



ORIGINAL REPORT:

**STAGE 2 ARCHAEOLOGICAL ASSESSMENT
MISSISSAUGA ROAD WIDENING (REGIONAL ROAD 1) BETWEEN FINANCIAL DRIVE
AND QUEEN STREET WEST, PART OF LOTS 4, 5, AND 6, CONCESSIONS 4 AND 5 (WHS),
IN THE FORMER TOWNSHIP OF CHINGUACOUSY, COUNTY OF PEEL, NOW IN THE CITY
OF BRAMPTON, REGIONAL MUNICIPALITY OF PEEL, ONTARIO**

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THE ONTARIO MINISTRY OF TOURISM, CULTURE AND SPORT

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Associated P.I.F. # P141-0234-2015 (Stage 1 [Austin])**

**Amec Foster Wheeler Project # TP115085.1A.3001
01 March, 2018**

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- Region of Peel – 1 Copy & 1 Electronic Copy;
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EXECUTIVE SUMMARY

Amec Foster Wheeler Environment & Infrastructure (“Amec Foster Wheeler”) was retained by the Region of Peel (the “CLIENT”) to conduct a Stage 2 archaeological assessment for the proposed widening of Mississauga Road (Regional Road 1) between Financial Drive and Queen Street West (Regional Road 6) in the City of Brampton, Ontario (Appendix A: Figures 1, 2, and 3). The study area was historically described as Part of Lots 4, 5, and 6, Concessions 4 and 5 (WHS), in the former Township of Chinguacousy, County of Peel, now in the City of Brampton, Regional Municipality of Peel, Ontario. This archaeological assessment was triggered by a Schedule “C” Municipal Class Environmental Assessment. The approximate size of the study corridor corresponds to 8.44 hectares (20.85 acres). The assessment included a 45 m total Right-of-Way (ROW) from the centre line, corresponding to approximately 22.5 m on either side of the road in areas previously assessed to have retained archaeological potential 0.11 ha or 1.44% (AmecFW 2016, P141-0234-2015 [Austin]).

The assessment was carried out under an Ontario Professional Licence to Conduct Archaeological Fieldwork (P141) held by Dr. Shaun Austin, Associate Archaeologist at Amec Foster Wheeler. The project information form (PIF) was acknowledged by the Ministry of Tourism, Culture and Sport (MTCS) on 1 November 2017 with the approval of PIF number P141-0281-2017. Permission to enter for the purposes of the Stage 2 archaeological assessment was confirmed for 4 December 2017 via 24 hour notice and comprised all required archaeological fieldwork activities, including the recovery and removal of artifacts.

The Stage 2 test pit survey was conducted prior to any land development on 4 December, 2017 under the field direction of Ms. Cara Howell (R180), with field assistance provided by Mr. Jason Seguin (P354). The temperature was approximately 5 degrees Celsius with mostly overcast skies. Weather conditions did not impede the assessment in any way. At the request of the Region of Peel and prior to commencing Stage 2 field activities, Amec Foster Wheeler provided information sharing letters to three Indigenous organizations. Appendix E of this report contains the Indigenous Engagement Documentation.

All aspects of the Stage 2 assessment were conducted in accordance with the MTCS’s *Standards and Guidelines for Consultant Archaeologists* (2011).

The previous Stage 1 background study (AmecFW 2016:19) indicated that areas where potential has been removed as a result of infrastructure installations and the placement of paved walkways, comprise approximately 28% of the study area, or 0.12 ha. Landscaped sections of the study area were assumed to have retained archaeological potential (72% or 0.30 ha). Amec Foster Wheeler (2016:20) had recommended that:

A Stage 2 archaeological assessment in accordance with Section 2.1 of the MTCS Standards and Guidelines for Consultant Archaeologist (2011) is required prior to any form of land alteration within the areas of archaeological potential that are noted in Appendix A, Figure 8.

As indicated above, the previous Stage 1 assessment concluded that 0.11 ha or 1.44% of the study area retained archaeological potential. However, during the Stage 2 assessment 0.02 ha was determined to be low and wet (see Appendix A: Figure 7c and Appendix B: Photographs 15-16). In addition, Amec Foster Wheeler was unable to obtain permission-to-enter on 0.03 ha of the study area (see Appendix A: Figures 7b and 7e). The remaining 0.06 ha of archaeological potential where systematically test pitted at 5-m intervals.

During the Stage 2 assessment no cultural artifacts were encountered in any of the test pits advanced. No archaeological materials were recovered, and no new archaeological sites were identified.

In light of these results, the following recommendations are made, subject to the conditions below and the advice on compliance with legislation contained in Section 6.0:

1. The assessed portions of the study area, as noted on Figures 7a-e in Appendix A, do not require further archaeological assessment.
2. The unassessed portions of the study area, as noted on Figures 7b and 7e in Appendix A, require Stage 2 archaeological assessment by means of test pit survey in accordance with Section 2.1.2 of the *MTCS Standards and Guidelines for Consultant Archaeologist (2011)* prior to any form of land alteration.

The above recommendations are subject to Ministry of Tourism, Culture and Sport approval, and it is an offence to alter any of the study area without Ministry of Tourism, Culture, and Sport concurrence.

No grading or other activities that may result in the destruction or disturbance to the study area is permitted until notice of Ministry of Tourism, Culture, and Sport approval has been received.

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
1.0 PROJECT CONTEXT.....	1
1.1 Development Context	1
1.2 Scope of Work.....	1
1.3 Environmental Context	2
1.4 Archaeological Context	3
1.4.1 Review of Previously Documented Work	6
1.5 Historical Context	7
1.5.1 Overview of Southern Ontario Archaeology.....	7
1.5.2 Local History.....	11
1.5.3 Review of Historical Records	12
1.5.4 Historic Plaques / Designated Historic Structures.....	14
2.0 STAGE 2 PROPERTY ASSESSMENT	16
2.1 Methodology.....	16
2.2 Field Observations and Results.....	16
3.0 RECORD OF FINDS	18
4.0 STAGE 2 ANALYSIS AND CONCLUSIONS.....	19
5.0 RECOMMENDATIONS	20
6.0 ADVICE ON COMPLIANCE WITH LEGISLATION	21
7.0 ASSESSOR QUALIFICATIONS.....	22
8.0 CLOSURE.....	23
9.0 BIBLIOGRAPHY	25

LIST OF TABLES

Table 1: Registered Archaeological Sites within a One-Kilometre Radius	3
Table 2: Simplified Cultural Chronology of Southern and Eastern Ontario.....	10
Table 3: Property Owner(s) and Historic Feature(s) Illustrated Within or Adjacent to the Study Corridor in 1859	12
Table 4: Property Owner(s) and Historic Feature(s) Illustrated Within or Adjacent to the Study Corridor in 1877	13
Table 5: Inventory of Documentary Record	18

APPENDICES

APPENDIX A: FIGURES

Figure 1	Location of the Study Area
Figure 2	Aerial Photograph Showing the Location of the Study Area
Figure 3	Topographic Map Showing the Location of the Study Area
Figure 4	<i>1859 Tremaine Map of the County of Peel, Canada West</i> Showing the Location of the Study Area
Figure 5	1877 Illustrated Historical Atlas of the County of Peel Showing the Location of the Study Area
Figure 6a-e	Amec Foster Wheeler (2015) Stage 1 Results
Figure 7a-e	Stage 2 Results with Photograph Numbers, Locations and Directions

