ridges Moraine physiographic region of southern Ontario (Chapman and Putnam 1984) extends from the Niagara Escarpment to the Trent River forming the height of land separating the drainage basin of Lake Ontario from the drainage basins of Georgian Bay and the Trent. This physiographic region, covering approximately 1,300 square kilometres, is characterized by hilly, "knob and basin" topography of sandy or gravelly till. The Moraine was created during the melting of the Laurentian Glaciers 13,000-12,000 B.P. The meltwater ran into present day Georgian Bay and Lake Simcoe areas, and into the Great Lakes, forming Lake Iroquois to the south (over present day Lake Ontario), and Lake Algonquin to the north (over present day Lake Huron, Georgian Bay and Lake Simcoe). On the moraine itself, glacial melting formed a series of kettle lakes (Bennett and Glasser 1996).

## 3.2 Summary of Early Indigenous History in Southern Ontario

Southern Ontario has been occupied by human populations since the retreat of the Laurentide glacier approximately 13,000 years ago, or 11,000 Before the Common Era (B.C.E.) (Ferris 2013).<sup>2</sup> During the

<sup>&</sup>lt;sup>2</sup> While many types of information can inform the precontact settlement of Ontario, such as oral traditions and histories, this summary provides information drawn from archaeological research conducted in southern Ontario over the last century.



Paleo period (c. 11,000 B.C.E. to 9,000 B.C.E), groups tended to be small, nomadic, and non-stratified. The population relied on hunting, fishing, and gathering for sustenance, though their lives went far beyond subsistence strategies to include cultural practices including but not limited to art and astronomy. Fluted points, beaked scrapers, and gravers are among the most important artifacts to have been found at various sites throughout southern Ontario, and particularly along the shorelines of former glacial lakes. Given the low regional population levels at this time, evidence concerning Paleo-Indian period groups is very limited (Ellis and Deller 1990).

Moving into the Archaic period (c. 9,000 B.C.E. to 1,000 B.C.E.), many of the same roles and responsibilities continued as they had for millennia, with groups generally remaining small, nomadic, and non-hierarchical. The seasons dictated the size of groups (with a general tendency to congregate in the spring/summer and disperse in the fall/winter), as well as their various sustenance activities, including fishing, foraging, trapping, and food storage and preparation. There were extensive trade networks which involved the exchange of both raw materials and finished objects such as polished or ground stone tools, beads, and notched or stemmed projectile points. Furthermore, mortuary ceremonialism was evident, meaning that there were burial practices and traditions associated with a group member's death (Ellis and Deller 1990; Ellis et al. 2009).

The Woodland period (c. 1,000 B.C.E. to 1650 C.E.) saw several trends and aspects of life remain consistent with previous generations. Among the more notable changes, however, was the introduction of pottery, the establishment of larger occupations and territorial settlements, incipient horticulture, more stratified societies, and more elaborate burials. Later in this period, settlement patterns, foods, and the socio-political system continued to change. A major shift to agriculture occurred in some regions, and the ability to grow vegetables and legumes such as corn, beans, and squash ensured long-term settlement occupation and less dependence upon hunting and fishing. This development contributed to population growth as well as the emergence of permanent villages and special purpose sites supporting those villages. Furthermore, the socio-political system shifted from one which was strongly kinship based to one that involved tribal differentiation as well as political alliances across and between regions (Ellis and Deller 1990; Williamson 1990; Dodd et al. 1990; Birch and Williamson 2013).

The arrival of European trade goods in the sixteenth century, Europeans themselves in the seventeenth century, and increasing settlement efforts in the eighteenth century all significantly impacted traditional ways of life in Southern Ontario. Over time, war and disease contributed to death, dispersion, and displacement of many Indigenous peoples across the region. The Euro-Canadian population grew in both numbers and power through the eighteenth and nineteenth centuries and treaties between colonial administrators and First Nations representatives began to be negotiated.

The study area is within Treaty 13a, signed on August 2, 1805 by the Mississaugas and the British Crown in Port Credit at the Government Inn. A provisional agreement was reached with the Crown on August 2, 1805, in which the Mississaugas ceded 70,784 acres of land bounded by the Toronto Purchase of 1787 in the east, the Brant Tract in the west, and a northern boundary that ran six miles back from the shoreline of Lake Ontario. The Mississaugas also reserved the sole right of fishing at the Credit River and were to retain a 1 mile strip of land on each of its banks, which became the Credit Indian Reserve. On September 5, 1806, the signing of Treaty 14 confirmed the Head of the Lake Purchase between the Mississaugas of the Credit and the Crown (Mississauga of the New Credit First Nation 2001; Mississaugas of the Credit First Nation 2017).



## 3.3 Historical Euro-Canadian Township Survey and Settlement

Historically, the study area is located in the former Township of Vaughan, County of York, in part of Lots 30 and 31, Concession 2-5.

## 3.3.1 Township of Vaughan

John Stegman, Deputy Surveyor, drew up a rough plan for the location of Vaughan in 1788; however, Abraham Iredell conducted the first survey in 1795 along Yonge Street. The township was not surveyed in its entirety until 1851, and the sidelines were resurveyed in 1861. The survey divided the township into eleven, north-south concessions with 200-acre lots. The exceptions were Concessions 9, 10 and 11, which were cut off in the south due to original survey line of the Toronto Purchase on the west and Yonge Street on the east. The east to west sideroads were located one and a quarter miles apart.

In 1792, Lieutenant Governor Simcoe announced a plan to attract settlers to Upper Canada. This plan offered 200 acres of land to pioneer settlers, provided they undertake certain duties in return. By 1800, all the lots on Yonge Street between the current Steeles Avenue and Langstaff Road had been granted to the first settlers in the area. Pennsylvanian German settlers from the United States settled primarily in the southeast corner of the Township.

Governor Simcoe and his team traveled through this area in the autumn of 1793 on their exploration of the region between Toronto and Matchedash Bay. They followed the Humber Trail from south to north, explored the area between Lake Simcoe and Matchedash Bay, and returned to Toronto following another ancient Carrying Place along the Don River.

In the period between 1814 and 1860, the lots and concessions that had been previously surveyed formed the basis for the clearing of land for future agricultural development. The farms were often basic in the beginning with the 200 acre properties later evolving to include a more substantial residence either built of frame, brick or stone masonry complemented with agricultural outbuildings such as a barn, driveshed, silo, and storage sheds.

Although there was some immigration from Britain in the post War of 1812 period, the township population grew slowly until the 1820s when Crown and Clergy Reserve land became available for purchase. In the late 1820s and early 1830s there was a substantial increase in British immigration.

The Township prospered economically as a farming area between 1840 and 1867 with Toronto to the south a major market. Centres of settlement developed as service and institutional communities to support the burgeoning agricultural growth in Vaughan. Churches, cemeteries and post offices were created.

The Township was incorporated in 1850 as a municipal government. Construction for the Ontario Simcoe and Huron Railway began in 1852 and the line was opened through Vaughan Township in 1853 with a station in Concord. It was renamed the Northern Railway Company in 1858, and later became part of the Grand Trunk Railway and then Canadian National Railway (CNR) c. 1920. The Toronto, Grey



and Bruce Railway (T.G.&B.R) was opened through the west part of the Township in 1871. Although Yonge Street on the east side of the township was the principal route to the markets in Toronto to the south, two railways built through the township greatly increased market access for the farmers and contributed to the township's prosperity. Agriculture continued as the principal land use throughout the nineteenth century.

In the period from 1850 to 1950 Vaughan witnessed the introduction of railways, improved rural-urban roadways, larger villages and towns and industrialization. This facilitated growth in population of both rural and urban communities in the Township of Vaughan. The result during this period was more established commercial-industrial centres with residential housing and institutional amenities. Improvements to water and sewage infrastructure aided development.

After World War II an influx of immigration occurred in the Township, and the process of urbanization of the land began in the south and gradually moved northward. Highway 400 was built north to south through the western part of Vaughan Township in the late 1940s. Urbanization of the Township slowly moved northward from Steeles Avenue, and the southern part of Vaughan Township developed quickly from the 1970s onwards. In 1971, the new regional government of York Region was established and Vaughan Township merged with the Village of Woodbridge to form the Town of Vaughan. That same year, the Police Village of Thornhill ceased to exist and the community was divided between the newly created Towns of Markham and Vaughan in the Regional Municipality of York Act. In 1991, it officially changed its legal status to City of Vaughan.

