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Appendix B: CULTURAL HERITAGE RESOURCE ASSESSMENT REPORT

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

**CLARKSON ROAD AND LAKESHORE ROAD INTERSECTION IMPROVEMENTS
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT**

**CITY OF MISSISSAUGA
REGION OF PEEL, ONTARIO**

FINAL REPORT

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EXECUTIVE SUMMARY

ASI was contracted by CIMA+, on behalf of City of Mississauga, to conduct a Cultural Heritage Report as part of the Clarkson Road and Lakeshore Road Intersection Improvements Municipal Class Environmental Assessment. The Clarkson Road and Lakeshore Road Intersection Improvements Municipal Class Environmental Assessment involves intersection improvements, proposed for Lakeshore Road West and Clarkson Road North/Clarkson Road South in the City of Mississauga. The Clarkson-Lakeshore Intersection Improvements study area consists of a section of Lakeshore Road West inclusive of its intersections with Clarkson Road North and Clarkson Road South, bound to the north by the Lakeshore West GO Transit Line and to the south generally by the rear lot lines of Sunningdale Bend.

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.

The results of background historical research and a review of secondary source material, including historical mapping, indicate a study area with a rural land use history dating back to the early nineteenth century that transitioned into a commercial and residential land use in the second half of the twentieth century. A review of federal, provincial, and municipal registers, inventories, and databases revealed that there are five previously identified properties of cultural heritage value within or adjacent to the Clarkson-Lakeshore Intersection Improvements study area. Two additional properties were identified during the fieldwork.

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

1. Construction activities and staging should be suitably planned and undertaken to avoid unintended negative impacts to identified BHRs. Avoidance measures may include, but are not limited to: erecting temporary fencing, establishing buffer zones, issuing instructions to construction crews to avoid identified BHRs, etc.
2. As the property at 1764 Lakeshore Road West (BHR 2) is listed by the City of Mississauga and there are direct impacts anticipated due to construction, a resource-specific HIA may be required as per the City of Mississauga Official Plan clause 7.4.1.10. Given that no structures



or apparent landscape features of significant CHVI within the property are anticipated to be impacted, it is recommended that the City of Mississauga consider waiving the requirement for a HIA in this case if suitable mitigation measures including post construction rehabilitation can be implemented, with sympathetic plantings as applicable. Suitable mitigation measures may also include establishing no-go zones with fencing, issuing instructions to construction crews to avoid the BHR.

3. Indirect impacts to 1764 Lakeshore Road West (BHR 2), 972 Clarkson Road South (BHR 4) and 1741-1745 Lakeshore Road West (BHR 7) are anticipated as a result of their location adjacent to the proposed alignment. To ensure these properties are not adversely impacted during construction, a baseline vibration assessment should be undertaken during detailed design. Should this advance monitoring assessment conclude that the structure(s) on these properties 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.
4. The re-alignment of Clarkson Road, as proposed in the preferred alignment, would result in the elimination of the jog in the roadway at Lakeshore Road West. As the jog has been in place since the first half of the nineteenth century and has influenced the spatial arrangement and settlement of the surrounding area, documentation of the intersection is recommended to occur prior to alteration to record the historical transportation network for archival purposes. Documentation would involve additional research focused specifically on the development of the intersection, photography taken of the existing conditions of the jog to record its historical alignment and keyed to a location map, and deposit to local repositories. This form of recording for documentation can be implemented by identifying it as a commitment in the Project File Report and should be completed prior to construction activities.
5. Should future work require an expansion of the study area and/or changes are made to the preferred alignment then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential heritage resources.
6. The report should be submitted to the City of Mississauga and the Ministry of Tourism, Culture and Sport (MTCS) 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 Mississauga for their records.



PROJECT PERSONNEL

<i>Senior Project Manager:</i>	Annie Veilleux, MA, CAHP (2020) Senior Cultural Heritage Specialist Manager - Cultural Heritage Division
	Rebecca Sciarra, MA, CAHP (2022) Partner Director - Cultural Heritage Division
<i>Project Coordinator:</i>	Katrina Thach, BA (Hons.) Associate Archaeologist Project Coordinator - Environmental Assessment Division
<i>Project Manager:</i>	Kristina Martens, BA, Dipl. Heritage Conservation (2020) Cultural Heritage Specialist Assistant Manager - Cultural Heritage Division
	Meredith Stewart, MA, MSc, CAHP Intern (2022) Cultural Heritage Specialist Project Manager - Cultural Heritage Division
<i>Field Review:</i>	Meredith Stewart
<i>Report Production:</i>	Kirstyn Allam, BA (Hons.), Dip. Advanced Museum Studies Cultural Heritage Technician Technical Writer and Researcher - Cultural Heritage Division
	Meredith Stewart
<i>Graphics Production:</i>	Andrew Clish, BES Senior Archaeologist - Planning Assessment Division
	Jonas Fernandez, MSc Manager, Geomatics - Operations Division
<i>Report Reviewer(s):</i>	Meredith Stewart
	Rebecca Sciarra



QUALIFIED PERSONS INVOLVED IN THE PROJECT

Annie Veilleux, MA, CAHP

Senior Cultural Heritage Specialist, Manager - Cultural Heritage Division

The Senior Project Manager for this Cultural Heritage Report for the Existing Conditions portion in 2020 was Annie Veilleux (MA, CAHP), who is a Senior Cultural Heritage Specialist and Manager of the Cultural Heritage Division. 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. Annie is academically trained in the fields of cultural landscape theory, history, 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 identification and evaluation of cultural heritage resources, both above and below ground. Annie has managed and conducted numerous built heritage and cultural heritage landscape assessments, heritage recordings and evaluations, and heritage impact assessments as required for Environmental Assessments and Planning projects throughout the Province of Ontario. Annie has extensive experience leading and conducting research for large-scale heritage planning studies, heritage interpretation programs, and projects requiring comprehensive public and Indigenous engagement programs. She is fully bilingual in English and French and has served as a French language liaison on behalf of Archaeological Services Inc. Annie is a member of the Ontario Archaeological Society, the National Trust for Canada, ICOMOS Canada, and IAP2 Canada. She is also a professional member in good standing of the Canadian Association of Heritage Professionals.

Rebecca Sciarra, MA, CAHP

Partner, Director - Cultural Heritage Division

The Senior Project Manager for this Cultural Heritage Report for the Preliminary Impact Assessment update in 2022 is Rebecca Sciarra (MA, Canadian Studies). 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. Rebecca is a Partner and Director of the Cultural Heritage Division. She is responsible for the highest-level management of a busy and diverse team of heritage professionals who apply their expertise across a broad range of public and private sector clientele. Rebecca also provides oversight and quality assurance for all deliverables, maintaining responsive and prompt client communications, and providing heritage clients with a direct connection to corporate ownership. In addition to her role as Director of the Cultural Heritage Division, Rebecca is academically trained in heritage conservation principles and practices. She has led a range of high profile and complex heritage planning and conservation management projects for public and private sector clients. Her experience in both the private and public sectors has involved providing expertise around the strategic development of policies and programs to conserve Ontario's cultural heritage resources as part of environmental and land-use planning processes. She has worked with municipal, provincial, federal and private sector clients to lead heritage evaluations and assessment as part of area planning studies, including secondary plans, heritage conservation district studies, and master plans. Rebecca is a member of ICOMOS Canada and the Canadian Association of Heritage Professionals.



Kristina Martens, BA, Dipl. Heritage Conservation

Cultural Heritage Specialist, Assistant Manager - Cultural Heritage Division

The Project Manager for this Cultural Heritage Report for the Existing Conditions portion in 2020 was Kristina Martens (BA, Diploma Heritage Conservation), who is a Cultural Heritage Specialist and Assistant Manager within the Cultural Heritage Division. She was responsible for the day-to-day management activities, including scoping of research activities and site surveys and drafting of study findings and recommendations. She has ten years of experience in the field of cultural heritage planning and management as a conservator and heritage consultant with Vitreous Glassworks and Taylor Hazell Architects prior to joining ASI in 2018. Kristina brings a cultural landscape focus to the heritage planning process and draws on holistic methods for understanding the interrelationships between natural, built and intangible heritage. Kristina has extensive experience conducting field surveys and heritage analysis, including the comprehensive documentation and evaluation of cultural heritage resources in urban and rural settings. She brings together her experience in research, project management, documentation, built form and spatial analysis, architectural history, and built heritage conservation with the practical application of Ontario Regulation 9/06 and 10/06 of the Ontario Heritage Act and writing statements of cultural heritage value. Kristina is a graduate of the prestigious Willowbank School.

Meredith Stewart, MA, MSc, CAHP Intern

Cultural Heritage Specialist, Project Manager - Cultural Heritage Division

The Project Manager for this Cultural Heritage Report for the Preliminary Impact Assessment update in 2022 is Meredith Stewart (MA, Art History, MSc, Historic Preservation), who is a Cultural Heritage Specialist and Project Manager within the Cultural Heritage Division. She was responsible for conducting the field review, preparing and contributing research, and technical reporting. Meredith's work as a cultural heritage professional has focused on historical research, large-area studies, and survey work. Meredith holds a MA in Art History from Carleton University, where she focused on architectural history and the built environment, and graduated with a MSc in Historic Preservation from the School of the Art Institute of Chicago. Meredith utilizes her knowledge of architectural history and building materials in the identification and evaluation of heritage buildings and structures. Meredith is an intern member of CAHP.