APPENDIX B: PHOTOGRAPHS
APPENDIX C: ASSESSOR QUALIFICATIONS
APPENDIX D: LIMITATIONS
APPENDIX E: INDIGENOUS ENGAGEMENT

PROJECT PERSONNEL

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1.0 PROJECT CONTEXT

1.1 Development Context

Amec Foster Wheeler Environment & Infrastructure (“Amec Foster Wheeler”) was retained by the Region of Peel (the “CLIENT”) to conduct a Stage 2 archaeological assessment for the proposed widening of Mississauga Road (Regional Road 1) between Financial Drive and Queen Street West (Regional Road 6) in the City of Brampton, Ontario (Appendix A: Figures 1, 2, and 3). The study area was historically described as Part of Lots 4, 5, and 6, Concessions 4 and 5 (WHS), in the former Township of Chinguacousy, County of Peel, now in the City of Brampton, Regional Municipality of Peel, Ontario. This archaeological assessment was triggered by a Schedule “C” Municipal Class Environmental Assessment. The approximate size of the study corridor corresponds to 8.44 hectares (20.85 acres). The assessment included a 45 m total Right-of-Way (ROW) from the centre line, corresponding to approximately 22.5 m on either side of the road in areas previously assessed to have retained archaeological potential 0.11 ha or 1.44% (AmecFW 2016, P141-0234-2015 [Austin]).

The assessment was carried out under an Ontario Professional Licence to Conduct Archaeological Fieldwork (P141) held by Dr. Shaun Austin, Associate Archaeologist at Amec Foster Wheeler. The project information was acknowledged by the MTCS on 1 November 2017 with the approval of PIF number P141-0281-2017. Permission to enter for the purposes of the Stage 2 archaeological assessment was confirmed for 4 December 2017 via 24 hour notice and comprised all required archaeological fieldwork activities, including the recovery and removal of artifacts.

The Stage 2 test pit survey was conducted prior to any land development on 4 December, 2017 under the field direction of Ms. Cara Howell (R180), with field assistance provided by Mr. Jason Seguin (P354). The temperature was approximately 5 degrees Celsius with mostly overcast skies. Weather conditions did not impede the assessment in any way. At the request of the Region of Peel and prior to commencing Stage 2 field activities, Amec Foster Wheeler provided information sharing letters to three Indigenous organizations. Appendix E of this report contains the Indigenous Engagement Documentation. All aspects of the Stage 2 assessment were conducted in accordance with the MTCS’s *Standards and Guidelines for Consultant Archaeologists* (2011).

This report presents the results of the Stage 2 property assessment, and makes pertinent recommendations.

1.2 Scope of Work

The purpose of a Stage 2 assessment is to conduct a field survey for archaeological resources and to determine if these resources are artifacts and archaeological sites with potential cultural heritage value or interest. The Stage 2 property assessment has three

main objectives: 1) to document all archaeological resources on the property; 2) to determine whether the property contains archaeological resources requiring further assessment; and 3) to recommend appropriate Stage 3 assessment strategies for any archaeological sites identified (MTCS 2011: 27). This Stage 2 archaeological assessment was conducted in accordance with the technical standards defined in the *Standards and Guidelines for Consultant Archaeologists, 2011*, set out by the MTCS, and with the Ontario Heritage Act, R.S.O. 1990, c.0.18.

The scope of work consisted of the following tasks:

- The MTCS was contacted to determine if any additional recorded archaeological sites exist in the vicinity of the property since the 2016 Stage 1 Background Study report through a search of the Ontario Archaeological Sites Database on Past Portal;
- A review of all previous related archaeological research, including the Amec Foster Wheeler 2016 Stage 1 assessment report and all previous archaeological assessment reports within 50 m of the study area;
- Organizing public underground utility locates;
- The study area was subjected to hand shovel test pit survey employing strategies that adhere to Section 2.1.2 of the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011);
- Mapping, photographing and other relevant graphics;
- Artifact processing and analysis, where applicable; and,
- Preparing a report of findings with recommendations regarding the need for further archaeological work if deemed necessary.

Sites discovered during a Stage 2 assessment that are determined to have cultural value or interest may be recommended for a Stage 3 site-specific assessment. The preferred option, however, is to avoid and protect such sites wherever possible.

1.3 Environmental Context

The study area is situated within the Peel Plain Physiographic Region of Southern Ontario near the interface with the South Slope region (Chapman and Putnam 1984).

The Peel Plain covers a large area across the central portions of the Regional Municipalities of Peel, York and Halton. The plain has level to gently rolling surface topography, with a gradual slope downward toward Lake Ontario. The plain is made up of deep deposits of dense limestone and shale till, often covered by a layer of clay sediment. Several major rivers and a number of smaller streams cut across the plain, draining southward into Lake Ontario.

The South Slope region (Ibid 1984: 172-174) refers to the southern slope of the Oak Ridges Moraine. The South Slope meets the Oak Ridges Moraine at approximately 300 m above sea level, then descends southward toward Lake Ontario. In some areas, it ends at elevations below 150 m above sea level. There are numerous streams that descend the South Slope, having cut deep valleys in the till.

It is crucial to consider the proximity of modern and relict water sources in any evaluation of archaeological potential because the availability of water is arguably the single most important determinant of human land use, past and present. The *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011) lists proximity to water as one of the prime indicators of potential for the presence of archaeological sites. Distance from potable water has been one of the most commonly used variables for predictive modeling of site location. Water, both potable and non-potable, also facilitated the transportation of people and goods and served to focus animal and vegetable resources. A portion of the Credit River along with a number Credit River tributaries are located within the study corridor.

1.4 Archaeological Context

Prior to the Stage 2 archaeological assessment, Amec Foster Wheeler contacted the MTCS in order to search the Ontario Archaeological Sites Database to ascertain if any additional previously registered archaeological sites have been identified since the submission of the 2016 Amec Foster Wheeler Stage 1 background study and property inspection report was submitted (MTCS correspondence 4 September, 2015 in Amec Foster Wheeler 2016: 12-13).

In Ontario, information concerning archaeology sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MTCS. This database contains archaeological registered sites within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on longitude and latitude. A Borden block is approximately 13 kilometres east to west, and approximately 18.5 kilometres north to south. Each Borden block is referred to by a four letter designation and sites located within the block are numbered sequentially as they are found. The study area is located within the AjGw Borden Block. On the basis of the combined 2015 and 2017 search of the OASD (2017 inquiries made through Past Portal, 2 November, 2017), there are 24 registered archaeological sites located within a one-kilometre radius and four archaeological assessments have been completed within a 50-m radius.