The Province of Ontario acquired land in Vaughan Township as part of the Parkway Belt West Plan in the mid-1970s under the provisions of The Parkway Belt Planning and Development Act, 1973. The Plan was implemented in 1978 for the purposes of creating a multi-purpose utility corridor, urban separator and linked open space system with public use area designated for public open space and buffer area, utility, electric power facility, road, and inter-urban transit. In Vaughan it was located east to west from Highway 400 to Yonge Street between Steeles Avenue and Highway 7 to Dufferin Street, and then northeastward to Richmond Hill and Yonge Street. The principal north roads were improved as development moved northward. In the late 1990s, Highway 407 was built east to west through the southern part of the City of Vaughan in the Parkway Belt West lands with interchanges at the principal north-south roads; Highway 7 became a regional arterial road.

The City of Vaughan has continued to evolve through the urbanization of the agricultural lands and intensification of the former nineteenth-century hamlets and villages. Echoes of its early centres of settlements still remain, with names such as Carrville, Coleraine, Elder Mills, Nashville, Patterson, Pinegrove, Purpleville, Richvale, Teston and Vellore. At the same time the larger historical centres of settlement, such as Thornhill and Woodbridge, grew correspondingly as new families moved to more affordable, larger residential properties and sought commercial centres. New nodes of residential and commercial areas have begun to emerge as a result of the development.

By 1950, the City of Vaughan, especially south of Major Mackenzie Drive saw an increase in suburban development through tract housing projects combining detached and semi-detached housing. Associated municipal services in the form of education facilities and developed parks and recreation facilities followed. Slowly, the active family-owned farms were purchased early in this period by the development industry for potential commercial, industrial and residential development. While the



period after World War II saw an influx of immigration in Vaughan Township, the process of the urbanization of the land began in the south.

### 3.3.2 Village of Hope

The settlement of Hope is first cartographically identified on the 1919 publication of the National Topographic Survey, but the presence of a church, a school house and a steam saw mill in the same location is depicted on the 1860 *Map of the County of York* (Tremaine 1860). The settlement is not described in *A History of Vaughan Township*, though it is noted that Hope section formed part of Patterson School, S.S. No. 19, which was built in 1872 (Reaman 1971).

## 3.3.3 Northern Railway

The Toronto, Simcoe, and Lake Huron Union Rail Road Company was incorporated in 1844 and in 1850 was renamed the Ontario, Simcoe, and Huron Union Rail Road Company. The rail line opened on May 16,1853, and connected Toronto to Aurora (formerly Matchell's Corners) via a 48 kilometre track (Andreae 1997). The line was expanded with service to Bradford beginning June 13, 1853, and further expanded to Barrie on October 11, 1853 (forming the path for the present Barrie GO Rail Corridor). The inaugural trip on May 16, 1853 from Toronto to Aurora is commemorated by a plaque at Toronto's Union Station, as it was the first steam locomotive operated in Ontario (Mika and Mika 1977).

In 1858, the company underwent a third name change becoming the Northern Railway Company of Canada. Subsequently, the Ontario, Simcoe & Huron Railway became known simply as the Northern Railway, until 1888 when the ownership amalgamated with the Grand Trunk Railway Company of Canada, at which point the Northern Railway became part of the Grand Trunk Railway. Rail tracks were quickly laid across Ontario, as well as other parts of the country linking settlements and provinces. The population of Canada doubled between 1851 and 1901 but the miles of rail laid increased exponentially from 159 to 18,294 miles (Andreae 1997). The Northern Railway was a major draw factor for businesses in the Counties of York and Simcoe and caused many communities with a station to thrive and those without to dissipate (Town of Newmarket 2018). In 1923, the railway company was again amalgamated, this time with the government owned CNR.

Commuter service began on the line in 1972, operated by CN as part of the CN Newmarket Subdivision. This commuter service was taken over by VIA Rail in 1978, and then by GO Transit in 1982. GO Transit continues to operate this commuter service to this day.

## 3.4 Review of Historical Mapping

The 1860 Map of the County of York (Tremaine 1860) and the 1878 Illustrated Historical Atlas of the County of York, Vaughan Township (Miles & Co. 1878) were examined to determine the presence of historical features within the study area during the nineteenth century (Figure 2 and Figure 3).



It should be noted, however, that not all features of interest were mapped systematically in the Ontario series of historical atlases. For instance, they were often financed by subscription limiting the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the atlases. The use of historical map sources to reconstruct or predict the location of former features within the modern landscape generally begins by using common reference points between the various sources. The historical maps are geo-referenced to provide the most accurate determination of the location of any property on a modern map. The results of this exercise can often be imprecise or even contradictory, as there are numerous potential sources of error inherent in such a process, including differences of scale and resolution, and distortions introduced by reproduction of the sources.

The nineteenth-century maps (Figure 2 and Figure 3) illustrate that Kirby Road, Jane Street, Keele Street, and Dufferin Street were historically surveyed roads and existed in their present alignments. The 1860 *Map of the County of York* illustrates the increase of domestic settlement to the south of the study area. To the south of Lot 30 along Keele Street; a Steam Saw Mill is illustrated on the parcel south of William Nixon's parcel. The railway is illustrated extending in its current north-south alignment through Lots 30 and 31, Concession 4. The 1878 *Illustrated Historical Atlas* depicts one orchard and five farmhouses across Lot 30, Concession 4. Within Concession 3, Lots 30 and 31 illustrate four farmhouses adjacent to the study area. Along Keele Street and south of the study area, one orchard, one schoolhouse, one church, and five farmhouses are illustrated after the railway transects from Concession 3 to Concession 4. The Northern Railway transects the study area through Lots 30 and 31, Concession 4. The lands within the study area are illustrated in a rural agricultural context throughout the nineteenth century.

In addition to nineteenth-century mapping, historical topographic mapping and aerial photographs from the twentieth century were examined. This report presents maps and aerial photographs from 1928, 1954, 1972, 1973, and 1994 (Figure 4 to Figure 7). These do not represent the full range of maps consulted for the purpose of this study but were judged to cover the full range of land uses that occurred in the area during this period.

The twentieth-century mapping revealed that the study area retained a mostly rural agricultural character throughout the century. The 1926 and 1930 topographic maps (Figure 4) indicates that Keele Street was identified as a County Road. There are tributary channels located to the south of the study area within Concession 4, and to the north of the study area within Concession 3. Identifiable farm houses are visible in the 1954 aerial photograph on both the north and south side of Kirby Road (Figure 5). The 1972 and 1973 topographical maps (Figure 6) illustrates Kirby Road as a 'loose surface road through all weather', suggesting its regular use, and indicates that Kirby Road continues as a trail east of Keele Street. There are 13 buildings illustrated within Concession 4, Lots 31 and 30. Within Concession 3, there are seven buildings illustrated throughout Lots 31 and 30. There is a concentration of settlement along Keele Street, within the community of Hope to the south of the study area. The 1994 NTS map (Figure 7) illustrates development following along the railway. A causeway was developed along the intersection of Kirby Road and Keele Street. Houses are illustrated along the south and west of the study area. The Community of Hope has grown slightly in the latter half of the twentieth century.



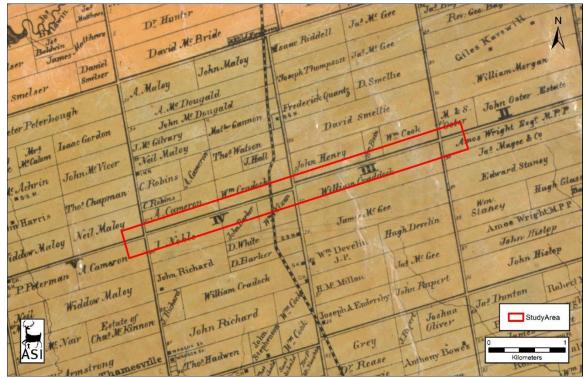


Figure 2: The study area overlaid on the 1860 Map of the County of York

Base Map: (Tremaine 1860)

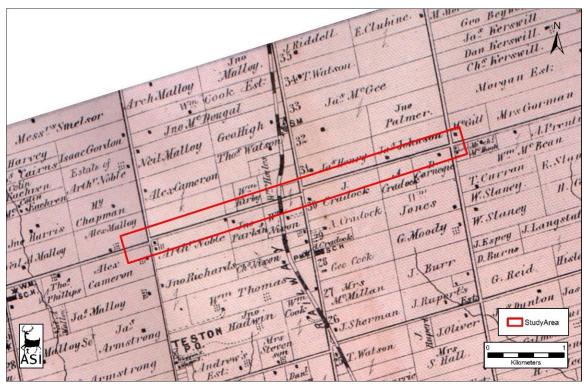


Figure 3: The study area overlaid on the 1878 Historical Atlas of the County of York