Kirstyn Allam, BA (Hon), Advanced Dipl. in Applied Museum Studies

Cultural Heritage Technician, Technical Writer and Researcher - Cultural Heritage Division

The Cultural Heritage Technician for the Preliminary Impact Assessment update in 2022 is Kirstyn Allam (BA (Hon), Advanced Diploma in Applied Museum Studies), who is a Cultural Heritage Technician and Technical Writer and Researcher within the Cultural Heritage Division. She was responsible for preparing and contributing to research and technical reporting. Kirstyn Allam's education and experience in cultural heritage, historical research, archaeology, and collections management has provided her with a deep knowledge and strong understanding of the issues facing the cultural heritage industry and best practices in the field. Kirstyn has experience in heritage conservation principles and practices in cultural resource management, including three years' experience as a member of the Heritage Whitby Advisory Committee. Kirstyn also has experience being involved with Stage 1-4 archaeological excavations in 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 (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 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 by-law, or other land use planning mechanisms” (Government of Ontario 2020:42).
Cultural Heritage 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 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 <i>Ontario Heritage Act</i> , or protected by a heritage agreement, covenant or easement, protected by the <i>Heritage Railway Stations Protection Act</i> or the <i>Heritage Lighthouse Protection Act</i> , 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 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 Influence	Area within a 50 metre buffer of construction-related activities in which there is potential to affect an identified cultural heritage resource. A 50 metre 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 Ministry of Tourism, Culture and Sport (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).

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1.0 INTRODUCTION

1.1 Report Purpose

ASI was contracted by CIMA+, on behalf of City of Mississauga, to conduct a Cultural Heritage Report as part of the Clarkson Road and Lakeshore Road Intersection Improvements Municipal Class Environmental Assessment. 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.

1.2 Project Overview

The Clarkson Road and Lakeshore Road Intersection Improvements Municipal Class Environmental Assessment involves intersection improvements, proposed for Lakeshore Road West and Clarkson Road North/Clarkson Road South in the City of Mississauga. The Clarkson-Lakeshore Intersection Improvements study area consists of a section of Lakeshore Road West inclusive of its intersections with Clarkson Road North and Clarkson Road South, bound to the north by the Lakeshore West GO Transit Line and to the south generally by the rear lot lines of Sunningdale Bend.

1.3 Description of Study Area

This Cultural Heritage Report will focus on the project study area (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 Mississauga.



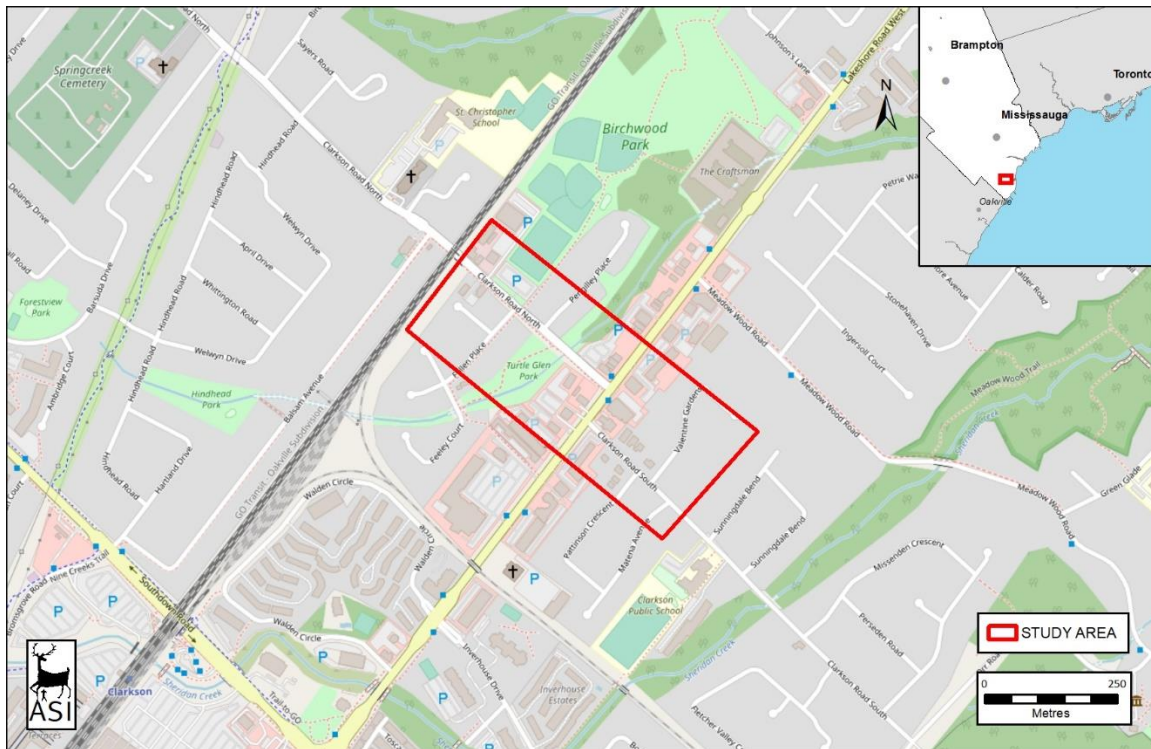


Figure 1: Location of the study area

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 Tourism, Culture and Sport (hereafter “The Ministry”) 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 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 Mississauga, in the Region of Peel. Policies relating to cultural heritage resources were reviewed from the following sources:

- City of Mississauga Official Plan (2020a)
- Peel Region Official Plan (Office Consolidation 2018)
- Clarkson Village Study (City of Mississauga 2010)

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 Ministry 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 9 November, 2020, include:

- The Heritage Register for Mississauga (City of Mississauga 2020b);
- 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 (U.N.E.S.C.O. World Heritage Centre n.d.).

2.4.2 Review of Previous Heritage Reporting

Additional cultural heritage studies undertaken within parts of the study area were also reviewed. These include:

- GO Rail Network Electrification TPAP, Final Cultural Heritage Screening Report (A.S.I. 2017)

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:

- Paula Wubbenhorst, Heritage Planner, City of Mississauga (email communication 9 November 2020). Email correspondence confirmed that there are no additional previously identified heritage resources or concerns regarding the study area.
- The Ministry (email communication 9 and 13 November 2020). Email correspondence confirmed that there are no additional previously identified heritage resources or concerns regarding the study area.
- The Ontario Heritage Trust (email communications 9 and 25 November 2020). A response indicated that there are no conservation easements or Trust-owned properties within or adjacent to the study area.

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 metre of features on the property. A 50 metre 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 Ministry (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 Ministry) and the Ministry of the Environment entitled *Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments* (1992). While this document has largely been superseded in some respects by more current policies and legislation, the guidance provided that continues to be of relevance to this specific project includes the following definitions:

- 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 Iroquois plain physiographic region of southern Ontario (Chapman and Putnam 1984). The Iroquois Plain physiographic region of Southern Ontario is a lowland region bordering Lake Ontario. This region is characteristically flat, and formed by lacustrine deposits laid down by the inundation of Lake Iroquois, a body of water that existed during the late Pleistocene. This region extends from the Trent River, around the western part of Lake Ontario, to the Niagara River, spanning a distance of 300 km (Chapman and Putnam 1984).

Between Hamilton and Toronto, along the north edge of the Iroquois plain physiographic region the ancient Lake Iroquois shoreline creates a distinct bluff of varying rocks and shales commonly known as the escarpment. The land between the ancient shoreline and the modern shoreline, which was the former bed of Lake Iroquois, is comprised of sandy soil in the Clarkson area as well as neighbouring communities from Aldershot to Humber Bay. These sandy soils were preferred over the adjoining areas which have clay and combined with being protected from frost because of the proximity to Lake Ontario and having good road and railway facilities, this two mile width of land became important for horticulture. The season was shorter in this area than on the south side of Lake Ontario which distinguished the crops grown which included apples, pears, bush fruits, strawberries and vegetables (Chapman and Putnam 1984).

After almost 100 years of farming, the physiography of this area supported its impressive and quick change to residential, commercial and industrial uses, replacing the more than 15,000 acres of farms that existed in 1941 so that by the 1980s the whole of the Iroquois plain between Hamilton and Toronto was built up. The gravels were used for construction, the sand plains are excellent housing sites and the flat lake plain with bedrock is good for industrial uses which were established south of the study area. This can be seen in the area of Clarkson which was once highly agricultural and is now residential, commercial, and industrial in use (Chapman and Putnam 1984).



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).¹ During the 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.

¹ 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.



The Mississauga lands between Burlington Bay to the west and Etobicoke Creek to the east formed part of what was called the “Mississauga Tract” at the turn of the nineteenth century. Although the British had secured the right to travel and trade within this area, it long remained as a physical barrier between the East and West Ridings of York County. In 1805, for example, it was noted that “the tract between the Tobicoake and the head of the lake is frequented only by wandering tribes of Missassagues.” Much of Toronto Township was “a wilderness,” in which “some Mississauga Indians are stationary” (Boulton 1805:48).

The “Toronto Purchase,” also known as Treaty #13, occurred during the administration of Upper Canadian “President” Alexander Grant in August 1805, which includes the land where the study area is located. It was negotiated to resolve confusion over a 1787 “provisional surrender” of lands on the north shore of Lake Ontario from Ashbridges Bay to Etobicoke Creek. The Toronto Purchase was followed by Treaty #14 or the Head of the Lake Purchase, concluded in September 1806 (Mississauga of the New Credit First Nation 2001; Mississaugas of the Credit First Nation 2017).² At that time, the Mississaugas surrendered 70,784 acres west of the Toronto Purchase, extending inland from the lakeshore for a distance of six miles, in exchange for £1000 in goods. The terms of the treaty were to maintain the Mississaugas’ “sole right of the fisheries” and the “flats or low grounds,” to grow corn on Twelve and Sixteen Mile Creeks, and the Etobicoke and Credit Rivers (Johnson 1990:249). In the latter instance, the reserve was specified as “one mile on each side of the river.” The Credit River itself was described as a “fine, clear stream with a strong bottom,” which contained an abundance of salmon, bass, bullheads, pike, and redhorse. The fishing rights of the Mississaugas were not always respected by the local settler community. Complaints were made by Chief Kineubenae regarding the abuses upon the salmon fisheries by European settlers as early as 1806 (Weeks 1995; Robb et al. 2003).