Table 1: Registered Archaeological Sites within a One-Kilometre Radius				
Borden Number	Site Name	Cultural Affiliation	Site Type	Researcher (Year Researched)
AjGw-9	Burton	Undetermined Pre-Contact	Lithic Scatter	P. Ramsden (1967, 1971)

Table 1: Registered Archaeological Sites within a One-Kilometre Radius				
Borden Number	Site Name	Cultural Affiliation	Site Type	Researcher (Year Researched)
AjGw-11	Hutton	Woodland	Campsite	J. Godja (1966)
AjGw-15	Ostranger	Undetermined Pre-Contact	Campsite	R. Hazard (1971)
AjGw-18	Fraser	Archaic	Campsite	D. Spittal (1976)
AjGw-330	-	-	-	James Clifford O'Neal (2002)
AjGw-361	-	Pre-Contact	Findspot	B. Welsh (2004)
AjGw-362	-	Middle Archaic	Findspot	B. Welsh (2004)
AjGw-363	-	Pre-Contact	Findspot	B. Welsh (2004)
AjGw-364	-	Pre-Contact	Scatter	B. Welsh (2004)
AjGw-365	-	Post-Contact	Homestead	B. Welsh (2004)
AjGw-366	-	Post-Contact	Homestead	B. Welsh (2004)
AjGw-437	Clader A	Post-Contact (Euro-Canadian)	Homestead	Marilyn Cornies (2006)
AjGw-438	Clader B	-	-	Marilyn Cornies (2006)
AjGw-441	Erin Mills A	-	-	Marilyn Cornies (2006)
AjGw-442	Erin Mills B	-	-	Marilyn Cornies (2006)
AjGw-444	-	-	-	Marilyn Cornies (2006)
AjGw-445	-	Middle Archaic	Unknown	Marilyn Cornies (2006)
AjGw-455	P3	Pre-Contact	Findspot	Kim Slocki (2006)
AjGw-456	P4	Early Woodland (Meadowood)	Findspot	Kim Slocki (2006)
AjGw-457	P1	Pre-Contact	Scatter	Kim Slocki (2008)
AjGw-459	P3	Late Woodland	Village	Kim Slocki (2008)
AjGw-461	Tesch Village	Late Woodland	Village	Kim Slocki (2007)
AjGw-525	Clearview	Post-Contact	Homestead	W. Finlayson (2010)
AjGw-536	Anthony Site	Post-Contact (Euro-Canadian)	Farmstead	Thomas Irvin (2015)

(*- Information not recorded on electronic site record form)

Of the 24 registered sites noted above, four are recorded as post-contact homesteads (AjGw-365, AjGw-366, AiGw-437 and AjGw-525) and one as a post-contact farmstead (AjGw-536). There is one undetermined pre-contact campsite (AjGw-15), one undetermined pre-contact lithic scatter (AjGw-9) and one Middle Archaic component (AjG-445) that has an unknown site type. There are three pre-contact findspots (AjGw-361, AjGw-363 and AjGw-455), and two pre-contact scatters (AjGw-364 and AjGw-457).

Also noted are: one Archaic campsite (AjGw-18), one Middle Archaic findspot (AjGw-362), one Woodland campsite (AjGw-11), one Early Woodland findspot (AjGw-456) and two Late Woodland villages (AjGw-459 and AjGw-461).

Five other sites contained limited information of the electronic site record forms (AjGw-330, AjGw-438, AjGw-441, AjGw-442, and AjGw-444).

AjGw-9 was noted on the 2017 database search as having a Stage 3 assessment completed in 2008, with ongoing Stage 4 assessment. AjGw-459 was also undergoing a Stage 4 assessment, while Stage 4 assessment was recommended for AjGw-461 and AjGw-525. Stage 3 assessment was recommended for AjGw-366. Sites AjGw-455, AjGw-456, AjGw-525 and AjGw-536 were deemed to have no further cultural heritage value or interest (CHVI).

There are four relevant reports on assessments conducted within 50 m of the study area:

- *Stage 1 Archaeological Assessment Class Environmental Assessment Study, Mississauga Road Improvements From Queen Street to Bovaird Drive (Formerly Highway 7) Regional Municipality of Peel, Ontario.* ASI File 05EA-122, (MCL PIF P057-188 [R. Pihl, M.A.] 2005a).
- *Stage 2 Archaeological Assessment Class Environmental Assessment Study, Mississauga Road Improvements From Queen Street to Bovaird Drive (Formerly Highway 7) Regional Municipality of Peel, Ontario.* ASI File 05EA-122, (MCL PIF P057-188 [R. Pihl, M.A.] 2005b).
- *Stage 1 Archaeological Reconnaissance Proposed Keneff Draft Subdivision, 8472 Mississauga Road, Part of the East Half of Lot 3, Concession 5 West of Hurontario Street, Geographic Township of Chinguacousy), Regional Municipality of Peel, City of Brampton.* Revised Report AMICK Consulting Limited File # COSW03.006/21T-10002B (P038-0834-2015 [M. Cornies]).
- *Stage 1 Background Study and Property Inspection for the Proposed Widening of Mississauga Road (Regional Road 1) From 300 Metres North of Financial Drive to 300 Metres North of Queen Street West (Regional Road 6), City of Brampton, Regional Municipality of Peel, Ontario.* AmecFW Project No.TP115085.3, (PIF No. P141-0234-2015 [S. Austin, Ph.D.] 2016).

1.4.1 Review of Previously Documented Work

The four assessment reports cited above were carefully reviewed during the preparation of this report. The first two assessments were conducted by Archaeological Services Inc. (ASI, 2005a and 2005b). The third report documents a Stage 1 assessment conducted by AMICK Consulting Ltd (AMICK, 2015) on a parcel of land just outside of the current corridor on Lot 3, Concession 5. The fourth and most recent assessment was conducted by Amec Foster Wheeler (AmecFW 2016). The Amec Foster Wheeler 2016 report provided the following summary of relevant information included in the two ASI reports noted above as it pertained to the study area (AmecFW 2016: 13-14).

The 2005(a) Stage 1 assessment was conducted for a Class Environmental Assessment for Mississauga Road Improvements between Queen Street and Bovaird Drive in the Regional Municipality of Peel (ASI 2005a, Robert Pihl [P057]). This report indicated that undisturbed lands within 100 m of Mississauga Road exhibit potential for historic Euro-Canadian sites. The Stage 1 report recommendations included the following statement:

Prior to any land-disturbing activities along the study corridor, Stage 2 archaeological assessment should be conducted in accordance with Ministry of Culture Stage 1-3 Archaeological Assessment Guidelines, in order to identify any archaeological remains that may be present within the study corridor limits. Such assessment must include investigation of any and all lands beyond the limits of the existing disturbed right-of-way (consisting of the traveled lanes and shoulders, and extending to the toe of the fill slope, the top of the cut slope, or the outside edge of the drainage ditch, whichever is the furthest from the centreline), that will be impacted, whether temporarily or permanently, by the project (ASI 2005a, Section 4.0, Recommendation 1).

The Stage 2 assessment (ASI 2005b) concluded that the entire ROW has been thoroughly disturbed in the past, and does not retain any archaeological potential (ASI 2005b: 5). However, “future road widening will... extend outside the current ROW, and these lands will...require field assessment at some later date. They were not investigated during the present study” (ASI 2005b: 5).

Finally, the Amec Foster Wheeler Stage 1 background study and property inspection (AmecFw 2016: 17) indicated that “...undisturbed and previously unassessed portions of the study corridor have archaeological potential for three principal reasons: 1) the close proximity of a natural watercourse, The Credit River, as illustrated on Figures 1-5 (Appendix A) (as well as a number of smaller Credit River tributaries); 2) a clear pattern of pre-contact Aboriginal and historic Euro-Canadian land use in the vicinity as demonstrated by the presence of 13 registered archaeological sites within 1 km; and, 3) the close proximity of early transportation routes (Mississauga Road, an early settlement road), as shown on historic mapping (AmecFW 2016 Figures 4 and 5, Appendix A).