Base Map: (Miles & Co. 1878)



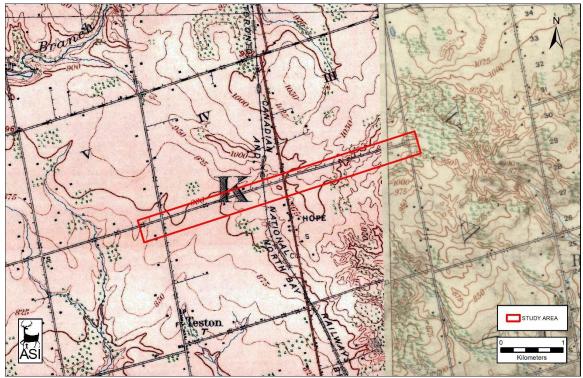


Figure 4: The study area overlaid on the 1926 and 1930 topographic maps of Vaughan

Base Map: (Department of National Defence 1930; Department of National Defence 1926)



Figure 5: The study area overlaid on the 1954 aerial photograph of Vaughan

Base Map: (Hunting Survey Corporation Limited 1954, Photo 437.793)



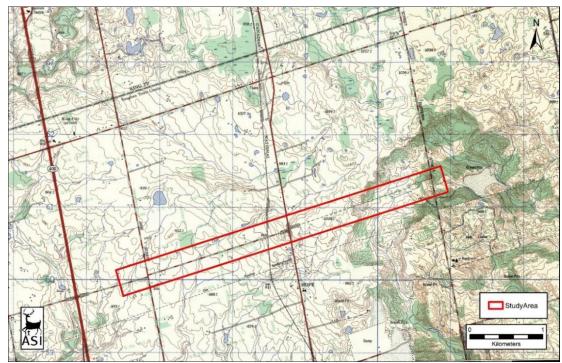


Figure 6: The study area overlaid on the 1972 and 1973 topographic maps of Vaughan

Base Map: (Department of Energy, Mines and Resources 1972;

Department of Energy, Mines and Resources 1973)

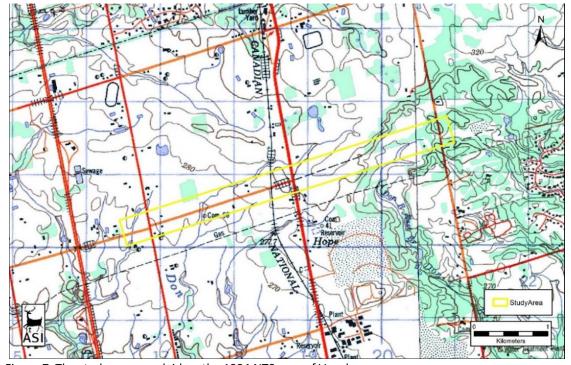


Figure 7: The study area overlaid on the 1994 NTS map of Vaughan

Base Map: (Department of Energy, Mines and Resources 1994a; Department of Energy, Mines and Resources 1994b)



## 4.0 EXISTING CONDITIONS

## 4.1 Description of Field Review

A field review of the study area was undertaken by Johanna Kelly of ASI, on November 7, 2019, to document the existing conditions of the study area from existing rights-of-way. The existing conditions of the study area are described below and captured in Plate 1 to Plate 8. Identified cultural heritage resources are discussed in Section 4.2 and are mapped on Figure 8 of this report.

The study area is located along Kirby Road between Jane Street and Dufferin Street in the City of Vaughan, and is oriented in a roughly east-west direction. Throughout the study area, the right-of-way (ROW) consists of a single lane of traffic in either direction. The west portion of the study area (west of Keele Street) consists of a narrow gravel shoulder and drainage ditches. The east portion of the study area includes pedestrian sidewalks on the south side of Kirby Road. The topography throughout the study area is relatively flat, with some undulations east of Keele Street.

The portion of the study area located west of Keele Street is dominated by active agricultural land and associated residences. A commercial property and a gas station occupy the northwest corner of the intersection of Kirby Road and Keele Street. The Barrie Corridor for the GO Rail Network passes in a north-south direction through the study area, via an at-grade crossing to the west of Keele Street. East of Keele Street the study area includes residential subdivisions and land designated as Environmentally Significant Areas (ESA) by the Toronto and Region Conservation Authority (TRCA) on the south side of Kirby Road. The north side of Kirby Road, east of Keele Street, consists primarily of active agricultural land.



Plate 1: Looking southwest across CHL 2 (CHL 1 is visible in the background).





Plate 2: Looking west along Kirby Road across agricultural fields.



Plate 3: Looking east along Kirby Road.





Plate 4: View south across the at grade crossing of the Barrie GO Rail Corridor across Kirby Road.



Plate 5: View east across the intersection of Kirby Road and Keele Street, residential subdivision visible at the southeast corner.





Plate 6: View east along Kirby Road, residential subdivisions are visible on the left (south side of Kirby Road)



Plate 7: View east along gently undulating topography of Kirby Road, east of Keele Street.





Plate 8: View west along gently undulating topography of Kirby Road, east of Keele Street.

# 4.2 Identification of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes

Based on the results of the background research and field review, eight cultural heritage resources, all CHLs, were identified within and/or adjacent to the Kirby Road study area. A detailed inventory of these cultural heritage resources within the study area is presented Table 1. See Figure 8 for mapping showing the location of identified CHLs.



Table 1: Inventory of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within the Study Area

| Feature<br>ID | Type of Property                  | Address or Location | Heritage Status and Recognition  | ge Landscapes within the Study Area  Description of Property and Known or Potential CHVI  | Photographs/ Digital Image  |
|---------------|-----------------------------------|---------------------|--|---|---|
| CHL 1         | Late-nineteenth century farmscape | 11424 Jane Street   | Listed on the City of<br>Vaughan's Heritage<br>Inventory                         | -1860 and 1878 mapping indicate the property was owned by Alex Cameron (Figure 2 and Figure 3)Farmstead and orchard are illustrated in the location of the standing house on 1878 mapping (Figure 3)Victorian-style house built in 1875 (City of Vaughan 2005) -The property features several outbuildings in addition to the residence, vegetative windbreak surrounding the house, a long driveway, and active agricultural fieldsLocated at the southwest corner of Jane Street and Kirby Road, two nineteenth century roadwaysContributes to the historical agricultural character of rural Vaughan.  | Plate 9: Looking northwest across agricultural fields towards the farmstead (ASI 2019). |
| CHL 2         | Nineteenth century farmscape      | 11451 Jane Street   | Identified as a Property of Interest on the City of Vaughan's Heritage Inventory | -Nineteenth century mapping indicates the property was owned by the Noble family (J. Noble in 1860, and Arthur Noble in 1878) (Figure 2 and Figure 3).  -Farmstead and orchard are illustrated in the location of the standing house on 1878 mapping (Figure 3).  -The property features a one-and-a-half storey Gothic Revival style cottage with a one-and-a-half storey rectangular addition on the rear, several outbuildings, circulation routes, and active agricultural land.  -The property also features the residence at 2939 Kirby Road (CHL 3) connected by a long driveway.  -Located at the southeast corner of Jane Street and Kirby Road, two nineteenth century roadways.  -Contributes to the historical agricultural character of rural Vaughan. | Plate 10: Looking northeast towards the residence at 11451 Jane Street (ASI 2019).      |