3.3 Historical Euro-Canadian Township Survey and Settlement

The first Europeans to arrive in the area were transient merchants and traders from France and England, who followed Indigenous pathways and set up trading posts at strategic locations along the well-traveled river routes. All of these occupations occurred at sites that afforded both natural landfalls and convenient access, by means of the various waterways and overland trails, into the hinterlands. Early transportation routes followed existing Indigenous trails that typically followed the highlands adjacent to various creeks and rivers (ASI 2006). Early European settlements occupied similar locations as Indigenous settlements as they were generally accessible by trail or water routes and would have been in locations with good soil and suitable topography to ensure adequate drainage.

Historically, the study area is located in the Former Township of Toronto, County of Peel in part of Lots 28-29, Concession 1 and 2 South of Dundas Street.

In 1788, the County of Peel was part of the extensive district known as the “Nassau District”. Later called the “Home District”, its administrative centre was located in Newark, now called Niagara. After the province of Quebec was divided into Upper and Lower Canada in 1792, the Province was separated into 19 counties, and by 1852, the entire institution of districts was abolished and the late Home Districts were represented by the Counties of York, Ontario and Peel. Shortly after, the County of Ontario

² Note that disagreements between the Mississaugas and the Crown concerning the Toronto Purchase and subsequent treaties were settled in 2010.



became a separate county, and the question of separation became popular in Peel. A vote for independence was taken in 1866, and in 1867 the village of Brampton was chosen as the capital of the new county (Armstrong 1985).

3.3.1 Township of Toronto and Transportation in the Nineteenth Century

The Township of Toronto was originally surveyed in 1806 by Mr. Wilmot, Deputy Surveyor. The first settler in this Township, and also the County of Peel, was Colonel Thomas Ingersoll. The whole population of the Township in 1808 consisted of seven families, scattered along Dundas Street. The number of inhabitants gradually increased until war broke out in 1812, which gave considerable check to its progress. When the war was over, the Township's growth revived and the rear part of the Township was surveyed and called the "New Survey". The greater part of the New Survey was granted to a colony of Irish settlers from New York City, who suffered persecution during the war.

The first transportation routes to be established followed early Indigenous trails, both along the lakeshore and adjacent to various creeks and rivers. Local roads were initially cleared by the grantees of adjacent land as part of their settlement duties although the many rivers and creeks posed a challenge to the gridded road system, and nineteenth-century maps detail the many jags and detours necessary to avoid bad crossing points.

Along the lakeshore, a pre-existing trail was widened and improved as a public road by 1798. Lakeshore Road opened through Etobicoke in 1804, was planked in 1820, and by 1826, a regular stagecoach service ran between York (present-day Toronto) and Niagara. The Toronto Road Company purchased the Lakeshore Road in 1850, turning it into a toll road.

The Hamilton and Toronto Railway was formed in 1852, and in 1855, completed its lake shore route across the south end of Lot 11. In 1871, the railway was amalgamated with the Great Western Railway, which in turn, was amalgamated in 1882, with the Grand Trunk Railway. The Grand Trunk Railway was amalgamated in 1923, with Canadian National Railway (Andreae 1997).

3.3.2 Village of Clarkson

Historically, the Village of Clarkson comprised the southwestern corner of Toronto Township. Settlement first began in this rural village in 1807 after the first survey. The first settlers were from Pennsylvania, New York, and New Brunswick, and among them were the Bradley, Clarkson, Gable, Greeniaus, Hammond, Hendershott, Jarvis, Marlatt, Merigold, Monger, Oliphant, Shook and Thompson families. The area was first referred to as "Merigold's Point", and later became known as "Clarkson's Corners" after early settler Warren Clarkson, who also operated the post office and general store. By 1850, the road bordering Warren Clarkson's property was known as Clarkson Road and a train station for the Great Western Railway was built in 1855 on part of Warren Clarkson's property (Heritage Mississauga 2009).

In the first half of the nineteenth century, Clarkson Road was a simple stagecoach and wagon trail, one of many north/south routes that cut across Lakeshore Road between Hamilton and York (Toronto). A



few farmhouses lined the road, and residents grew fruits and vegetables and raised various farm animals. Increased traffic along the road meant that Toronto Township council approved its official recognition in 1850, ensuring ongoing maintenance (Hicks 2003). One local historian notes that the reason that Clarkson Road does not align north and south of Lakeshore Road was because Warren Clarkson, after whom the road is named, rebuffed the idea of moving his store (Hicks 2003), which was located north of Lakeshore Road next to the railway (Heritage Mississauga 2019). North of Clarkson's store, the road curves back into alignment with the original concession/lot road allowance.

There were never more than a handful of houses and shops on Clarkson Road throughout the nineteenth century (Riendeau 1985). Nevertheless, a few key changes occurred after 1850. Most notably, the completion of the Hamilton and Toronto Railway (later purchased by the Great Western Railway) in 1855 spawned development in the immediate surrounding area, which was sometimes called Clarkson's Corners. The 1877 Illustrated Historical Atlas shows further evidence of change along Clarkson Road. A new church (Carman Methodist Episcopal Church) was built on the southeast corner of Lakeshore Road and Clarkson Road. Further, it shows more farmhouses and orchards in the area. In the first half of the twentieth century, Clarkson Road was marked by both continuity and change. The cluster of buildings around the railway and at the intersection with Lakeshore Road persisted. Plus, orchards, strawberry fields, and forested areas remained prominent along the road. Yet, many changes also came to the fore. New houses were continually being built and a new school was erected (south of the study area) in 1916. The arrival of electricity to Clarkson in 1913 also helped to spur growth (Hicks 2003). While all of Clarkson Road was still unmetalled in the early 1920s, by 1940 its northern stretch was paved and its southern stretch was graveled.

Major urbanization began in the 1950s with new houses on either side of Clarkson Road, both north and south of Lakeshore Road. New subdivisions emerged close by, with streets now feeding onto Clarkson Road. The sprawl on both sides of Clarkson Road continued unabated until the end of the century (Hicks 2003).





Figure 2: Clarkson Road, looking south to railway crossing, 1910 (City of Mississauga)



Figure 3: Clarkson Road North, undated (City of Mississauga)

3.4 Review of Historical Mapping

The 1859 *Map of the County of Peel* (Tremaine 1859), and the 1877 *Illustrated Historical Atlas of the County of Peel* (Walker and Miles 1877), were examined to determine the presence of historical features within the study area during the nineteenth century (Figure 4 and Figure 5). While the study area is oriented in a northwest-southeast direction in alignment with the roadways contained within, for ease of description the roadways and study areas will be described in a north-south orientation.

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.

Historically, the study area is located on Lot 28 and 29, Concession 2 and 3 South of Dundas Street in the Township of Toronto, County of Peel. Details of historical property owners and historical features in the study area are listed in Table 1.

Table 1: Nineteenth-century property owner(s) and historical features(s)

Con #	Lot #	1859 Map of Peel County		1877 Illustrated Historical Atlas of Peel County	
		Property Owner(s)	Historical Feature(s)	Property Owner(s)	Historical Feature(s)
2	28	Warren Clarkson	Waterway, Roadways	H.S. Clarkson	Waterway, Roadways, Farmstead
2	29	Warren Clarkson	Waterway, Roadways	Warren Clarkson	Waterways, Roadways, Farmstead with Orchards
3	28	Dan' [Daniel] Marrigold	Roadways	Mrs. M Marrigold	Roadway, Church
3	29	Isaac Oliphant	Roadways	Joseph Orr	Roadway

The study area was located within an area of agricultural land use in the nineteenth century, based on historical mapping. In 1859 the area shows an emphasis on transportation infrastructure, but little other development in the area. A roadway (present-day Lakeshore Road West) that runs in an east-west direction intersects the study area. A north-south roadway (present-day Clarkson Road North and Clarkson Road South) also cuts through the study area, jogging at present-day Lakeshore Road West. The Hamilton Toronto Railway line runs in an east-west direction along the north border of the study area. A store is located on the south side of present-day Lakeshore Road West, just outside of the east boundary of the study area. This is the only built structure indicated in the immediate vicinity, suggesting the area was largely agricultural or early in its settlement. A waterway is shown running through the north portion of the study area, eventually connecting to Lake Ontario. Mapping from 1877 indicates steady agricultural growth in the area, as several properties are depicted with farmsteads, one containing an orchard. A church is depicted on the southeast corner of present-day Lakeshore Road West and Clarkson Road South, within the parcel owned at that time by Mrs. M Marrigold. Another structure, likely a schoolhouse, is shown just south of the study area boundary. The presence of these structures, in addition to the establishment of farmsteads, indicates the growth and development of the community in that area. North of the railway (now under operation by Great Western Railway) that bounds the north side of the study area is an area labelled "Clarkson P.O." further pointing to the establishment of the area, and indicates the area was a destination along the rail line.

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 1909, 1933, 1954, 1974 and 1994 (Figure 6 to Figure 9). 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.

Topographical mapping from 1909 indicated that the farmstead on the west side of Clarkson Road North persists. The church and school noted in nineteenth-century mapping are also still extant in 1909. On the south side of Lakeshore Road West, a stone structure is indicated on the west side of Clarkson Road South, and a wooden structure is indicated to the east of the church. An additional wooden structure is indicated to have been constructed by this time within the study area, located south of a creek which feeds into Sheridan Creek. Two bridges are shown in this mapping, with one carrying Clarkson Road



North over Turtle Creek, and the other carrying Clarkson Road South over the creek that feeds into Sheridan Creek located south of the study area. A telegraph or telephone line is shown on Lakeshore Road West east of Clarkson Road North and along Clarkson Road both north and south of Lakeshore Road West. The area has many deciduous trees drawn, with most related to the waterways running through the area. North of the study area “Clarkson” is labelled along with indication of a railway station, post office, and blacksmith shop.