Furthermore, Amec Foster Wheeler (2016: 17) determined that areas of low archaeological potential, or where potential has been removed, comprise approximately 80.09% / 6.73 ha of the study area (including 5.05 ha of paved or compacted gravel roads, driveways and shoulders, 0.05 ha of low and wet areas; and 1.66 ha of excessive and artificial slope). Additionally, 18.47% / 1.57 ha was previously assessed by ASI (2005) and does not warrant further assessment. The remainder of the study area (1.44% / 0.11 ha) exhibits archaeological potential and warrants Stage 2 assessment. The resulting recommendations included the following (AmecFW 2016: 18):

A Stage 2 archaeological assessment in accordance with Section 2.1 of the MTCS Standards and Guidelines for Consultant Archaeologists (2011) is required prior to any form of land alteration within the areas of archaeological potential that are noted in Figures 6 a-e, Appendix A.

The remainder of the study area (paved or compacted gravel roads, driveways and shoulders; low and wet areas; areas of excessive and artificial slope; areas already assessed) does not require further archaeological assessment (see Figures 6 a-e, Appendix A).

The AMICK 2015 Stage 1 report documented work on Lot 3, Concession 5, a parcel of land located just outside of the current study corridor. Section 9.1 of the AMICK 2015 report (page 25) concluded the following:

Although the presence of previously registered sites, waterways within 300 metres, an early settlement road adjacent to the study area and the settlement history suggest archaeological potential, extensive impacts have removed all potential for archaeological resources... Consequently, the following recommendations are made:

No further archaeological assessment of the study area is warranted;

The Provincial interest in archaeological resources with respect to the proposed undertaking has been addressed;

The proposed undertaking is clear of any archaeological concern.

1.5 Historical Context

1.5.1 Overview of Southern Ontario Archaeology

The majority of interpretations of pre-contact Aboriginal adaptations in Ontario derive from the analysis and interpretation of stone tools. Stone tools are made from specific types of rocks that fracture in ways that can be controlled, so that they are easily shaped into useful forms. These rocks include chert, chalcedony, quartzite, petrified wood, and volcanic glass, known as obsidian. The majority of stone tools found in southern Ontario are formed from types of chert that outcrop in local limestone formations, such as Onondaga

and Haldimand Chert, found near the north shore of Lake Erie, Kettle Point Chert, which outcrops near Lake Huron, and Collingwood Chert, which outcrops along the Niagara Escarpment to the north.

Stone tools used as spear tips and arrowheads are the most commonly studied tool type. These are referred to as projectile points. As projectile technology changed over time, styles and shapes of points changed also. Studying these changing point types has resulted in the development of a chronological framework for pre-contact times prior to 3,000 years ago, when First Nations groups began to make clay pottery and later periods are defined by the pottery and point types found. Radiocarbon dating of archaeological sites can only be done when organic materials are collected from those sites, so the dating of most sites is done by comparing the artifacts from dated sites to those from undated sites. The following is an overview of the pre-contact history of Ontario as understood by archaeologists.

The cultural history of southern Ontario began approximately 11,000 years ago when the glaciers had melted and the land was re-exposed. The land was quickly settled by bands of hunters and gatherers who are thought to have been large game hunters. These people used large spear points that are distinctively shaped with long central grooves, called “flutes”. Archaeologists have defined a number of point types that date to this time, including Gainey, Barnes, Crowfield, and Hi-Lo types. This period is referred to as the Palaeo-Indian Period and it is thought to have lasted until approximately 9,000 years ago.

After 9,000 years ago, there was a long period when the climate was variable and the bare lands left by the glaciers were becoming re-forested, resulting in patchier, more diverse ecozones. During this time, which lasted until 3,000 years ago, people were thought to be settling into various parts of the landscape. There appears to have been more reliance on local stone for making tools and more variable tool manufacturing technologies. The adoption of a spear-throwing board, known as an atlatl, was an important innovation, resulting in the ability to throw smaller darts with more force. Projectile points from this period, called the Archaic Period, are commonly side or corner-notched and are smaller than those of the preceding period. The Archaic adaptation is generally thought to have centred on localized resources, often forest resources, and groups of people are thought to have been less mobile. This adaptation is one that remained unchanged in North-western Canada until the arrival of Europeans.

In southern Ontario, the Archaic Period is divided into the Early, Middle and Late Archaic. Early point types include Nettling, Bifurcate Base points. Middle types include Brewerton Corner Notched and Otter Creek, and Late types include Lamoka, Genesee, Crawford Knoll, and Innes. Most of these are named after sites where they were first identified.

The Archaic Period is followed by the Woodland Period. The major technological change in the Early Woodland Period is the introduction of pottery. During this time, people are

thought to have developed more community organization and the manufacture of clay pottery is thought to indicate less residential mobility. Burial sites dating to this time often display evidence of ceremonial activities. Projectile points made at this time include much smaller types, probably used as arrow tips. Point types include Meadowood and Kramer and early ceramics were crudely-made vessels with conoidal (pointed) bases. The Early Woodland Period transitioned into the Middle Woodland Period approximately 2,600 years ago.

The primary technological advancement of the Middle Woodland Period in southern Ontario is the introduction of rudimentary agriculture, which was practiced as part of the hunting and gathering strategy. More sedentary communities developed as a result, and the importance of community and kin identity became more deeply entrenched. Point types made at this time include Saugeen, Vanport, and Snyders. Ceramic vessels were conoidal in shape, but were decorated with stamped designs in the soft clay. The Middle Woodland Period ended approximately A.D. 500/900.

The Late Woodland Period saw the development of recognizable Iroquoian and Algonkian cultures in southern Ontario, characterized by the intensification of agriculture and the increased utilization of corn. Greater sedentism led to increasing settlement populations and greater complexity of settlement organization. Sites dating to this time are often found on terraces overlooking the floodplains of large rivers. Iroquoian villages tended to be small, palisaded compounds with longhouses occupied by families. As the Late Woodland Period progressed, more intercommunity communication and integration became necessary to maintain the sedentary agricultural way of life. Later Iroquoian villages were larger and more heavily palisaded and longhouses were larger also.

When European explorers and missionaries arrived in southern Ontario in the early seventeenth century, they described the local Iroquois social organization as being under the direction of elected chiefs. Tribal confederacies and allegiances resulted in intertribal warfare, which was only made worse by the European presence. Three Ontario Iroquoian confederacies, the Huron, Petun, and Neutral, were driven from their traditional territories before the middle of the seventeenth century.

Archaeologists tend to describe a period of transition from Late Woodland to Historic times as “proto-historic”. The dating of this period is variable and may be different from site to site within a region as it describes a time when local First Nations were acquiring European trade goods indirectly through other Aboriginal middlemen rather than directly from European traders. This period was generally very short and is often difficult to differentiate archaeologically from later historic times, when trade goods were widely available, but it usually is identified by evidence of an intact traditional cultural adaptation with occasional European items used in traditional ways.

Archaeologically, the years since the arrival of Europeans are referred to as the Historic Period. In southern Ontario, significant Historic sites are those that have an affiliation with an important historic event, figure, or family, but can also be anything dating to the original European settlement of a region. Often, these sites date to before AD 1830. Table 2 provides an overview of the Cultural Chronology of Southern and Eastern Ontario.