| Feature<br>ID | Type of Property             | Address or Location | Heritage Status and Recognition  | Description of Property and Known or Potential CHVI   | Photographs/ Digital Image  |
|---------------|------------------------------|---------------------|--|---|---|
| CHL 3         | Nineteenth century residence | 2939 Kirby Road     | Identified as a Property of Interest on the City of Vaughan's Heritage Inventory | -Nineteenth century mapping indicates the property was owned by the Noble family (J. Noble in 1860, and Arthur Noble in 1878) (Figure 2 and Figure 3).  -The house appears on mapping between 1954 and 1972 (Figure 5 and Figure 6).  -The house was built by Bruce and Evelyn Snider in 1966 (Hewitt 1966).  -This property features a Georgian style twentieth century two-storey red brick house with a second, separate residence connected by an enclosed hallway as well as several outbuildings, circulation routes, and active agricultural land.  -The house contains elements of the Snider family's former home, the former front doorway, side porch, and oak doors. An article detailing the family's move in 1966 notes that "their recreation room will be panelled with barn boards" (Hewitt 1966:16).  -The property also features the residence at 11451 Jane Street (CHL 2) connected by a long driveway.  -Located at the southeast corner of Jane Street and Kirby Road, two nineteenth century roadways.  -Contributes to the historical agricultural character of rural Vaughan. | Plate 11: North elevation of the residence at 2939 Kirby Road (ASI 2019).             |
| CHL 4         | Nineteenth century farmscape | 11665 Jane Street   | Identified as a Property of Interest on the City of Vaughan's Heritage Inventory | -Nineteenth century mapping indicates the property was owned by the C. Robins in 1860 and Alex Cameron in 1878 (Figure 2 and Figure 3).  -The Heritage Inventory suggests the house was constructed in 1880 (City of Vaughan n.d.).  -A house is illustrated in the same location as early as 1926 on mapping (Figure 4).  -A one-and-a-half storey residence with an L shaped footprint and rear addition. The house features a cross-gable roof, white horizontal siding, and double hung windows.  -The property features several outbuildings, circulation routes, and active agricultural fields.  -Located at the northeast corner of Jane Street and Kirby Road, two nineteenth century roadways.  -Contributes to the historical agricultural character of rural Vaughan.   | Plate 12: North and west elevations of the residence at 11665 Jane Street (ASI 2019). |



| Feature<br>ID | Type of Property                           | Address or Location | Heritage Status and Recognition   | Description of Property and Known or Potential CHVI  | Photographs/ Digital Image   |
|---------------|--|---------------------|---|--|--|
| CHL 5         | Nineteenth century farmscape               | 2480 Kirby Road     | Listed on the City of Vaughan's Heritage Inventory                                | -Nineteenth century mapping indicates the property was owned by the William Cradock in 1860 and William Kirby in 1878 (Figure 2 and Figure 3).  -The Heritage Inventory states the house was constructed in 1895 (City of Vaughan n.d.).  -A house is illustrated in the same location as early as 1926 on mapping (Figure 4).  -One-and-a-half storey red brick Gothic Revival style residence with decorative contrasting brick details.  -The former agricultural fields are currently in use as a par 3 golf course and driving range.  -Farmhouse and homestead of the Kirby Family, for whom the road is named after.  -Located on the north side of Kirby Road, a nineteenth century roadway.  -Contributes to the historical agricultural character of rural Vaughan.                        | Plate 13: Looking northeast towards the historical residence at 2480 Kirby Road (ASI 2019) |
| CHL 6         | Remnant<br>nineteenth century<br>farmscape | 11390 Keele Street  | Identified in a previous study and by the Heritage Planner at the City of Vaughan | -Property was owned by William Nixon and D. White in 1860 (Figure 2), William Nixon and Charles Nixon in 1878 (Figure 3), and by O. Minon in 1917 (ASI 2015).  -Structures illustrated on nineteenth century mapping are associated with the buildings at 11320 and 11290 Keele Street (ASI 2015).  -There are no extant structures on the property, all structures associated with the farmstead were removed by 2009.  -Landscape features include agricultural fields, a pond, and fence and tree lines.  -The Barrie GO Rail Corridor bisects the property, extending in a north-south direction through the parcel.  -Located at the northwest corner of Keele Street and Kirby Road, two nineteenth century roadways.  -Contributes to the historical agricultural character of rural Vaughan. | Plate 14: Aerial view of the property at 11390 Keele Street (Google Earth 2018).           |



| Feature<br>ID | Type of Property                       | Address or Location     | Heritage Status and Recognition  | Description of Property and Known or Potential CHVI   | Photographs/ Digital Image  |
|---------------|--|-------------------------|--|---|---|
| CHL 7         | Nineteenth<br>century rail<br>corridor | Barrie GO Rail Corridor | Identified during field review   | -Illustrated in its present alignment on 1860 and 1878 mapping and labelled as the Northern Railway (Figure 2 and Figure 3).  -The current Barrie GO Rail Corridor follows the alignment of the original Northern Railway, built between 1851 and 1855.  -At the time of writing this line extends from Union Station in Toronto to Barrie.  -Crosses the study area at Kirby Road, between Jane and Keele Streets, all nineteenth-century roadways.  -Is associated with early transportation routes and contributes to the historical and scenic character of rural Vaughan.  | Plate 15: At grade crossing of the Barrie GO Rail Corridor with Kirby Road, looking south (ASI 2019). |
| CHL 8         | Nineteenth century farmscape           | 11724 Dufferin Street   | Identified as a Property of Interest on the City of Vaughan's Heritage Inventory | -Nineteenth century mapping indicates the property was owned by Davide Smellie, William Cook, and William Baine in 1860 and James Johnson and John Palmer in 1878 (Figure 2 and Figure 3).  -A house is illustrated in the same location as early as 1926 on mapping (Figure 4).  -No structures are visible from the publicly accessible right-of-way.  -The heritage inventory describes the residence as Georgian in style (City of Vaughan n.d.).  -The property features several structures at the end of a long winding driveway in the northeast quadrant of the property. The surrounding lands are mixed use, active agricultural land and wooded land.  -Located at the northwest corner of Dufferin Street and Kirby Road, two nineteenth century roadways.  -Contributes to the historical agricultural character of rural Vaughan. | Plate 16: Aerial view of the property at 11724 Dufferin Street (Google Earth 2018).                   |



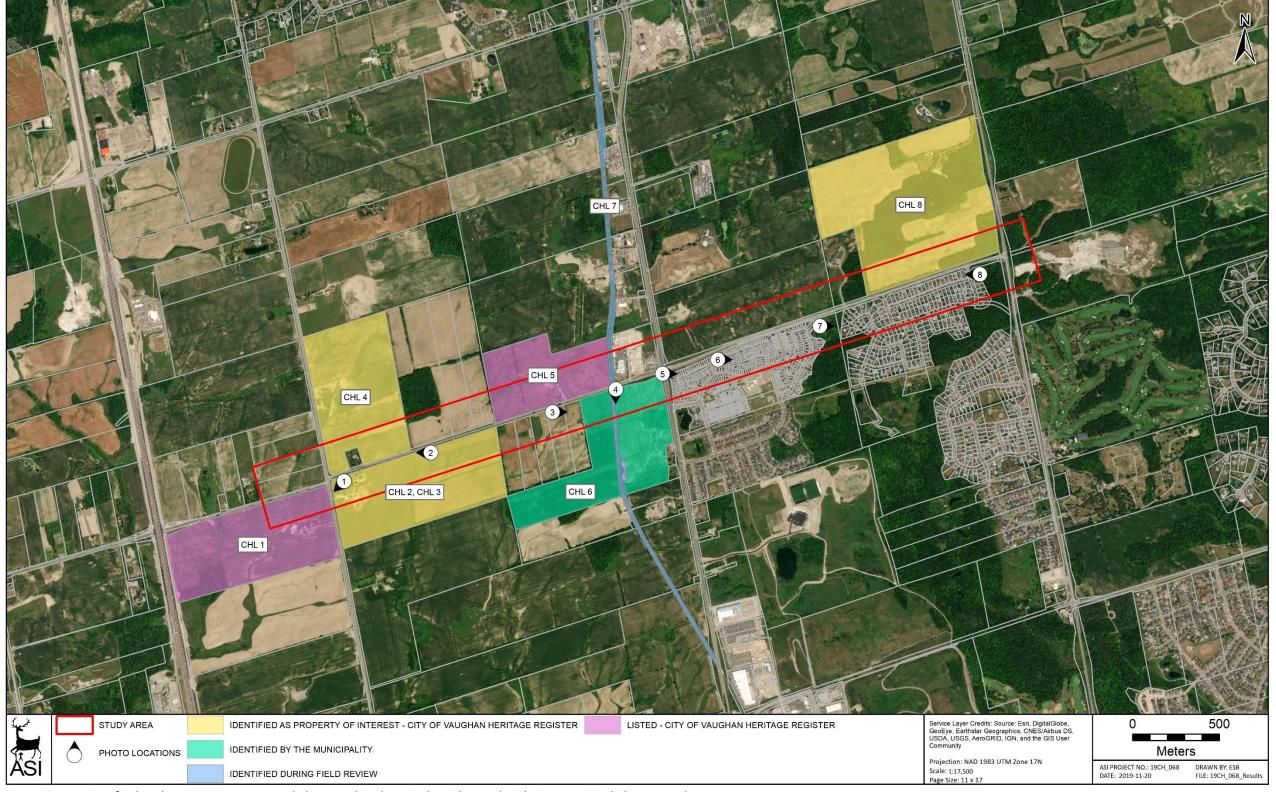


Figure 8: Location of Cultural Heritage Resources and Photographic Plates in the Kirby Road Widening Municipal Class EA study area.