Topographic mapping from 1933 shows steady but continued growth in the area. A hotel or tavern is indicated on the south side of Lakeshore Road West, on the east side of the study area. All corners of the intersection of Lakeshore Road West with Clarkson Road, both north and south, have buildings constructed. The church and school remain. An additional structure is indicated within the study area, on the east side of Clarkson Road North on the south side of the railway. Lakeshore Road West and Clarkson Road West are both indicated to be paved, however, Lakeshore Road West is wider than 18 feet (approximately 5.5 m) whereas Clarkson Road is under 18 feet. Outside of the study area new roads have been introduced, which are lined with residences and a grist mill is constructed on the north side of Lakeshore Road West, just east of the study area. The post office persists, however, the blacksmith is no longer extant.

The 1954 aerial photograph of the area show a cluster of buildings on the south side of the railway on the east side of Clarkson Road North. Lakeshore Road West is labelled “Middle Road.” Dense trees continue to persist around the creeks that run through the study area. A pattern of orchards is evident, particularly to the west side of Clarkson Road North and on the properties south of (present-day) Lakeshore Road West. There may be an increased number of buildings along Lakeshore Road West. Outside of the study area roads that were indicated in 1933 have been extended and there are an increased number of residences along these roadways. Agricultural land use, often with extensive orchards, is shown to continue in this area. Additionally, a spur line of the railway has extended south from Clarkson Road North to the west of the study area.

Towards the end of the twentieth century mapping indicates a transition from primarily agricultural use towards residential and commercial land use. The area continues to be labelled “Clarkson” in topographic mapping from 1974. This mapping also notes “Clarkson Sta” the railway station located north of the study area. An orchard is indicated on the east side of Clarkson Road North, in the area of present-day Birchwood Park. Lakeshore Road West features many buildings on the north side of the roadway, and a motel is indicated in the west part of the study area. South of Lakeshore Road West, Pattinson Crescent, Matena Avenue and Valentine Gardens are extant and surrounded by a shaded area indicating density. Outside of the study area a school and sports track are indicated and appear to be larger than previously indicated in earlier mapping, suggesting expansion or new construction on the site.

Mapping from 1994 indicates that the area saw minimal change over the two decades between. The east side of Clarkson Road East remains mostly the same, with the exception of the addition of present-day Pengilley Place, and the west side of Clarkson Road West remains primarily an orchard or wooded area with a few structures. The creek crossing Clarkson Road North is labelled “Turtle Creek” and “Sheridan Creek” is labelled where it runs under Clarkson Road South, south of the study area. The area of density on the south side of Lakeshore Road West has extended to the northside of the roadway



indicating the road is fully built out by this time. Outside of the study area shows increasing areas of density and urban growth.

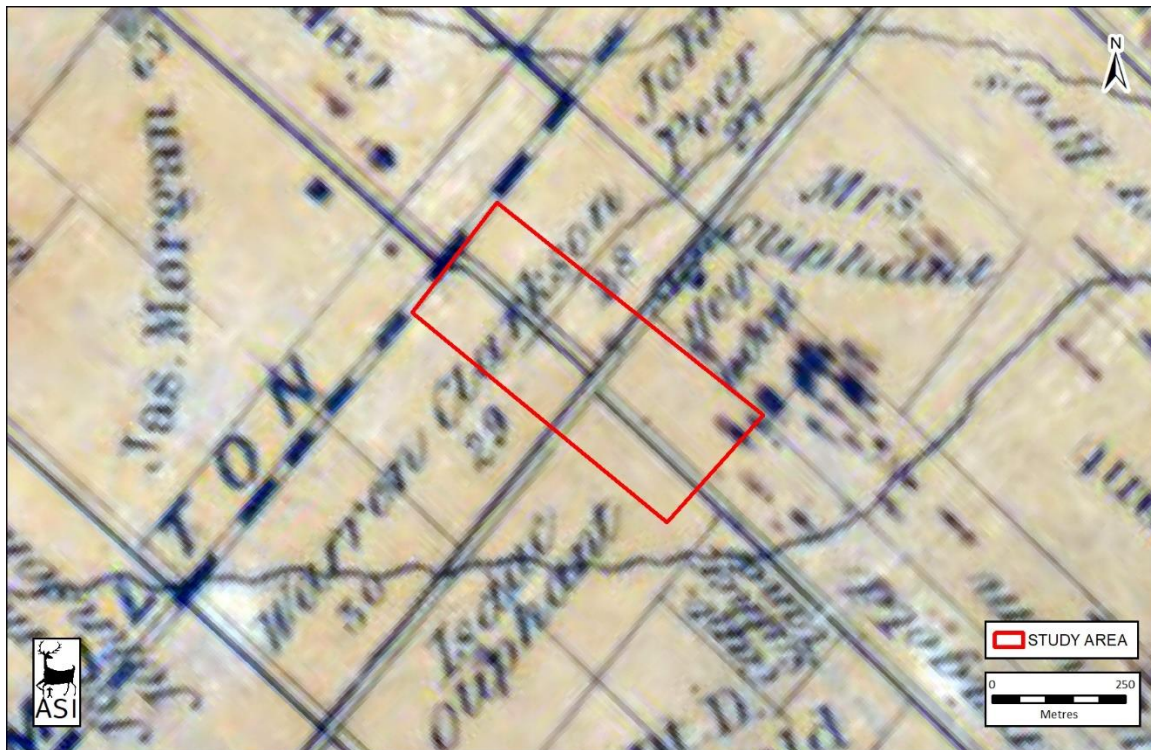


Figure 4: The study area overlaid on the 1859 Tremaine's Map of the County of Peel

Base Map: (Tremaine 1859)

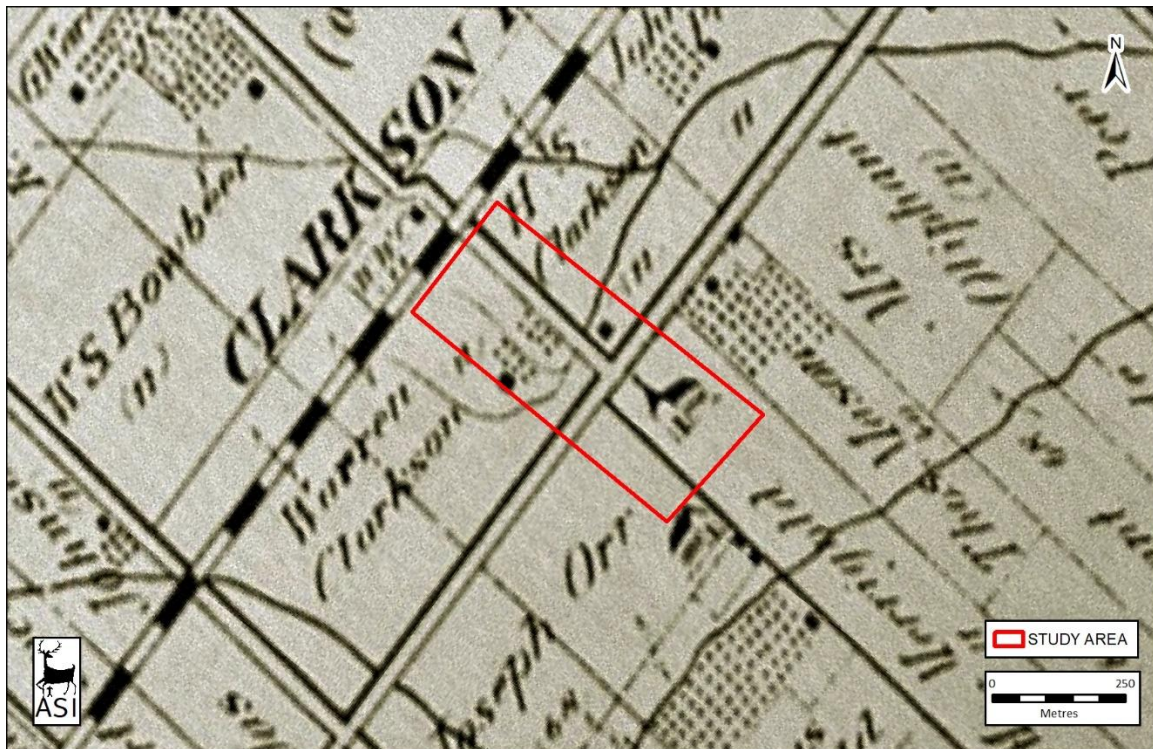


Figure 5: The study area overlaid on the 1877 Historical Atlas of the County of Peel

Base Map: (Walker and Miles 1877)



Figure 6: The study area overlaid on the 1909 topographic map of Brampton

Base Map: (Department of Militia and Defence 1909)



Figure 7: The study area overlaid on the 1933 topographic map of Brampton
Base Map: (Department of Militia and Defence 1933)

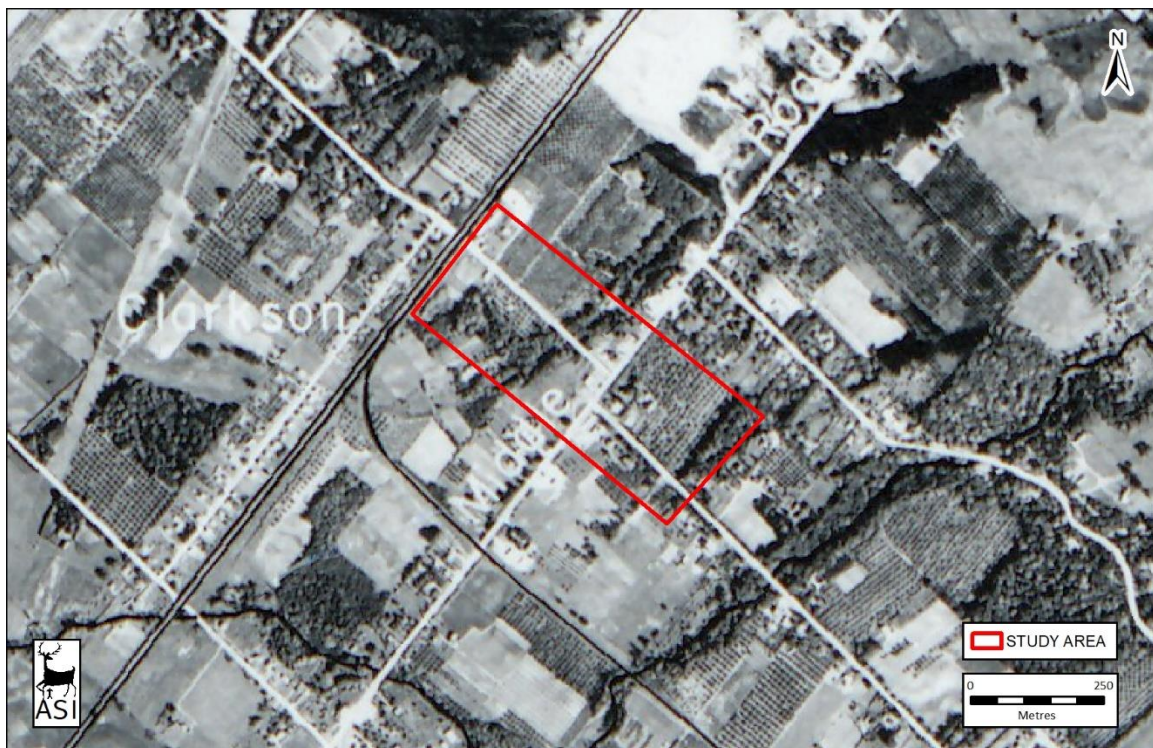


Figure 8: The study area overlaid on the 1954 aerial photograph of Mississauga
Base Map: Hunting Survey Corporation Limited 1954