Table 2: Simplified Cultural Chronology of Southern and Eastern Ontario	
Period	Complexes/Cultures, Some Diagnostic Artifacts
<i>Early Paleo-Indian</i> (9000–8500 B.C.)	Small nomadic hunter-gatherer bands. EPI rarely found in Eastern Ontario. Gainey, Barnes, Crowfield fluted points.
<i>Late Paleo-Indian</i> (8500–7500 B.C.)	Small nomadic hunter-gatherer bands. Hi-Lo, Holcombe points, Lanceolate Bifaces.
<i>Early Archaic</i> (7500–6000/4500 B.C.)	Small nomadic hunter-gatherer bands. Nettling, Stanley/Neville points.
<i>Middle Archaic</i> (6000/4500–2500 B.C.)	Transition to territorial settlements. Seasonal round of subsistence introduced. Thebes (6000–5000 B.C.), Otter Creek points (4500–3000 B.C.). Brewerton Complex (3000–2500 B.C.) . Brewerton points. Laurentian Complex (6000 B.C.–2500 B.C.) (Eastern Ontario)
<i>Late Archaic</i> (2500–1000 B.C.)	More numerous territorial hunter-gatherer bands, increasing use of exotic materials and artistic items for grave offerings, regional trade networks. Narrowpoint Complex (2500–1850 B.C.) . Lamoka points. Broadpoint Complex (1850–1650 B.C.) . Adder Orchard, Genesee points. Smallpoint Complex (1650–1000 B.C.) . Crawford Knoll, Innes points. Terminal Archaic (1100–1000 B.C.) Glacial Kame Complex . Hind points.
<i>Early Woodland</i> (1000–400 B.C.)	Pottery introduced. Meadowood Notched points, Meadowood Cache Blades, Kramer, Adena points. Meadowood Complex (1000–400 B.C.) . Middlesex Complex (650–400 B.C.) . Introduction of true cemeteries.
<i>Middle Woodland</i> (400 B.C.–A.D. 500/900)	Saugeen, Snyders, Vanport, Port Maitland points. Point Peninsula Complex (Southcentral and Eastern Ontario) Saugeen Complex (southeast of Lake Huron and the Bruce Peninsula, London area, and possibly as far east as the Grand River) Couture Complex (Lake St. Clair and the western end of Lake Erie). Burial ceremonialism.
<i>Transitional Woodland</i> (A.D. 500–900)	Agriculture introduced. Levanna, Jacks Reef points. Princess Point Complex (Eastern end of Lake Erie and the western end of Lake Ontario). Sandbanks Complex (Kingston area).
<i>Late Woodland</i> (A.D. 900–1650)	Tribal differentiation. Transition to settled village life. Dewaele, Glen Meyer Tanged, Triangular Naticoke, Notched Naticoke, Triangular Daniels/Madison points. Ontario Iroquoian and St. Lawrence Iroquoian Traditions (Southcentral and Eastern Ontario, respectively).

Table 2: Simplified Cultural Chronology of Southern and Eastern Ontario	
Period	Complexes/Cultures, Some Diagnostic Artifacts
	Algonkian Western Basin Tradition (Lake St. Clair and the western end of Lake Erie).
<i>Early Post-Contact</i> (A.D. 1650–1763)	Iroquoian, Algonkian migrations and resettlement. French exploration and colonization
<i>Late Post-Contact</i> (A.D. 1763–1867)	Iroquoian, Algonkian migrations and resettlement. British and other European immigration increases.

1.5.2 Local History

The study area was historically within the Township of Chinguacousy, Peel County. The historic community of Huttonville is located within the study area.

The Township of Chinguacousy was the largest in the county (Walker & Miles 1877: 90), containing 130 square miles. On the north it was bounded by Caledon, on the east by Albion and Toronto Gore, on the south by Toronto Township, and on the west by the County of Halton (Ibid 1877: 90). Settlement took place approximately the same time as the new survey of the Township of Toronto, circa 1818 (Ibid 1877: 90). A number of the first settlers drew their land while in New York City and immigrated to the County of Peel, some of them settling in Chinguacousy. The majority of the first settlers in Chinguacousy were from New Brunswick, United States and parts of Upper Canada. Many were the children of the U.E. Loyalists who came to Canada at the close of the American Revolution and first settled in Niagara (Ibid 1877: 90).

In 1821 the Township of Chinguacousy had a population of 412, with 230 acres of cultivated land. The total assessed land within the Township at that time was 80,271 acres. By 1876 the population had grown to 6,129 (Ibid 1877: 90). Chinguacousy is divided by Hurontario Street which runs through its centre, with the concessions numbering east and west from it. Chinguacousy was considered a first-class agricultural township and the farmers, in general, were very successful (Ibid 1877: 90). The Township was noted for its beautiful and substantial farm residences and commodious barns (Ibid 1877: 90). The Credit River, almost immediately after entering the township from Caledon, makes an eccentric curve, and runs away into Halton, returning to Chinguacousy in the lower part of the township. In addition, Etobicoke Creek runs through the centre of the township, and there are also several small streams and branches of the Humber River and Mimico Creek (Ibid 1877: 90).

The Village of Huttonville:

The village of Huttonville is situated on the Credit River (on the 4th line west, Chinguacousy), and is within the study area. By 1876 Huttonville had a population of approximately 150. The principal business there was the celebrated mills of J.P. Hutton, Esq. The village commenced with the building of the mills by a Mr. Brown in 1848. At that time, the mill site was densely forested and contained only an old gate saw and very few

buildings. Brown kept the mill going until 1855, when Mr. J.P. Hutton purchased it. Among other improvements, Hutton put in a circular saw, a lather and a shingle mill (Ibid 1877: 90-91). After the improvements, the mill was able to cut from 10 to 20 thousand feet of lumber per day, giving employment to a number of men (Ibid 1877: 91). Hutton also created a connection to a planing mill for matching and planing. The shingle mill produced approximately two million singles, and the lathe mill cut approximately 400,000 feet of lumber (Ibid 1877: 91). The only store in the village at that time was owned by a Mr. Shawcross, who was also the deputy postmaster. There was also a wagon shop, a blacksmith shop, and a temperance hotel (Ibid 1977: 91).

1.5.3 Review of Historical Records

Historical records and mapping, including the *1859 Tremaines' Map of the County of Peel*, (G.R. & G.M. Tremaine. 1859) and the *1877 Illustrated Historical Atlas of Peel County* (Miles & Co. 1877), were examined for evidence of early Euro-Canadian use of Part of Lot 4, Lot 5 and Part Lot 6, Concession 4 (WHS), and Part of Lot 4, Lot 5 and Part Lot 6, Concession 5 (WHS), formerly in the Township of Chinguacousy, County of Peel, now in the City of Brampton, Regional Municipality of Peel, Ontario.

The 1859 Tremaines' Map of the County of Peel (G.R. & G.M. Tremaine. 1859: Appendix A: Figure 4) was examined first. Table 1 lists the property owner(s) and historic feature(s) illustrated within or adjacent to the study corridor.

Table 3: Property Owner(s) and Historic Feature(s) Illustrated Within or Adjacent to the Study Corridor in 1859			
Concession	Lot	Owner(s)	Illustrated Feature(s) Present
4 WHS	4	Mrs. Mary Ann Forrest	A portion of the Credit River is within this lot but not directly within the study area. No other features are illustrated.
4 WHS	5	Jacob Snure	A portion of the Credit River is illustrated within the study area. No other features are illustrated.
4 WHS	6	Jos. Pearen	A tributary of the Credit River is within this lot but not directly within the study area. No other features are illustrated.
5 WHS	4	Jas. Ostrander	No features are illustrated.
5 WHS	5	Jas. P. Hutton	A portion of the Credit River is illustrated within the study area. There is one mill ("Hutton's Mill") within the study area and a pond associated with the Credit River (not within the current study area). A road is also illustrated (a portion of the northeast section is within the study area).