## 5.0 PRELIMINARY IMPACT ASSESSMENT

## 5.1 Description of Proposed Undertaking

The proposed undertaking for the Kirby Road study area consists of the widening of Kirby Road between Jane Street and Dufferin Street, the grade separation of the Barrie GO Rail line at Kirby Road, and the elimination of the jog at the intersection of Kirby Road and Jane Street. See Figure 9 to Figure 17 for mapping showing the location and type of proposed work in relation to identified CHLs.

The widening of Kirby Road will require grading, extension of the ROW, and property acquisition and easements to expand Kirby Road from two to four lanes. Sidewalks, vegetation, and cycle tracks will be added to the north and south sides of the roadway. This widening will result in the elimination of the jog that currently exists at the intersection of Kirby Road and Jane Street. The grade separation of the Barrie GO Rail line will require the construction of a roadway underpass structure with an associated retaining wall that extends approximately 65 m to the west of the rail corridor and approximately 225 m to the east.



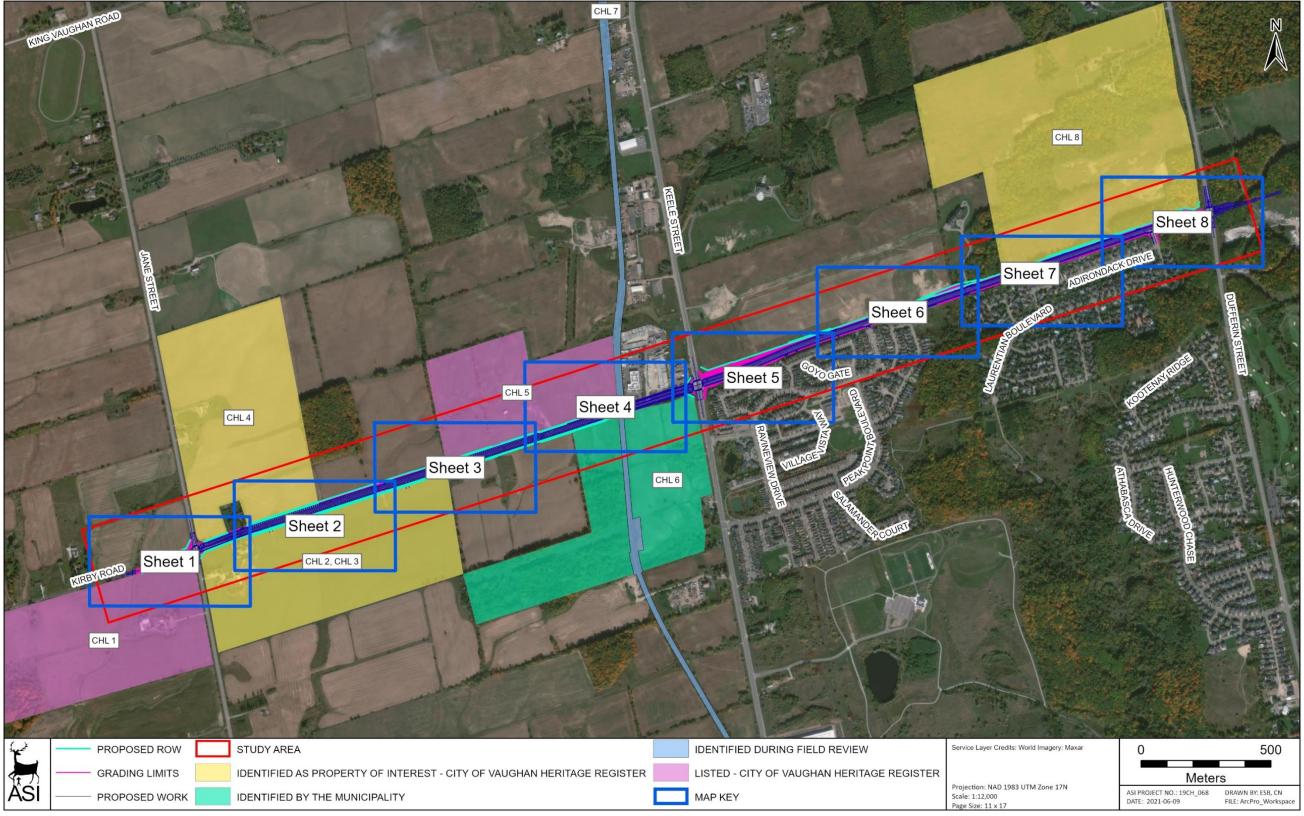


Figure 9: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road Widening Municipal Class EA study area (Key Plan).





Figure 10: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road Widening Municipal Class EA study area (Sheet 1).





Figure 11: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road Widening Municipal Class EA study area (Sheet 2).



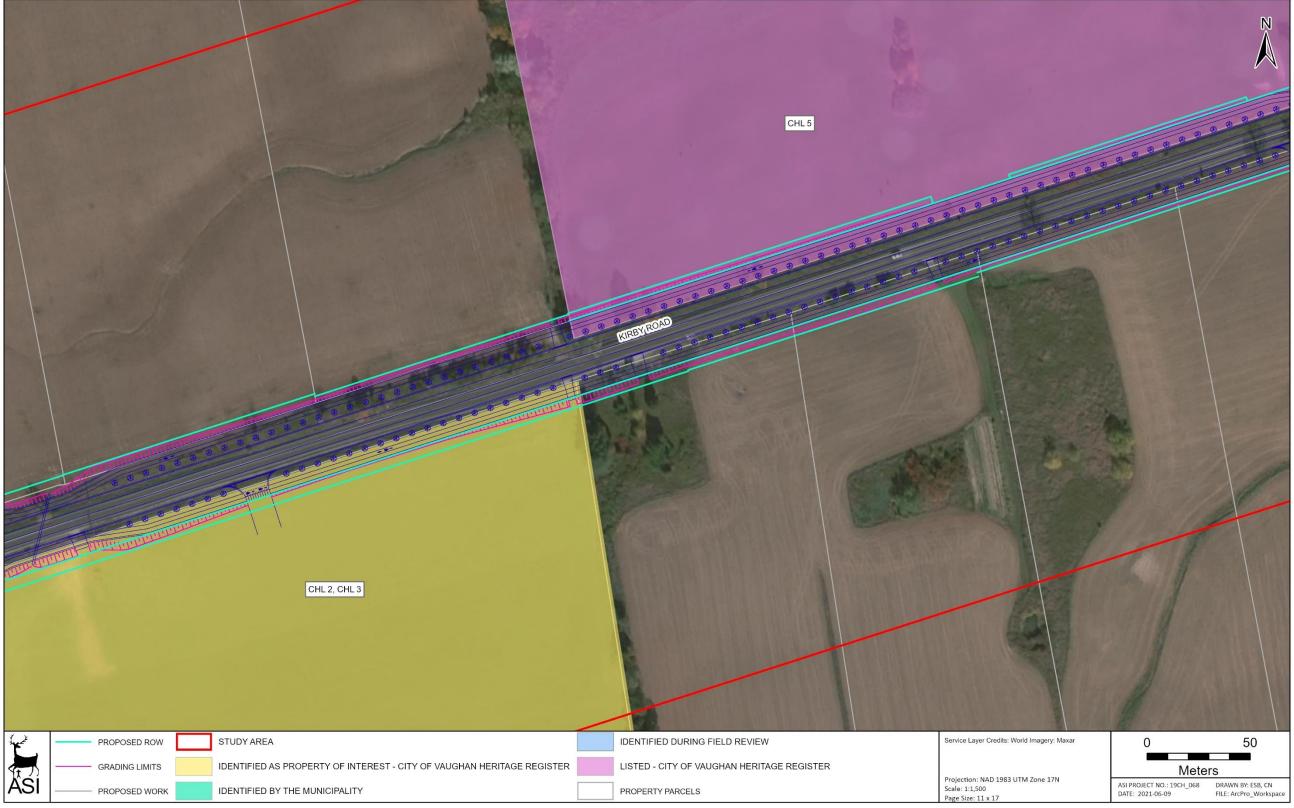


Figure 12: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road Widening Municipal Class EA study area (Sheet 3).