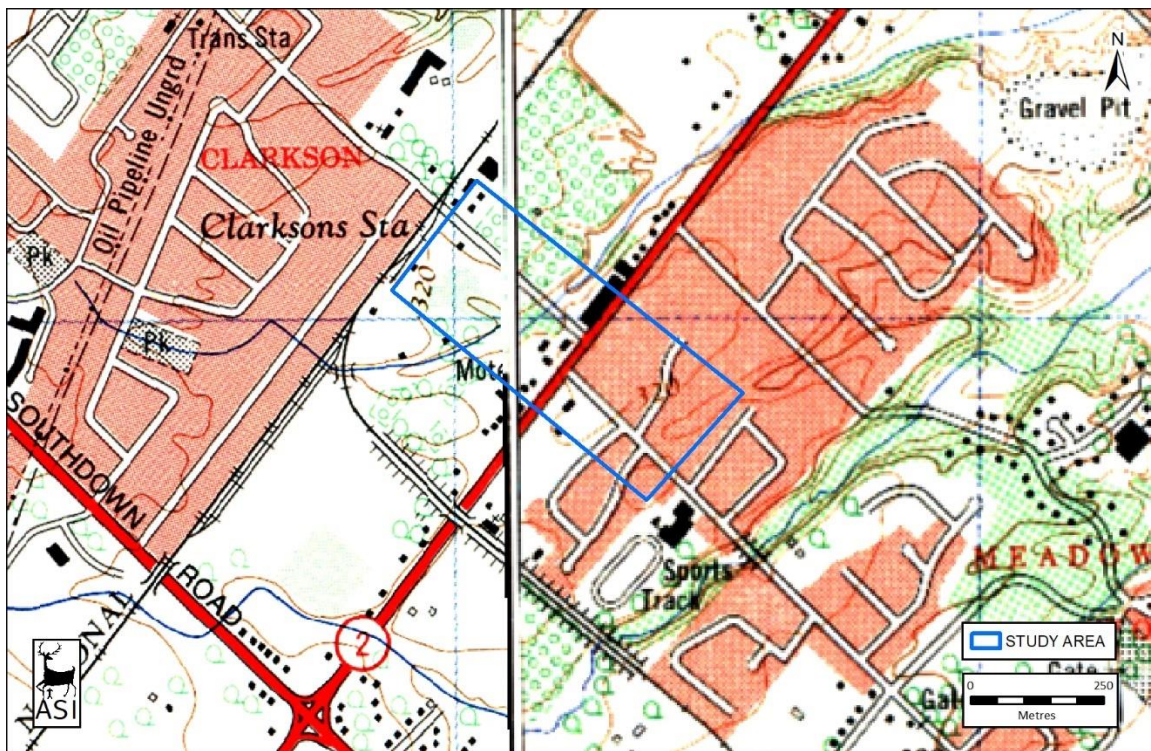


Figure 9: The study area overlaid on the 1974 topographic map of Port Credit

Base Map: (Department of Energy, Mines and Resources 1974)



Figure 10: The study area overlaid on the 1994 NTS map of Brampton

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

4.0 EXISTING CONDITIONS

4.1 Description of Field Review

A field review of the study area was undertaken by Meredith Stewart of ASI, on 17 November 2020 to document the existing conditions of the study area from existing public rights-of-way. The existing conditions of the study area are described below and captured in Plate 1 to Plate 6. As was done in Section 3.4 of this report, for ease of description the roadways and study areas will be described in a north-south orientation despite the orientation of the study area and roadways contained within following a northwest-southeast alignment.

Clarkson Road North is a north-south running roadway with one lane of traffic in each direction. Within the study area, paved pedestrian sidewalks run alongside the west side and portions of the east side of the roadway, separated by a grassed boulevard. Sections of paved roadside parking is also cut into these grassed boulevards as the roadway approaches Lakeshore Road West (Plate 1). Mature trees line Clarkson Road North. The Lakeshore West Go Transit Line crosses Clarkson Road North, just outside of the north boundary of the study area. Two residential roadways – Fellen Place and Pengilley Place – connect with Clarkson Road North (Plate 2). Fellen Place provides access to a network of subdivision roadways – Sabina Court, Gorled Court, and Feeley Court. This residential area is characterized by single family homes set back from gently curving roadways, concrete curbs, mature trees, and occasionally paved pedestrian sidewalks separated from the roadway by a grassed boulevard. Turtle Glen Park, a forested stretch of land with a recreational trail, separates the residential subdivision on the west side of Clarkson Road North from the paved parking on the rear of the lots that front Lakeshore Road West.

Lakeshore Road West is an east-west running roadway that carries two lanes of traffic in both directions with an additional centre turning lane. This major throughfare is defined by the commercial land use on both sides of the roadway (Plate 3). Extended paved pedestrian sidewalks run along both sides of the roadway. The north side of Lakeshore Road West, east of Clarkson Road North, contains a streetwall of low-rise commercial and mixed-use buildings, with paved parking lots in the rear, accessed from Clarkson Road North. The other side of the roadway in this section features small-scale plazas with paved parking lots separating the roadway from the commercial buildings. West of Clarkson Road the commercial buildings are separated as single structures and there is increased paved parking and driveways along this portion.

Clarkson Road South is a north-south running roadway that extends south from Lakeshore Road West, west of the terminus of Clarkson Road North (Plate 4). Clarkson Road South carries one lane of traffic in each direction and features paved pedestrian sidewalks on both sides of the roadway, occasionally separated by a grassed boulevard, with no concrete curbs (Plate 5). Mature trees line the street. The area south of Lakeshore Road West around Clarkson Road South is residential, with a public school located just beyond the south border of the study area. Subdivision roadways – Pattinson Crescent, Valentine Gardens, and Matena Avenue – connect to Clarkson Road South (Plate 6). These residential roads are gently curving, lined with mature trees and feature detached single family homes set back on their lots. Paved sidewalks separated from the roadways by a concrete curb and grassed boulevard are common.





Plate 1: Clarkson Road North, looking north towards the Lakeshore West GO Transit Line.



Plate 2: Pengilly Place, looking east, representing typical residential roadways north of Lakeshore Road West.



Plate 3: Lakeshore Road West looking northeast towards the south terminus of Clarkson Road North and the commercial streetwall (right).



Plate 4: Intersection of Lakeshore Road West and Clarkson Road South, looking south from Lakeshore Road West.



Plate 5: Clarkson Road South, looking north towards Lakeshore Road West.





Plate 6: Valentine Gardens, looking east, showing representative residential roadway south of Lakeshore Road West.

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, five known BHRs and two potential BHRs were identified within the study area. These include: five properties listed on the Heritage Register for Mississauga (2020b), one of these resources is additionally included on the Ontario Heritage Trust's Places of Worship Inventory, and two properties identified during the field review. A detailed inventory of known and potential BHRs within the study area is presented in Table 2. See Figure 11 to Figure 13 for mapping showing the location of identified BHRs.

Table 2: Inventory of Known and Potential Built Heritage Resources within the Study Area



Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
BHR 1	Residential	1084 Feeley Court (also known as 1056 Clarkson Road North) Clarkson-Barnett House	<p>Known BHR - Listed on the Heritage Register for Mississauga</p> <p>Formerly Designated under Part IV the Ontario Heritage Act (By-law 970-87³) then repealed (By-law 603-98⁴)</p>	<p>Property Description</p> <ul style="list-style-type: none">- 1877 mapping indicates the property was owned by Warren Clarkson and contained a farmstead with orchards (Figure 5).- The property features a one-and-a-half storey gable roof residence likely constructed between 1822-25, with series of wings in interconnected additions included an earlier (1819) structure. A stone out-building is located on the perimeter of the property.- Located north of Turtle Creek at the southeast corner of Feeley Court and Fellen Place, two twentieth-century roadways. <p>Known Cultural Heritage Value or Interest and Associated Heritage Attributes</p> <p>The property has design and historical value as an early and rare nineteenth century farmhouse and stone out-building in the area and for its association with Warren Clarkson, one of the earliest settlers in Toronto Township and after whom the Village of Clarkson was named. See By-law 970-87 (later repealed) for a statement of the reasons for designation.</p>	<div><p>Plate 7: Looking south towards the residence from Fellen Place (ASI 2020).</p></div> <div><p>Plate 8: The stone out-building located on the property (ASI 2020).</p></div>



³ Text of the by-law can be accessed here: <https://www.heritagetrust.on.ca/en/oha/details/file?id=8521>



⁴ Text of the by-law can be accessed here: <https://www.heritagetrust.on.ca/en/oha/details/file?id=8522>



Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
BHR 2	Former church	1764 Lakeshore Road West Former Carman Methodist Church	Known BHR - Listed on the Heritage Register for Mississauga Included on the Ontario Heritage Trust’s Places of Worship Inventory	<p>Property Description</p> <ul style="list-style-type: none">- 1877 mapping indicates the church was one of the first and few non-agricultural structures located in the area by the late nineteenth century (Figure 5).- The property features a nineteenth century church (turned commercial) structure with rear additions.- Located prominently at the southeast corner of Clarkson Road South and Lakeshore Road West, two nineteenth-century roadways. <p>Potential Cultural Heritage Value or Interest and Associated Heritage Attributes⁵</p> <p>This property has potential to retain historical, contextual and design value.</p>	 <p>Plate 9: Looking south towards the former church from Lakeshore Road West (ASI 2020).</p>  <p>Plate 10: Looking southeast towards the former church from the intersection of Lakeshore Road West and Clarkson Road South (ASI 2020).</p>



⁵ An evaluation of this property against criteria outlined in O. Reg 9/06 is required to identify any formal cultural heritage value or interest or attributes associated with this potential cultural heritage resource.