Table 3: Property Owner(s) and Historic Feature(s) Illustrated Within or Adjacent to the Study Corridor in 1859			
Concession	Lot	Owner(s)	Illustrated Feature(s) Present
5 WHS	6	Jas. Ostrander	A portion of the Credit River is illustrated running through the centre of this lot (not within the current study area). No other features are illustrated.

Next, the 1877 *Illustrated Historical Atlas of the County of Peel, Ontario* was reviewed to determine the potential for the presence of historic Euro-Canadian archaeological evidence within the study corridor during the 19th century. Figure 5, Appendix A shows the approximate placement of the study corridor on the 1877 Historical Atlas map while Table 2 lists the property owner(s) and historic feature(s) illustrated within or adjacent to the study corridor.

Table 4: Property Owner(s) and Historic Feature(s) Illustrated Within or Adjacent to the Study Corridor in 1877			
Concession	Lot	Owner(s)	Illustrated Feature(s) Present
4 WHS	4	K. Chisholm & Co.	A portion of the Credit River is within this lot but not directly within the study area. There is one residence and one orchard in the upper eastern section, not within the current study area.
4 WHS	5	No name is illustrated	A portion of the Credit River is illustrated within the study area, one residence and two orchards are illustrated outside the current study area.
4 WHS	6	Ralph Brown	One barn, one residence and an orchard are illustrated, not within the current study area.
5 WHS	4	Nelson Conover	One residence and one orchard are illustrated to be present, not within the current study area.
5 WHS	5	Huttonville	A portion of the Credit River is illustrated within the study area. There are two mills (one within the study area) and two additional structures (one within the study area) associated with the mills, one barn, one residence and two orchards (not within the current study area), a pond associated with the Credit river (not within the current study area) and a road (a portion of the northeast section is within the study area).

Table 4: Property Owner(s) and Historic Feature(s) Illustrated Within or Adjacent to the Study Corridor in 1877			
Concession	Lot	Owner(s)	Illustrated Feature(s) Present
5 WHS	6	Jas P. Hutton	A portion of the Credit River is illustrated running through the centre of this lot (not within the current study area). There is a church, a barn and a residence illustrated on the south side of the river (not within the current study area)

In addition, a review of the Surname Index in the *1877 Illustrated Historical Atlas of the County of Peel, Ontario* was completed. There are five entries for K Chisholm & Co. Three of them are in the Township of Caledon, indicating that K. Chisholm & Co. had land on Lots 9, 10 and 11, Concession 4 (WHS). Two of the entries are for the Township of Chinguacousy South on Lots 3 and 4, Concession 4 (WHS). As noted, Lot 4, Concession 4 (WHS) is within the study area. There is one entry for Jas. P. Hutton on Lot 6, Concession 5 (WHS) in the Township of Chinguacousy South as noted in Table 1. There is one entry recorded for Ralph Brown on Lot 6, Concession 4 (WHS) in the Township of Chinguacousy South as noted in Table 1. Nelson Conover is also recorded on Lot 4, Concession 5 (WHS) in the Township of Chinguacousy as noted in Table 1.

A biographical note regarding J.P. Hutton Esq, (Walker & Miles: 1877: 94) indicates that his father was born in Perthshire, Scotland. J.P. Hutton came to Canada in 1819. He first lived in Quebec, resided there for a few years, and then moved to Niagara where he was married. He lived there for 10 years and in 1831 moved to the Township of Chinguacousy where he settled and lived until his death at the age of 82 (in 1875) (Ibid 1877: 94). He had nine children: eight boys and one girl, and approximately 34 grandchildren (ibid 1877: 94).

His son, J.P. Hutton, Jr. was born in 1821 in Niagara. He settled in Chinguacousy in 1831. In 1855 he married Miss Jemima Worts of Chinguacousy. He was politically active and engaged in farming and lumbering most of his life (Ibid 1877: 94). He owned 300 acres of land in a block, approximately 100 of which he cleared (Ibid 1877: 94). He was President and Director of the Peel Agricultural Society, was appointed Magistrate in 1857, was Captain of the militia, and was a member of the Chinguacousy Council for 10 years while holding the position of Deputy Reeve the entire time (Ibid 1877: 94).

1.5.4 Historic Plaques / Designated Historic Structures

There are no historic plaques located in the vicinity of the study area. A search of the *Municipal Register of Cultural Heritage Resources* (Listing Candidate Summary Report, 15 September, 2009) indicated that 18 River Road (which is situated approximately 120 metres southwest from the intersection of Queen Street West and Mississauga Road,

bordering the study corridor), legally described as Lots 11, 12, Concession 5 (WHS) and the East Part of Lot 5, contains:

...an excellent example of an early 20th century Craftsman style bungalow; a relatively rare style locally. Distinctive elements that contribute to the overall design value of the house include: unpainted red brick masonry walls, original windows of varying shapes and forms, dormers on each elevation of the home; and distinct brickwork (Listing Candidate Summary Report, 15 September, 2009: 3).

Furthermore:

...the properties along River Road were once part of Hutton Park, Limited, and were affiliated with the McMurchy property... This particular property is said to have been the estate of Mary McMurchy” (Listing Candidate Summary Report, 15 September, 2009: 3).

In addition, the McMurchy Woolen Mills and Powerhouse, located adjacent to the study area, are designated heritage structures originally owned by J.P. Hutton.

In 1885 the Powerhouse generated 100 horsepower of hydro-electric power, which was considered an engineering phenomenon at the time. The Powerhouse powered the woollen mill and also served as a power source for the Brampton area after Mr. Hutton built a 2200 volt line to this area. The designation reports for the powerhouse state that it powered the first outdoor lamp, which was located in front of the Queen’s hotel. In 1886 it powered 18 additional outdoor lights. The Powerhouse also supplied power to at least three Brampton factories...In 1903 the Powerhouse was purchased by John McMurchy who upgraded it to provide 500 horsepower. McMurchy continued to use the powerhouse as a source of electricity for his own industrial holdings until 1950, despite the fact that provincial hydro-electric power had become available as early as 1911 (Listing Candidate Summary Report, 15 September, 2009: 3).

2.0 STAGE 2 PROPERTY ASSESSMENT

2.1 Methodology

The Stage 2 property assessment was conducted under the Field Direction of Ms. Cara Howell (R180) with field assistance from Mr. Jason Seguin (P354) on 4 December, 2017. The temperature was approximately 5 degrees Celsius with mostly overcast skies. Weather conditions did not impede the assessment in any way. In addition, Mr. Mike Maracle, Field Liaison Representative for the Mississaugas of New Credit First Nation, was present for the field assessment. All aspects of the Stage 2 property assessment were conducted in accordance with the MTCS's *Standards and Guidelines for Consultant Archaeologists* (2011).

The Stage 2 study area, as defined by the previous Stage 1 assessment, indicated that areas of low archaeological potential or areas where potential has been removed, comprise of approximately 80.09% / 6.73 ha of the study area (including 5.05 ha of paved or compact gravel roads, driveways and shoulders, 0.05 ha of wet or low and wet areas; and 1.66 ha of excessive and artificial slope). Additionally, 18.47% / 1.57 ha was previously assessed by ASI (2005) and does not warrant further assessment. The remainder of the study area (1.44 % / 0.11 ha) exhibits archaeological potential and warrants Stage 2 archaeological assessment (Figures 6 a-e, Appendix A).