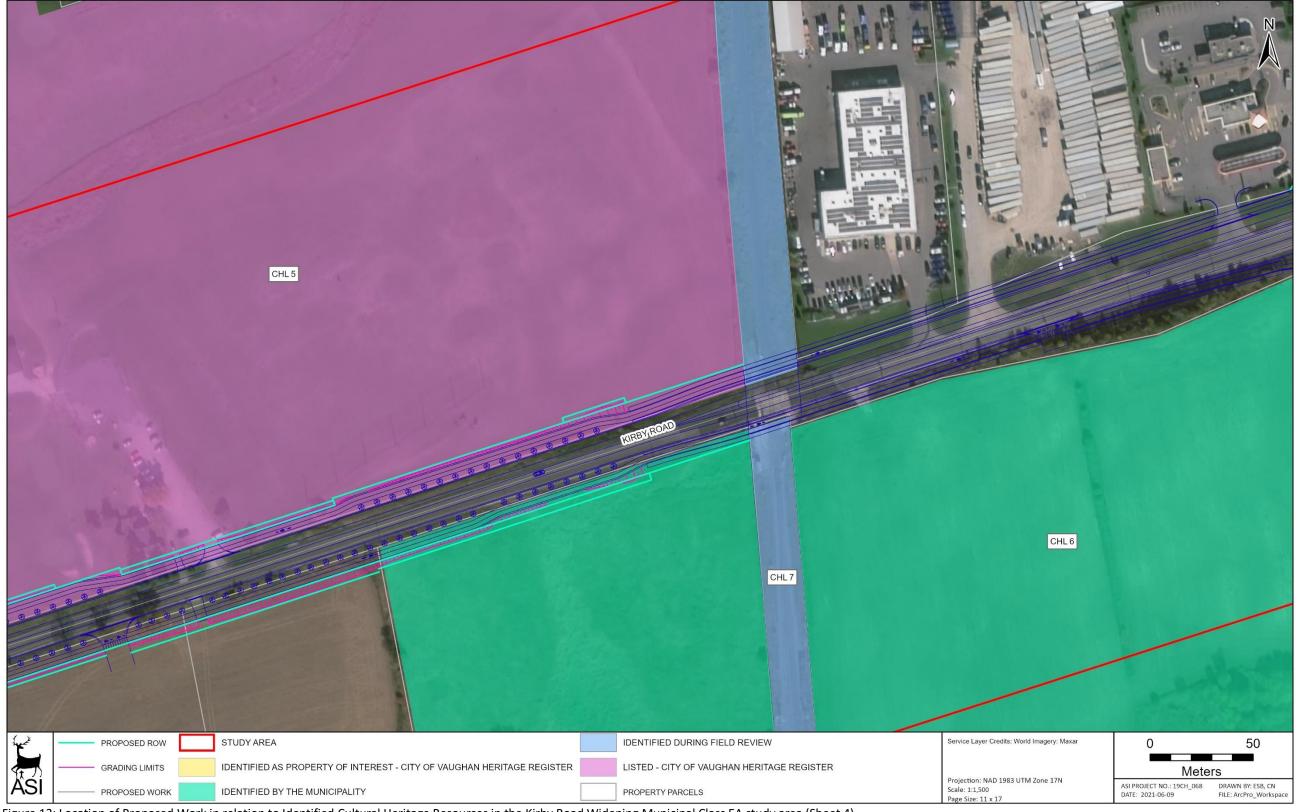


Figure 13: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road Widening Municipal Class EA study area (Sheet 4).





Figure 14: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road Widening Municipal Class EA study area (Sheet 5).





Figure 15: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road Widening Municipal Class EA study area (Sheet 6).





Figure 16: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road Widening Municipal Class EA study area (Sheet 7).



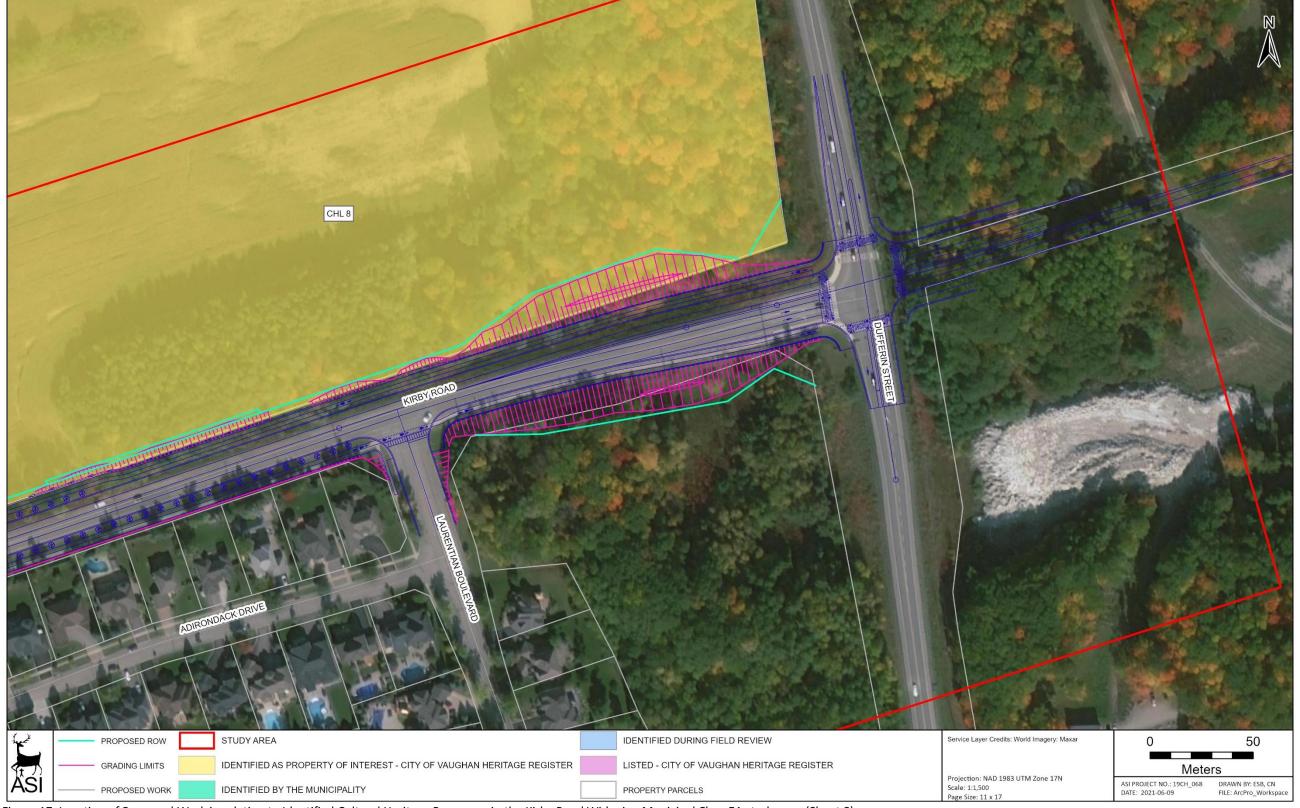


Figure 17: Location of Proposed Work in relation to Identified Cultural Heritage Resources in the Kirby Road Widening Municipal Class EA study area (Sheet 8).



# 5.2 Analysis of Potential Impacts

Table 2 outlines the potential impacts on all identified CHLs within the study area.