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
BHR 3	Residential	924 Clarkson Road South	Known BHR - Listed on the Heritage Register for Mississauga	<p>Property Description</p> <ul style="list-style-type: none">- Nineteenth-century mapping indicates the land where the property is located was owned by Isaac Oliphant and Joseph Orr (Oliphant in 1859, and Orr in 1877) (Figure 4 and Figure 5).- Topographic mapping from 1909 indicates that a wooden structure was located where this brick residence currently stands (Figure 6).- The property features a two-and-a-half storey red brick Edwardian Classical style residence and several small contemporary sheds.- Located on the west side of Clarkson Road South, a nineteenth century roadway, south of Matena Avenue, a twentieth-century roadway. <p>Potential Cultural Heritage Value or Interest and Associated Heritage Attributes</p> <p>This property has potential to retain historical, contextual, and design value.</p>	<div><p>Plate 11: Looking west towards the residence at 924 Clarkson Road South (ASI 2020).</p></div> <div><p>Plate 12: Looking northwest towards the residence from Clarkson Road South (ASI 2020).</p></div>

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
BHR 4	Residential	972 Clarkson Road South Pattinson House	Known BHR - Listed on the Heritage Register for Mississauga	<p>Property Description</p> <ul style="list-style-type: none">- Nineteenth-century mapping indicates the land where the property is located was owned by Isaac Oliphant and Joseph Orr (Oliphant in 1859, and Orr in 1877) (Figure 4 and Figure 5).- The residence was built in 1915 by Gordon Pattinson, who had purchased the property from the Orr family (Heritage Mississauga 2019), and it is likely the structure shown on topographic mapping from 1933 is the residence located on the property (Figure 7).- The property features a two-and-a-half storey red brick residence with cross gable roof, decorative barge board and wrap porch set back from the roadway with mature trees lining the gravel driveway.- Gordon Pattinson actively farmed his property yielding crops of vegetables, apples and strawberries. He also contributed to the Clarkson community as a school trustee and serving as Hydro Commissioner (Heritage Mississauga 2019).- Located on the west side of Clarkson Road South, a nineteenth-century roadway. <p>Potential Cultural Heritage Value or Interest and Associated Heritage Attributes</p> <p>This property has potential to retain historical, contextual, and design value.</p>	<div><p>Plate 13: Looking west towards 972 Clarkson Road South (ASI 2020).</p></div> <div><p>Plate 14: Looking southwest towards the residence from Clarkson Road South (ASI 2020).</p></div>

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
BHR 5	Residential	1715 Sunningdale Bend	Known BHR - Listed on the Heritage Register for Mississauga	<p>Property Description</p> <ul style="list-style-type: none">- Nineteenth-century mapping indicates the land where the property is located was owned by Dan’ [Daniel] Marrigold and Mrs. M. Marrigold (in 1859 and 1877 respectively) (Figure 4 and Figure 5).- The residence is visible on aerial photography from 1954 (Figure 8) and fronts Sunningdale Bend, which was laid between 1933 and 1954.- The property features a one-and-a-half storey Craftsman Bungalow style residence with a semi-circular driveway surrounded by mature trees.- Located on the north side of Sunningdale Bend, the rear of the property is adjacent to the study area. <p>Potential Cultural Heritage Value or Interest and Associated Heritage Attributes</p> <p>This property has potential to retain historical, contextual, and design value.</p>	 <p>Plate 15: Looking north towards 1715 Sunningdale Bend (ASI 2020).</p>  <p>Plate 16: Looking northeast towards the residence from Sunningdale Bend (ASI 2020).</p>

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
BHR 6	Residential	1117 Clarkson Road North	Potential BHR - Identified during review of historical mapping and field review	<p>Property Description</p> <ul style="list-style-type: none">- Nineteenth-century mapping indicates the land where this property is located was owned by Warren Clarkson in 1859 and H.S. Clarkson in 1877 (Figure 4 and Figure 5).- A structure is indicated in the location of the residence on topographical mapping from 1933 (Figure 7), and continues to be represented on mapping in subsequent years.- The property features a two-storey early twentieth-century residence set close to the roadway with a hipped roof and parged with contemporary stucco and a rear one-storey addition, surrounded by paved surface parking. A one storey addition (1115 Clarkson Road North) is attached to the south elevation of the residence.- Located on the east side of Clarkson Road north, a twentieth-century roadway, and south of the Lakeshore West GO Line, which maintains a rail corridor that was introduced to the area in the nineteenth century. <p>Potential Cultural Heritage Value or Interest and Associated Heritage Attributes</p> <p>The property has the potential to retain historical and contextual value.</p>	 <p>Plate 17: Looking southeast towards the residence at 1117 Clarkson Road North (ASI 2020).</p>  <p>Plate 18: Looking northeast towards the residence from Clarkson Road North (ASI 2020).</p>

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
BHR 7	Commercial	1741-1745 Lakeshore Road West	Potential BHR - Identified during review of historical mapping and field review	<p>Property Description</p> <ul style="list-style-type: none">- Nineteenth-century mapping indicates the land where this property is located was owned by Warren Clarkson in 1859 and H.S. Clarkson in 1877 (Figure 4 and Figure 5).- A structure is indicated in the location of the commercial bank on topographical mapping from 1933 (Figure 7), however its footprint does not confirm if it is the extant building on the corner.- The property features a two-storey early to mid twentieth-century red brick commercial building with a bank located prominently on the northeast corner of Lakeshore Road West and Clarkson Road North. Large storefront openings are located on the south elevation fronting Lakeshore Road West and on the beveled corner marked with concrete quoining that faces the intersection. The rear of the property is paved parking accessed from Clarkson Road North.- Located on the northeast corner of Lakeshore Road West and Clarkson Road North. <p>Potential Cultural Heritage Value or Interest and Associated Heritage Attributes</p> <p>The property has the potential to retain historical, contextual, and design value.</p>	 <p>Plate 19: Looking northeast towards 1741-1745 Lakeshore Road West (ASI 2020).</p>  <p>Plate 20: Looking north towards the commercail building from the south side of lakehore Road West (ASI 2020).</p>

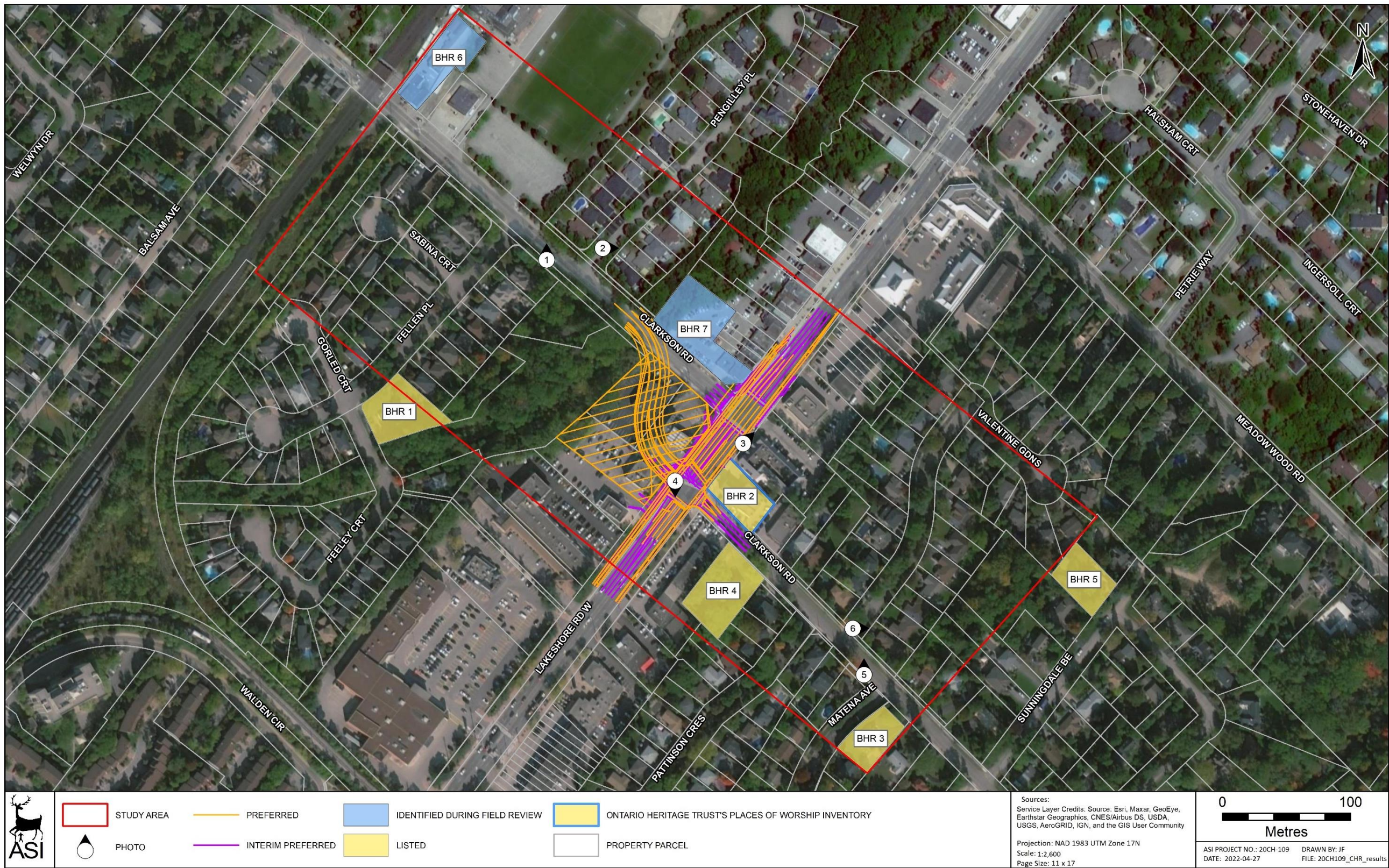


Figure 11: Location of Identified Built Heritage Resources in the Study Area and the Preferred Alignments