The previous Stage 1 assessment indicated that the portions of the study area determined to have retained archaeological potential consisted of 0.11 ha or 1.44%. However, during the Stage 2 assessment 0.02 ha of this area was determined to be low and wet (see Appendix A: Figure 7c and Appendix B: Photographs 15-16). In addition, Amec Foster Wheeler was unable to obtain permission-to-enter for 0.03 ha of the study area (see Appendix A: Figures 7b and 7e). The remaining 0.06 ha were systematically test pitted at 5-m intervals (Figures 7 a-e, Appendix A).

As per Amec Foster Wheeler's safety standards, test pits were not advanced within 1 m of any buried utility services; however, the Amec Foster Wheeler crew was able to conform to a 5-m interval grid within all areas of archaeological potential. All test pits were dug to a minimum diameter of 30 cm and to a minimum depth of 5 cm into the subsoil. Soil fills were screened through 6-mm mesh screens in order to facilitate artifact recovery. The stratigraphy of soils excavated during test pitting was examined in order to detect cultural soil horizons. All test pits were completely backfilled.

The Amec Foster Wheeler field crew photo-documented the Stage 2 assessment (Appendix A: Figure 7 a-e; and Appendix B: Photographs 1 - 16).

2.2 Field Observations and Results

As indicated above, the previous Stage 1 assessment concluded that 0.11 ha or 1.44% of the study area retained archaeological potential. However, during the Stage 2 assessment

0.02 ha of this area was determined to be low and wet (see Appendix A: Figure 7c and Appendix B: Photographs 15-16). In addition, Amec Foster Wheeler was unable to obtain permission-to-enter for 0.03 ha of the study area (see Appendix A: Figures 7b and 7e). The remaining 0.06 ha of was systematically test pitted at 5-m intervals.

The assessment observations and results are shown in Appendix A: Figure 7 a-e and Appendix B: Photographs 1 - 16).

Test pit profiles generally consisted of two types of soil stratigraphy. The first and most common included approximately 5 cm of sod, 20-25 cm of gravel fill with a mottled brown and grayish-brown fill, to a dark brown subsoil (Appendix A: Figure 7a and Appendix B: Photographs 2, 3 and 6, 8 and 9). The second consisted of approximately 5 cm of sod, 20-25 cm of brown to dark brown mottled fill to a dark brown subsoil (Appendix A: Figure 7e and Appendix B: Photograph 10).

The test pitting program yielded no culturally significant materials and no new archaeological sites were identified.

3.0 RECORD OF FINDS

The following table provides the inventory of documentary records accumulated as part of this assessment:

Table 5: Inventory of Documentary Record		
Study Area	Map and Photographs	Field Notes
Mississauga Road, from 300 metres North of Financial Drive to 300 metres North of Queen Street West, in the City of Brampton. Part of Lot 4, Lot 5 and Part Lot 6, Concession 4 (WHS), and Part of Lot 4 Lot 5 and Part Lot 6, Concession 5 (WHS), formerly in the Township of Chinguacousy, County of Peel, now in the City of Brampton, Regional Municipality of Peel, Ontario.	5 Field Maps (Stage 2), 146 Stage 2 Photographs	Stage 2 Survey Forms, Photo Logs and Field Notes

Documentation related to this archaeological assessment will be curated by Amec Foster Wheeler until such time that arrangements for their ultimate transfer to Her Majesty the Queen in right of Ontario, or other public institution, can be made to the satisfaction of the project owner, the MTCS and any other legitimate interest groups.

4.0 STAGE 2 ANALYSIS AND CONCLUSIONS

The Stage 2 study area, as defined by the previous Stage 1 assessment, indicated that areas of low archaeological potential or areas where potential has been removed, comprise of approximately 80.09% / 6.73 ha of the study area (including 5.05 ha of paved or compact gravel roads, driveways and shoulders, 0.05 ha of wet or low and wet areas; and 1.66 ha of excessive and artificial slope). Additionally, 18.47% / 1.57 ha was previously assessed by ASI (2005) and does not warrant further assessment (Figures 6 a-e, Appendix A).

The previous Stage 1 assessment concluded that 0.11 ha or 1.44% of the study area retained archaeological potential. However, during the Stage 2 assessment 0.02 ha of this area was determined to be low and wet (see Appendix A: Figure 7c and Appendix B: Photographs 15-16). In addition, Amec Foster Wheeler was unable to obtain permission-to-enter for 0.03 ha of the study area (see Appendix A: Figures 7b and 7e).

The portions of the study area determined to have retained archaeological potential (0.11 ha / 1.44%) were systematically test pitted at 5-m intervals (Figures 7 a-e, Appendix A).

No culturally significant materials were encountered and no new archaeological sites were identified.

5.0 RECOMMENDATIONS

In light of these results, the following recommendations are made, subject to the conditions below and the advice on compliance with legislation contained in Section 6.0:

1. The assessed portions of the study area, as noted on Figures 7a-e in Appendix A, do not require further archaeological assessment.
2. The unassessed portions of the study area, as noted on Figures 7b and 7e in Appendix A, require Stage 2 archaeological assessment by means of test pit survey in accordance with Section 2.1.2 of the MTCS *Standards and Guidelines for Consultant Archaeologist (2011)* prior to any form of land alteration.

The above recommendations are subject to Ministry of Tourism, Culture and Sport approval, and it is an offence to alter any of the study area without Ministry of Tourism, Culture, and Sport concurrence.

No grading or other activities that may result in the destruction or disturbance to the study area is permitted until notice of Ministry of Tourism, Culture, and Sport approval has been received.

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part IV of the *Ontario Heritage Act, R.S.O. 1990, c 0.18*. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism and Culture, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such a time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.

The *Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33* requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

Archaeological sites recommended for further archaeological fieldwork of protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological license.

7.0 ASSESSOR QUALIFICATIONS

This report was prepared and reviewed by the undersigned, employees of Amec Foster Wheeler. Amec Foster Wheeler Environment & Infrastructure is one of North America's leading engineering firms, with more than 50 years of experience in the earth and environmental consulting industry. The qualifications of the assessors involved in the preparation of this report are provided in Appendix C.

8.0 CLOSURE

This report was prepared for the exclusive use of the Region of Peel and is intended to provide a Stage 2 archaeological assessment of the study area. The study area is located on Mississauga Road (Regional Road 1) between Financial Drive and Queen Street West (Regional Road 6) in the City of Brampton, historically described as Part of Lots 4, 5, and 6, Concessions 4 and 5 (WHS), in the former Township of Chinguacousy, County of Peel, now in the City of Brampton, Regional Municipality of Peel, Ontario.

Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of the third party. Should additional parties require reliance on this report, written authorization from Amec Foster Wheeler Environment & Infrastructure will be required. With respect to third parties, Amec Foster Wheeler Environment & Infrastructure has no liability or responsibility for losses of any kind whatsoever, including direct or consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

The report is based on data and information collected during Stage 2 field inspection conducted by Amec Foster Wheeler Environment & Infrastructure. It is based solely a review of historical information and data obtained by Amec Foster Wheeler as described in this report. Except as otherwise may be specified, Amec Foster Wheeler disclaims any obligation to update this report for events taking place, or with respect to information that becomes available to Amec Foster Wheeler Environment & Infrastructure after the time during which Amec Foster Wheeler Environment & Infrastructure conducted the archaeological assessment.

In evaluating the property, Amec Foster Wheeler Environment & Infrastructure has relied in good faith on information provided by other individuals noted in this report. Amec Foster Wheeler Environment & Infrastructure has assumed that the information provided is factual and accurate. In addition, the findings in this report are based, to a large degree, upon information provided by the client. Amec Foster Wheeler Environment & Infrastructure accepts no responsibility for any deficiency, misstatement or inaccuracy contained in this report as a result of omissions, misinterpretations or fraudulent acts of persons interviewed or contacted.