Table 2: Preliminary Impact Assessment and Recommended Mitigation Measures

| Feature<br>ID | Location/Name        | Heritage Recognition  | Type and Description of Potential/Anticipated Impact  | Miti | igation Strategies   |
|---------------|----------------------|---|---|------|--|
| CHL 1         | 11424 Jane<br>Street | Listed on the City of<br>Vaughan's Heritage<br>Inventory                                  | Indirect impacts include property encroachment (extending approximately 13 m onto this property at the northeast corner and approximately 4 m onto this property at the north end) (see Figure 10). These parts of the property feature agricultural field. The identified encroachment is expected to be limited and is not expected to adversely impact any heritage attributes associated with this CHL. |      | Where feasible, excavation and staging activities should be planned and executed to avoid unintended impacts to this CHL. Avoidance measures may include, but are not limited to: erecting temporary fencing, establishing buffer zones, issuing instructions to construction crews to avoid identified cultural heritage resources, etc.  |
|               |                      |   | The structures on this property are located approximately 170 m to the south of the proposed work. Therefore, no indirect adverse impacts due to construction related vibration are anticipated as the structures and potential attributes associated with this CHL are located at a distance greater than 50 m from the proposed work.   |      | Indirect impacts to 11424 Jane Street (CHL 1) are anticipated as a result of property encroachment (see Figure 10). The identified encroachment is expected to be limited and will impact a small portion of agricultural field. This encroachment is not expected to impact any heritage attributes associated with this CHL. No further work is required to mitigate these   |
|               |                      |   | No direct impacts are anticipated as the proposed work will not be impacting any heritage attributes at 11424 Jane Street.  |      | indirect impacts.  |
| CHL 2         | 11451 Jane<br>Street | Identified as a Property of<br>Interest on the City of<br>Vaughan's Heritage<br>Inventory | Indirect impacts include property encroachment (extending approximately 15 m onto this property at the north end) (see Figure 10 and Figure 11). This part of the property features grassed lawn. The identified encroachment is expected to be limited and is not expected to adversely impact any heritage attributes associated with this CHL.   |      | Where feasible, excavation and staging activities should be planned and executed to avoid unintended impacts to this CHL. Avoidance measures may include, but are not limited to: erecting temporary fencing, establishing buffer zones, issuing instructions to construction crews to avoid identified cultural heritage resources, etc.  |
|               |                      |   | The structures on this property are located approximately 65 m to the south of the proposed work. Therefore, no indirect adverse impacts due to construction related vibration are anticipated as the structures and potential attributes associated with this CHL are located at a distance greater than 50 m from the proposed work.  |      | Indirect impacts to 11451 Jane Street (CHL 2) are anticipated as a result of property encroachment (see Figure 10 and Figure 11). The identified encroachment is expected to be limited and will impact a small portion of agricultural field. This encroachment is not expected to impact any heritage attributes associated with this CHL. No further work is required to mitigate   |
|               |                      |   | No direct impacts are anticipated as the proposed work will not be impacting any heritage attributes at 11451 Jane Street.  |      | these indirect impacts.  |
| CHL 3         | 2939 Kirby Road      | Identified as a Property of<br>Interest on the City of<br>Vaughan's Heritage<br>Inventory | Indirect impacts include property encroachment (extending approximately 8-10 m onto this property at the north end) (see Figure 10 and Figure 11). This part of the property features grassed lawn, paved driveway, and landscaped vegetation. The identified encroachment is expected to be limited and is not expected to adversely impact any potential heritage attributes associated with this CHL.    |      | Where feasible, excavation and staging activities should be planned and executed to avoid unintended impacts to this CHL. Avoidance measures may include, but are not limited to: erecting temporary fencing, establishing buffer zones, issuing instructions to construction crews to avoid identified cultural heritage resources, etc.  |
|               |                      |   | Indirect adverse impacts due to construction related vibration are possible as the structure sits within 50 m from the proposed work.   |      | Indirect impacts to 2939 Kirby Road (CHL 3) are anticipated as a result of property encroachment (see Figure 10 and Figure 11). The identified encroachment is expected to be limited and will impact a small postion of agricultural field. This engrees have the property of the impact and the i |
|               |                      |   | No direct impacts are anticipated as the proposed work will not be impacting any heritage attributes at 2939 Kirby Road.  |      | impact a small portion of agricultural field. This encroachment is not expected to impact any potential heritage attributes associated with this CHL. No further work is required to mitigate these indirect impacts.  |
|               |                      |   |   |      | To ensure this property is not adversely impacted during construction, baseline vibration monitoring should be undertaken during detailed design. Should this advance monitoring assessment conclude that any structures or landscape features on this property will be subject to vibrations, prepare and implement a vibration monitoring plan as part of the detailed design phase of the project to lessen vibration impacts related to construction.  |



| Page  | 38 |
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| Feature<br>ID | Location/Name         | Heritage Recognition   | Type and Description of Potential/Anticipated Impact   | cion Strategies  |   |
|---------------|-----------------------|--|--|--|---|
|               | 11665 Jane<br>Street  | Identified as a Property of<br>Interest on the City of<br>Vaughan's Heritage<br>Inventory  | Indirect impacts include property encroachment (extending approximately 7 m onto this property at the south end) (see Figure 10 and Figure 11). This part of the property features agricultural field. The identified encroachment is expected to be limited and is not expected to adversely impact any heritage attributes associated with this CHL.   | here feasible, excavation and staging activitie<br>nintended impacts to this CHL. Avoidance mea<br>ecting temporary fencing, establishing buffer<br>avoid identified cultural heritage resources, e  | sures may include, but are not limited to:<br>zones, issuing instructions to construction crews   |
|               |                       |  | The structures on this property are located approximately 420 m to the north of the proposed work. Therefore, no indirect adverse impacts due to construction related vibration are anticipated as the structures and potential attributes associated with this CHL are located at a distance greater than 50 m from the proposed work.  |  |   |
|               |                       |  | No direct impacts are anticipated as the proposed work will not be impacting any heritage attributes at 11665 Jane Street.   | ·  |   |
| CHL 5         | 2480 Kirby Road       | Listed on the City of<br>Vaughan's Heritage<br>Inventory                                   | Indirect impacts include property encroachment (extending approximately 13 m onto this property at the south end) and change in setting (see Figure 12 and Figure 13). While this part of the property features grassed lawn and field, the proposed ROW boundary will be located in close proximity to the historical house on the property, approximately 5-7 m from the front (south) elevation of the house. The widening of Kirby Road will result in an increase in vehicular and pedestrian traffic, with the addition of | here feasible, excavation and staging activitie<br>nintended impacts to this CHL. Avoidance mea<br>ecting temporary fencing, establishing buffer<br>avoid identified cultural heritage resources, e  | sures may include, but are not limited to:<br>zones, issuing instructions to construction crews   |
|               |                       |  | dedicated bike lanes and sidewalks, features that are not currently present within the existing ROW.  Indirect adverse impacts due to construction related vibration are possible as the structure sits within 50 m from the proposed work.  | Indirect impacts to 2480 Kirby Road (CHL 5) are anticipated as a result of propert and change in setting (see Figure 12 and Figure 13). A Cultural Heritage Impact A (CHIA) should be carried out by a qualified heritage consultant as early as possib Detailed Design, as per the City of Vaughan's Official Plan, Section 6.2.3.1 c (City 2019). This CHIA should follow the Terms of Reference outlined in the City of Vaughan's | 13). A Cultural Heritage Impact Assessment age consultant as early as possible during ficial Plan, Section 6.2.3.1 c (City of Vaughan             |
|               |                       |  | No direct impacts are anticipated as the proposed work will not be impacting any heritage attributes at 2480 Kirby Road.   | uidelines for Cultural Heritage Impact Assessm   | ents (City of Vaughan 2016b).   |
|               |                       |  |  | ensure this property is not adversely impacte<br>onitoring should be undertaken during detaile<br>sessment conclude that any structures or land<br>prations, prepare and implement a vibration r<br>hase of the project to lessen vibration impacts  | ed design. Should this advance monitoring<br>dscape features on this property will be subject t<br>nonitoring plan as part of the detailed design |
| CHL 6         | 11390 Keele<br>Street | Identified in a previous<br>study and by the Heritage<br>Planner at the City of<br>Vaughan | Indirect impacts include property encroachment (extending approximately 9 m onto this property at the north end) (see Figure 13 and Figure 14). This part of the property features agricultural field. The identified encroachment is expected to be limited and is not expected to adversely impact any heritage attributes associated with this CHL.   | here feasible, excavation and staging activitie<br>nintended impacts to this CHL. Avoidance mea<br>ecting temporary fencing, establishing buffer<br>avoid identified cultural heritage resources, e  | sures may include, but are not limited to:<br>zones, issuing instructions to construction crews   |
|               |                       |  | There are no structures on this property. Therefore, no indirect adverse impacts due to construction related vibration are anticipated.  | direct impacts to 11390 Keele Street (CHL 6) a acroachment (see Figure 13 and Figure 14). The sited and will impact a small portion of agriculture.  |   |
|               |                       |  | No direct impacts are anticipated as the proposed work will not be impacting any heritage attributes at 11390 Keele Street.  |  | his CHL. No further work is required to mitigate  |