5.0 PRELIMINARY IMPACT ASSESSMENT

5.1 Description of Proposed Undertaking

The proposed undertaking for the Clarkson-Lakeshore Intersection Improvements study area consists of intersection improvements, proposed for Lakeshore Road West and Clarkson Road North/Clarkson Road South in the City of Mississauga. Two preferred alignments are presented in this report. The ultimate preferred alignment involves the realignment of Clarkson Road at Lakeshore Road West. The preferred alignment represents the long-term solution for the connection of the north and south portions of Clarkson Road and is a complex and involved undertaking. As a result, an interim preferred alignment has also been developed to be implemented at the current intersection of Clarkson Road and Lakeshore West to address immediate transportation needs until the preferred alignment can be fully implemented. These alignments are presented in Figure 11 to Figure 13.

5.2 Analysis of Potential Impacts of the Interim Preferred Alignment

The interim preferred alignment (Figure 12) consists of widening Lakeshore Road West for an additional turning lane for the intersection to address the immediate transportation needs. Other works associated with the interim preferred alignment will include the installation of cycling track along both sides of Lakeshore Road West, relocating the existing crosswalk, relocating bus shelters, the removal of the existing median to allow for the new turning lane and new median, and the realignment of some driveways along Lakeshore Road West.

Table 3 outlines the potential impacts of the interim preferred alignment on all identified BHRs within the study area.

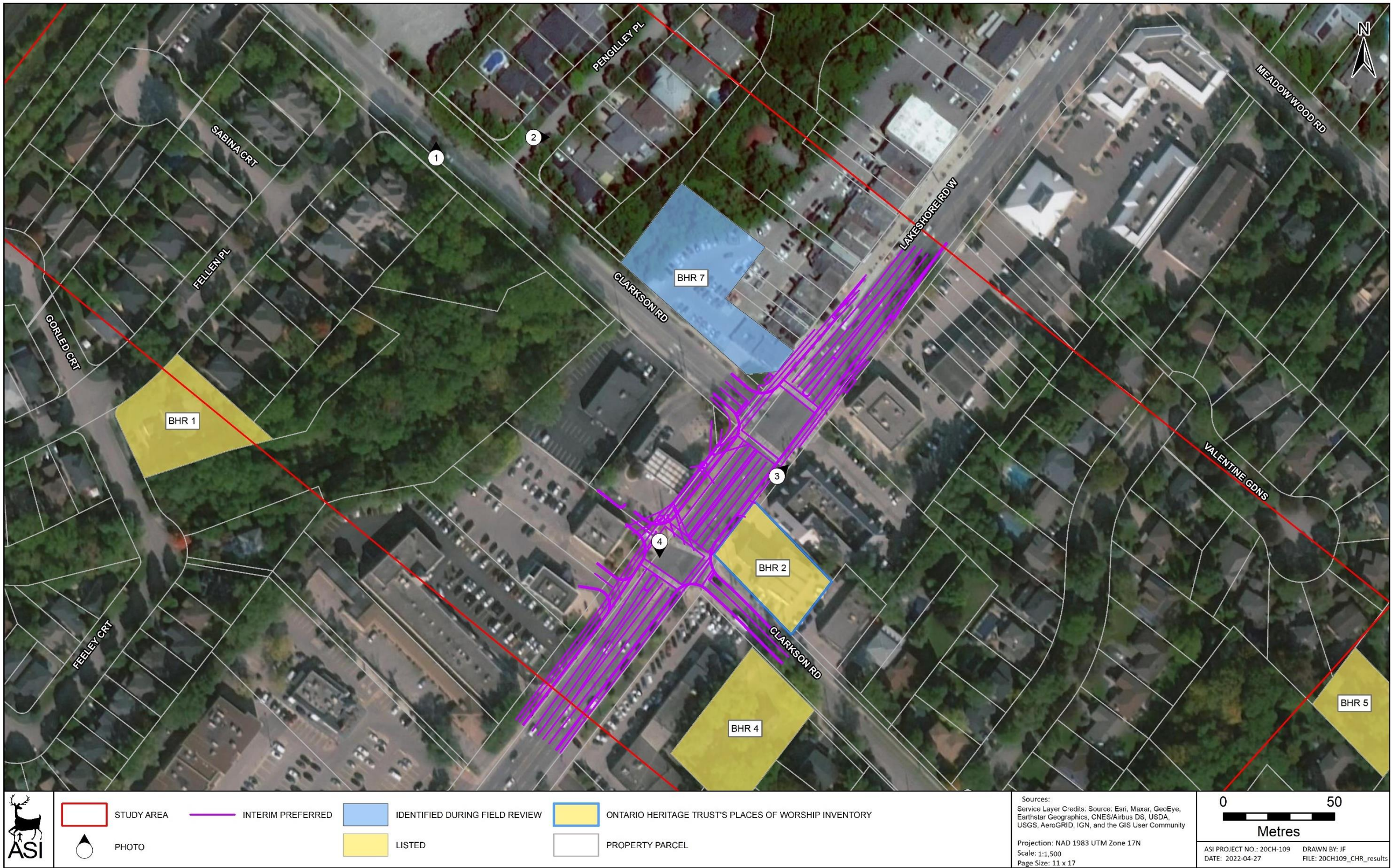


Figure 12: Location of Identified Built Heritage Resources in the Study Area with the Interim Preferred Alignment



Table 3: Preliminary Impact Assessment of the Interim Preferred Alignment and Recommended Mitigation Measures

Feature ID	Location/Name	Heritage Status and Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
BHR 1	1084 Feeley Court (also known as 1056 Clarkson Road North) Clarkson-Barnett House	Known BHR - Listed on the Heritage Register for Mississauga Formerly Designated under Part IV the Ontario Heritage Act	It is understood that the limits of the proposed alignment are not adjacent to this BHR. No direct or indirect adverse impacts to this property are anticipated. As the proposed work is located more than 50 metres from the structure, no vibration-related impacts are anticipated.	No further work required.
BHR 2	1764 Lakeshore Road West Former Carman Methodist Church	Known BHR - Listed on the Heritage Register for Mississauga Included on the Ontario Heritage Trust's Places of Worship Inventory	Direct impacts to BHR 2 are anticipated to include the slight re-alignment of the driveway to the parking lot. However, construction activities are not anticipated to have direct adverse impacts to the known cultural heritage value or interest of the BHR or identified heritage attributes. Indirect adverse impacts due to construction related vibration are possible as the structure sits within 50 metres from the proposed work. These impacts are expected to be limited and temporary. No other indirect impacts are anticipated.	Where feasible, the proposed alignment should be designed in a manner that avoids all impacts to BHR 2. As the property at 1764 Lakeshore Road West is listed by the City of Mississauga and there are direct impacts anticipated due to construction, a resource-specific HIA may be required as per the City of Mississauga Official Plan clause 7.4.1.10. Given that no structures or apparent landscape features of significant CHVI within the property are anticipated to be impacted, it is recommended that the City of Mississauga consider waiving the requirement for a HIA in this case if suitable mitigation measures including post construction rehabilitation can be implemented, with sympathetic plantings as applicable. To address the potential for indirect impacts due to construction related vibration, undertake a baseline vibration assessment during detail design to determine potential vibration impacts.

Feature ID	Location/Name	Heritage Status and Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
BHR 3	924 Clarkson Road South	Known BHR - Listed on the Heritage Register for Mississauga	<p>It is understood that the limits of the proposed alignment are not adjacent to this BHR. No direct or indirect adverse impacts to this property are anticipated.</p> <p>As the proposed work is located more than 50 metres from the structure, no vibration-related impacts are anticipated.</p>	No further work required.
BHR 4	972 Clarkson Road South Pattinson House	Known BHR - Listed on the Heritage Register for Mississauga	<p>It is understood that the limits of the proposed alignment will be confined to the existing right-of-way. No direct adverse impacts to this property are anticipated.</p> <p>Indirect adverse impacts due to construction related vibration are possible as the structure sits within 50 metres from the proposed work.</p>	<p>Where feasible, the proposed alignment should be designed in a manner that avoids all impacts to BHR 4.</p> <p>To address the potential for indirect impacts due to construction related vibration, undertake a baseline vibration assessment during detail design to determine potential vibration impacts.</p>
BHR 5	1715 Sunningdale Bend	Known BHR - Listed on the Heritage Register for Mississauga	<p>It is understood that the limits of the proposed alignment are not adjacent to this BHR. No direct or indirect adverse impacts to this property are anticipated.</p> <p>As the proposed work is located more than 50 metres from the structure, no vibration-related impacts are anticipated.</p>	No further work required.

Feature ID	Location/Name	Heritage Status and Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
BHR 6	1117 Clarkson Road North	Potential BHR - Identified during review of historical mapping and field review	<p>It is understood that the limits of the proposed alignment are not adjacent to this BHR. No direct or indirect adverse impacts to this property are anticipated.</p> <p>As the proposed work is located more than 50 metres from the structure, no vibration-related impacts are anticipated.</p>	No further work required.
BHR 7	1741-1745 Lakeshore Road West	Potential BHR - Identified during review of historical mapping and field review	<p>It is understood that the limits of the proposed alignment will be confined to the existing right-of-way. No direct adverse impacts to this property are anticipated.</p> <p>Indirect adverse impacts due to construction related vibration are possible as the structure sits within 50 metres from the proposed work.</p>	<p>Where feasible, the proposed alignment should be designed in a manner that avoids all impacts to BHR 7.</p> <p>To address the potential for indirect impacts due to construction related vibration, undertake a baseline vibration assessment during detail design to determine potential vibration impacts.</p>

5.3 Summary of Potential Impacts of the Interim Preferred Alignment

No direct adverse impacts to the identified BHRs are anticipated as a result of the proposed interim preferred alignment.

Where feasible, the proposed alignment should be designed to avoid direct and indirect adverse impacts to these identified BHRs. To ensure the structures on these properties are not adversely impacted, construction and staging for the Clarkson-Lakeshore Intersection Improvements should be suitably planned to avoid all impacts to these properties. Suitable mitigation measures could include the establishment of no-go zones with fencing and issuing instructions to construction crews to avoid the BHRs.

Direct impacts to BHR 2 (1764 Lakeshore Road West) are anticipated to include the slight realignment of the driveway to the parking lot. However, construction activities are not anticipated to have direct adverse impacts to the potential cultural heritage value or interest of the BHR or identified potential heritage attributes. As the property at 1764 Lakeshore Road West is listed by the City of Mississauga and there are direct impacts anticipated due to construction, a resource-specific HIA may be required as per the City of Mississauga Official Plan clause 7.4.1.10. Given that no structures or apparent landscape features of significant CHVI within the property are anticipated to be impacted, it is recommended that the City of Mississauga consider waiving the requirement for a HIA in this case if suitable mitigation measures including post construction rehabilitation can be implemented, with sympathetic plantings as applicable. Suitable mitigation measures may also include establishing no-go zones with fencing, issuing instructions to construction crews to avoid the BHR.

Vibrations during construction activities may impact BHR 2, BHR 4, and BHR 7 as a result of their location in close proximity to the proposed interim alignment. To ensure the structures on the properties at 1764 Lakeshore Road West (BHR 2), 972 Clarkson Road South (BHR 4) and 1741-1745 Lakeshore Road West (BHR 7) are not adversely impacted during construction, a baseline vibration assessment should be undertaken during detailed design. Should this advance 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.

As the limits of the proposed interim alignment are not adjacent to BHR 1 (1084 Feeley Court - also known as 1056 Clarkson Road North), BHR 3 (924 Clarkson Road South), BHR 5 (1715 Sunningdale Bend), and BHR 6 (1117 Clarkson Road North) and the proposed alignment will be more than 50 metres from the structures within those aforementioned BHRs, no further cultural heritage reporting is recommended.

5.4 Potential Impacts of the Preferred Alignment

The preferred alignment (Figure 13) consists of realigning Clarkson Road North, which will help plan for the City's longer-term vision of the community. The proposed realignment of Clarkson Road North to the west would align the road with Clarkson Road South and create a four-way intersection. The realignment of Clarkson Road North would require the demolition of three non-BHRs on the properties at 1765 Lakeshore Road West, 1785 Lakeshore Road West, and 1034 Clarkson Road North. The preferred alignment will also involve the installation of cycling track along both sides of Lakeshore Road



West, relocating the existing crosswalk, relocating bus shelters, and the removal of the existing median to allow for the new turning lane and new median.

No direct adverse impacts to the identified BHRs are anticipated as a result of the proposed preferred alignment. However, the preferred alignment will result in the elimination of the jog in Clarkson Road at Lakeshore Road West, which has been in place since at least the mid-nineteenth century. While one local historian claims that the influence of prominent early settler Warren Clarkson was the cause for the jog in the road (Hicks 2003), it may simply be the result of irregular lot divisions and surveys that occurred south of Lakeshore Road, lands which featured a watercourse and likely a high water table. Regardless of the specific cause, historical mapping from the nineteenth century confirms that this alignment in the roadway has been in place from its earliest days as a transportation route. Although not identified as a cultural heritage resource, the jog in Clarkson Road at Lakeshore does evidence early land use patterns that shaped the spatial arrangement of buildings and circulation patterns at this intersection and in the historical Clarkson community; buildings were constructed along both roadways during the nineteenth century, several of which have been identified as BHRs as part of this report. Prior to the re-alignment of Clarkson Road, which would see the removal of the jog, the existing intersection should be documented as a record of the historical transportation network.

Vibrations during construction activities may impact BHR 2, BHR 4, and BHR 7 as a result of their location in close proximity to the proposed alignment. To ensure the structures on the properties at 1764 Lakeshore Road West (BHR 2), 972 Clarkson Road South (BHR 4) and 1741-1745 Lakeshore Road West (BHR 7) are not adversely impacted during construction, a baseline vibration assessment should be undertaken during detailed design. Should this advance 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.

As the limits of the proposed preferred alignment are not adjacent to BHR 1 (1084 Feeley Court (also known as 1056 Clarkson Road North)), BHR 3 (924 Clarkson Road South), BHR 5 (1715 Sunningdale Bend), BHR 6 (1117 Clarkson Road North) and the proposed alignment will be more than 50 metres from the structures within those aforementioned BHRs, no further cultural heritage reporting is recommended.





Figure 13: Location of Identified Built Heritage Resources in the Study Area with the Preferred Alignment



6.0 RESULTS AND MITIGATION RECOMMENDATIONS

The results of background historical research and a review of secondary source material, including historical mapping, indicate a study area with a rural land use history dating back to the early nineteenth century that transitioned into a commercial and residential land use in the second half of the twentieth century. A review of federal, provincial, and municipal registers, inventories, and databases revealed that there are five previously identified properties of cultural heritage value within or adjacent to the Clarkson-Lakeshore Intersection Improvements study area. Two additional properties were identified during the fieldwork.

6.1 Key Findings

- A total of seven BHRs were identified within the study area.
- Of the seven identified BHRs, five properties are listed on the Heritage Register for Mississauga (2020b) (BHR 1 – BHR 5), one of these resources is additionally included on the Ontario Heritage Trust's Places of Worship Inventory (BHR 2), and two properties were identified during the field review as potential BHRs (BHR 6 – BHR 7).
- Identified known BHRs are historically, architecturally, and contextually associated with land use patterns in the Village of Clarkson and more specifically representative of the early settlement of the intersections of Clarkson Road North and Clarkson Road South with Lakeshore Road West, as well as twentieth century development in the area. The two potential BHRs identified during field review may also contribute to the understanding of the Village of Clarkson if confirmed through further research and heritage evaluation.

6.2 Results of Preliminary Impact Assessment for the Interim Preferred Alignment

- No direct adverse impacts to the identified BHRs are anticipated as a result of the proposed interim preferred alignment.
- The interim preferred alignment is anticipated to result in direct impacts to 1764 Lakeshore Road West (BHR 2). While the BHR will be directly impacted, construction activities are not anticipated to have direct adverse impacts to the known cultural heritage value or interest of the BHR or identified known heritage attributes.
- Potential vibration impacts as a result of the proposed interim alignment are anticipated to result in indirect impacts to two known BHRs and one potential BHR: 1764 Lakeshore Road West (BHR 2), 972 Clarkson Road South (BHR 4), and 1741-1745 Lakeshore Road West (BHR 7).
- No direct or indirect impacts are anticipated to three known BHRs (BHR 1, BHR 3, and BHR 5) and one potential BHRs (BHR 6).



- In advance of the alteration of the intersection of Clarkson Road and Lakeshore Road, as proposed through the preferred alignment, documentation of the intersection should occur to record the historical transportation network.

6.3 Recommendations

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

1. Construction activities and staging should be suitably planned and undertaken to avoid unintended negative impacts to identified BHRs. Avoidance measures may include, but are not limited to: erecting temporary fencing, establishing buffer zones, issuing instructions to construction crews to avoid identified BHRs, etc.
2. As the property at 1764 Lakeshore Road West (BHR 2) is listed by the City of Mississauga and there are direct impacts anticipated due to construction, a resource-specific HIA may be required as per the City of Mississauga Official Plan clause 7.4.1.10. Given that no structures or apparent landscape features of significant CHVI within the property are anticipated to be impacted, it is recommended that the City of Mississauga consider waiving the requirement for a HIA in this case if suitable mitigation measures including post construction rehabilitation can be implemented, with sympathetic plantings as applicable. Suitable mitigation measures may also include establishing no-go zones with fencing, issuing instructions to construction crews to avoid the BHR.
3. Indirect impacts to 1764 Lakeshore Road West (BHR 2), 972 Clarkson Road South (BHR 4) and 1741-1745 Lakeshore Road West (BHR 7) are anticipated as a result of their location adjacent to the proposed alignment. To ensure these properties are not adversely impacted during construction, a baseline vibration assessment should be undertaken during detailed design. Should this advance monitoring assessment conclude that the structure(s) on these properties 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.
4. The re-alignment of Clarkson Road, as proposed in the preferred alignment, would result in the elimination of the jog in the roadway at Lakeshore Road West. As the jog has been in place since the first half of the nineteenth century and has influenced the spatial arrangement and settlement of the surrounding area, documentation of the intersection is recommended to occur prior to alteration to record the historical transportation network for archival purposes. Documentation would involve additional research focused specifically on the development of the intersection, photography taken of the existing conditions of the jog to record its historical alignment and keyed to a location map, and deposit to local repositories. This form of recording for documentation can be implemented by identifying it as a commitment in the Project File Report and should be completed prior to construction activities.
5. Should future work require an expansion of the study area and/or changes are made to the preferred alignment then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential heritage resources.
6. The report should be submitted to the City of Mississauga and the Ministry of Tourism, Culture and Sport (MTCS) 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 Mississauga for their records.



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