| Feature<br>ID | Location/Name              | Heritage Recognition  | Type and Description of Potential/Anticipated Impact  | Mitigation Strategies   |
|---------------|----------------------------|---|---|---|
| CHL 7         | Barrie GO Rail<br>Corridor | Identified during field review  | Indirect adverse impacts due to construction related vibration are possible as the railway sits within 50 m from the proposed work.   | <ul> <li>Where feasible, excavation and staging activities should be planned and executed to avoid<br/>unintended impacts to this CHL. Avoidance measures may include, but are not limited to:<br/>erecting temporary fencing, establishing buffer zones, issuing instructions to construction crews</li> </ul>   |
|               |                            |   | Direct impacts are anticipated as the proposed work involves construction of a roadway underpass structure. This work is not expected to impact the heritage attributes of the rail corridor in a negative or   | to avoid identified cultural heritage resources, etc.   |
|               |                            |   | adverse way as the alignment and the historical connections with the nineteenth century Northern Railway Company will not be changing.  | <ul> <li>To ensure this property is not adversely impacted during construction, baseline vibration monitoring should be undertaken during detailed design. Should this advance monitoring assessment conclude that any structures or landscape features on this property will be subject to vibrations, prepare and implement a vibration monitoring plan as part of the detailed design phase of the project to lessen vibration impacts related to construction.</li> </ul> |
| CHL 8         | 11724 Dufferin<br>Street   | Identified as a Property of<br>Interest on the City of<br>Vaughan's Heritage<br>Inventory | Indirect impacts include property encroachment (extending approximately 14 m onto this property at the south end) (see Figure 16 and Figure 17). This part of the property features agricultural field and wooded land. The identified encroachment is expected to be limited and is not expected to adversely impact any heritage attributes associated with this CHL. | <ul> <li>Where feasible, excavation and staging activities should be planned and executed to avoid<br/>unintended impacts to this CHL. Avoidance measures may include, but are not limited to:<br/>erecting temporary fencing, establishing buffer zones, issuing instructions to construction crews<br/>to avoid identified cultural heritage resources, etc.</li> </ul>   |
|               |                            |   | The structures on this property are located approximately 520 m to the north of the proposed work. Therefore, no indirect adverse impacts due to construction related vibration are anticipated as the structures and potential attributes associated with this CHL are located at a distance greater than 50 m from the proposed work.                                 | <ul> <li>Indirect impacts to 11724 Dufferin Street (CHL 8) are anticipated as a result of property encroachment (see Figure 16 and Figure 17). The identified encroachment is expected to be limited and will impact a small portion of agricultural field. This encroachment is not expected to impact any heritage attributes associated with this CHL. No further work is required to mitigate these indirect impacts.</li> </ul>  |
|               |                            |   | No direct impacts are anticipated as the proposed work will not be impacting any heritage attributes at 11724 Dufferin Street.  | these man eet impacts.  |



Encroachment is expected to indirectly impact CHLs 1-6, and 8 as a result of land needed to widen Kirby Road from two lanes to four. This encroachment ranges from 7-15 m and will not negatively or adversely affect the heritage attributes of any of the identified CHLs.

Indirect impacts to CHL 5 as a result of the encroachment of the proposed ROW and change in setting are anticipated to adversely affect heritage attributes of the property, including the nineteenth century Gothic Revival style farmhouse. A Cultural Heritage Impact Assessment (CHIA) should be carried out for the property at 2480 Kirby Road by a qualified heritage consultant as early as possible during Detailed Design, as per the City of Vaughan's Official Plan, Section 6.2.3.1 c (City of Vaughan 2019). This CHIA should follow the Terms of Reference outlined in the City of Vaughan's Guidelines for Cultural Heritage Impact Assessments (City of Vaughan 2016b).

Indirect impacts to CHL 3, 5, and 7 may occur as a result of vibrations related to construction activity taking place within 50 m of the properties. To ensure the structures on the properties at 2939 Kirby Road (CHL 3), 2480 Kirby Road (CHL 5), and the Barrie GO Rail Corridor (CHL 7) are not adversely impacted during construction, baseline vibration monitoring should be undertaken during detailed design. Should this advance monitoring assessment conclude that the any structures will be subject to vibrations, a vibration monitoring plan should be prepared and implemented as part of the detailed design phase of the project to lessen vibration impacts related to construction.

Direct impacts to CHL 7 are anticipated as a result of the grade separation required for the construction of the roadway underpass structure. This work is not expected to impact the heritage attributes of the rail corridor in a negative or adverse way as the alignment and the historical connections with the nineteenth century Northern Railway Company will not be changing. No direct impacts to any other identified cultural heritage resources are anticipated as a result of the proposed road expansion.

### 6.0 SUMMARY OF COMMUNITY DATA COLLECTION

Consultation with the community will be undertaken through submission of this updated report for review and comment to municipal heritage staff, the MHSTCI, and any other relevant stakeholder with an interest in this project. Consultation will also be undertaken through Public Information Centres (PICs) conducted as part of the EA project. This section will be updated following receipt of any feedback.

### 7.0 RESULTS AND MITIGATION RECOMMENDATIONS

The results of background historic research and a review of secondary source material, including historical mapping, revealed a study area with a rural land use history dating back to the mid-nineteenth century. A review of federal, provincial, and municipal registers, inventories, and databases revealed that there are seven previously identified features of cultural heritage value within or adjacent to the Kirby Road Widening Class EA study area. An additional feature was identified during the fieldwork.



# 7.1 Key Findings

- Eight CHLs were identified within the study area. Two properties are listed on the City of Vaughan's *Heritage Inventory*, four properties are identified as a Property of Interest on the City of Vaughan's *Heritage Inventory*, one property was identified in a previous study (ASI 2015) and identified by the City's Heritage Planner, and one was identified during field review.
- Identified cultural heritage resources are historically, architecturally, and contextually associated with land use patterns in the City of Vaughan and more specifically representative of the early settlement along Kirby Road, a nineteenth century rural roadway.

#### **Results of Preliminary Impact Assessment**

- The preferred alternative is anticipated to result in indirect impacts to all eight cultural heritage landscapes, one of which will potentially be subject to adverse impacts to heritage attributes:
  - Seven cultural heritage landscapes are subject to encroachment: 11424 Jane Street (CHL 1), 11451 Jane Street (CHL 2), 2939 Kirby Road (CHL 3), 11655 Jane Street (CHL 4), 2480 Kirby Road (CHL 5), 11390 Keele Street (CHL 6), and 11724 Dufferin Street (CHL 8);
  - Three cultural heritage landscapes may be subject to construction related vibration impacts: 2939 Kirby Road (CHL 3), 2480 Kirby Road (CHL 5), and the Barrie GO Rail Corridor (CHL 7); and
  - One cultural heritage landscape may be subject to adverse impacts to heritage attributes as a result of encroachment and changes to the setting: 2480 Kirby Road (CHL 5).
- Direct impacts to one CHL is anticipated as a result of the preferred alternative: the Barrie GO
  Rail Corridor (CHL 7). These impacts are not expected to negatively or adversely affect the
  heritage attributes of this CHL.

#### 7.2 Recommendations

Based on the results of the assessment, the following recommendations have been developed:

- Construction activities and staging should be suitably planned and undertaken to avoid unintended negative impacts to identified BHRs and CHLs. Avoidance measures may include, but are not limited to: erecting temporary fencing, establishing buffer zones, issuing instructions to construction crews to avoid identified cultural heritage resources, etc.
- 2. Given that adverse indirect impacts are anticipated to the listed property at 2480 Kirby Road (CHL 5), a Cultural Heritage Impact Assessment (CHIA) should be carried out by a qualified heritage consultant as early as possible during Detailed Design, as per the City of Vaughan's Official Plan, Section 6.2.3.1 c (City of Vaughan 2019). This CHIA should follow the Terms of Reference outlined in the City of Vaughan's Guidelines for Cultural Heritage Impact Assessments (City of Vaughan 2016b).



- 3. To ensure the properties at: 2939 Kirby Road (CHL 3), 2480 Kirby Road (CHL 5), and the Barrie GO Rail Corridor (CHL 7) are not adversely impacted during construction, baseline vibration monitoring should be undertaken during detailed design. Should this vibration monitoring determine that the structures or landscape features within the CHLs will be subject to adverse impacts due to vibration, a vibration monitoring plan should be prepared and implemented as part of the detailed design phase of the project to lessen vibration impacts related to construction.
- 4. Should future work require an expansion of the study area, then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on known and potential heritage resources.
- 5. This existing conditions and preliminary impact assessment report should be submitted to the City of Vaughan and the Ministry of Heritage, Sport, Tourism and Culture Industries for review and comment, and any other local heritage stakeholders that may have an interest in this project. The final report should be submitted to the City of Vaughan for their records.



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