Amec Foster Wheeler Environment & Infrastructure makes no other representations whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation and change. Such interpretations and regulatory changes should be reviewed with legal counsel. This report is also subject to the further Standard Limitations contained in Appendix D.

Region of Peel
Stage 2 Archaeological Assessment
Mississauga Road Widening Between Financial Drive
and Queen St. West, City of Brampton, Regional
Municipality of Peel, Ontario



We trust that the information presented in this report meets your current requirements. Should you have any questions, or concerns, please do not hesitate to contact the undersigned.

Respectfully Submitted,

**Amec Foster Wheeler Environment & Infrastructure,
A Division of Amec Foster Wheeler Americas Limited**

Prepared by,

Reviewed by,

A handwritten signature in black ink, appearing to read "Jason Seguin". The signature is written in a cursive style with a large initial 'J'.

A handwritten signature in black ink, appearing to read "Shaun Austin". The signature is written in a cursive style with a large initial 'S'.

Jason Seguin, M.A. (P354)
Senior Archaeologist

Shaun Austin, Ph.D. (P141)
Associate Archaeologist

9.0 BIBLIOGRAPHY

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Region of Peel
Stage 2 Archaeological Assessment
Mississauga Road Widening Between Financial Drive
and Queen St. West, City of Brampton, Regional
Municipality of Peel, Ontario

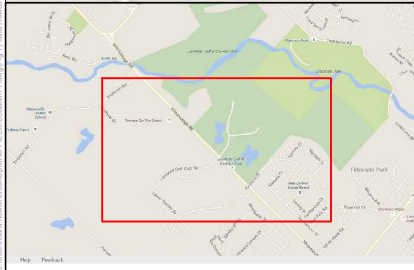
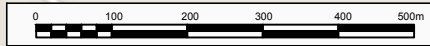
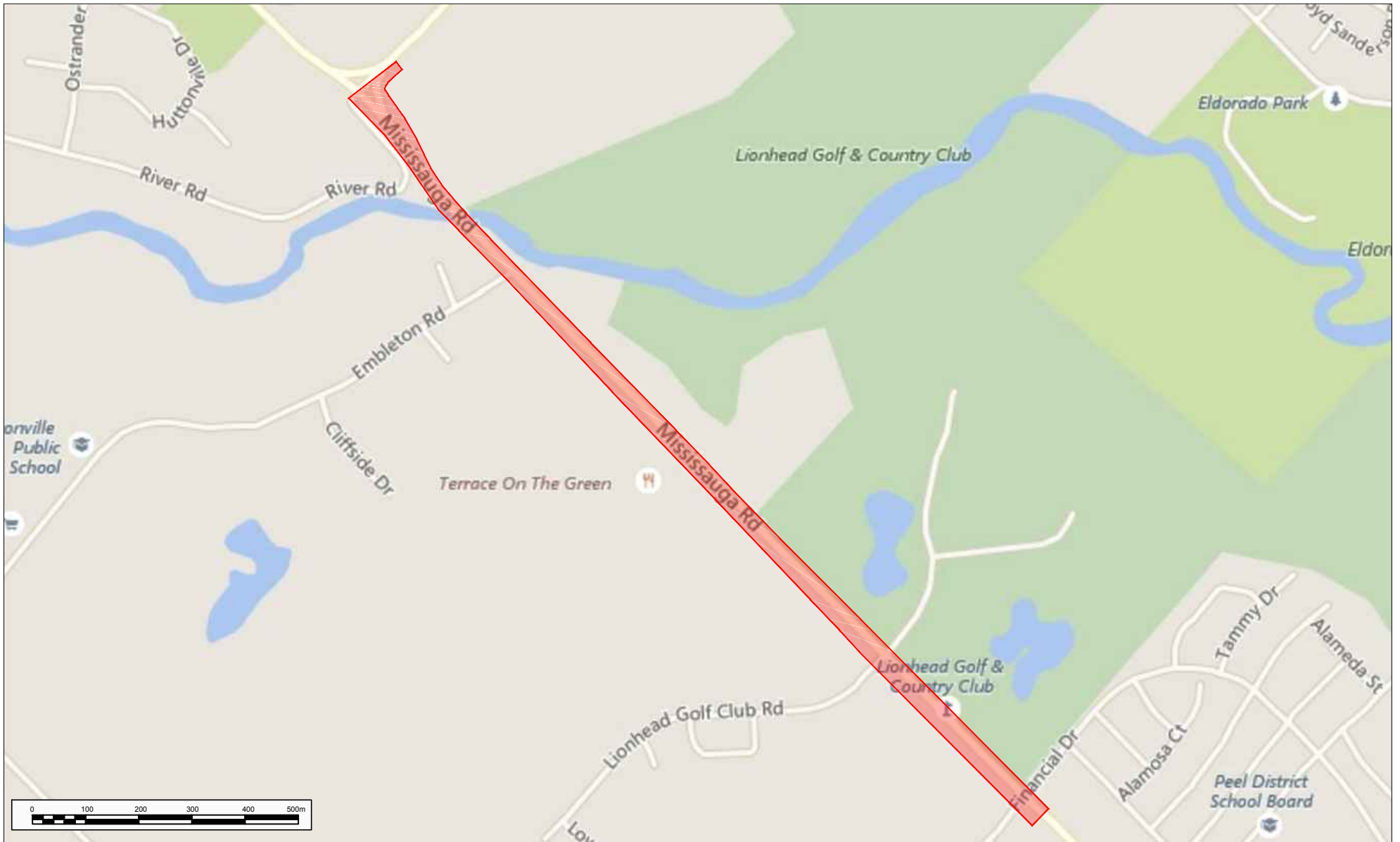


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December 13, 2017

APPENDIX A
FIGURES



LEGEND

 Study area

NOTES:

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE REPORT No. TP115085.1A.3001.

Conditions encountered in the field may be different from the interpreted information presented on this figure.

SOURCE: Bing Maps

CLIENT:
CITY OF BRAMPTON
REGION OF PEEL

Drawn By: CH

Checked By: SA

Revision N°: 01

Scale: 1: 10,000



STAGE 2 ARCHAEOLOGICAL ASSESSMENT
Mississauga Road (Regional Rd.1) between Financial Dr.
and Queen St. W. (Regional Rd. 6), Brampton, Ontario

Location of the Study Area

PROJECT N°: TP115085.1A.3001

DATE: 12 Dec 2017

Amec Foster Wheeler
Environment and Infrastructure
3450 Harvester Road, Suite 100, Burlington, ON
L7N3W5
tel: 905-335-2353 www.amectv.com

FIGURE: 1





LEGEND

 Study area

NOTES:

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE REPORT No. TP115085.1A.3001.

Conditions encountered in the field may be different from the interpreted information presented on this figure.

SOURCE: Bing Maps

CLIENT:
**CITY OF BRAMPTON
REGION OF PEEL**

Drawn By: CH

Checked By: SA

Revision N°: 01

Scale: 1: 10,000



STAGE 2 ARCHAEOLOGICAL ASSESSMENT
Mississauga Road (Regional Rd. 1) between Financial Dr.
and Queen St. W. (Regional Rd. 6), Brampton, Ontario

**Aerial Photograph Showing the Location of
the Study Area**

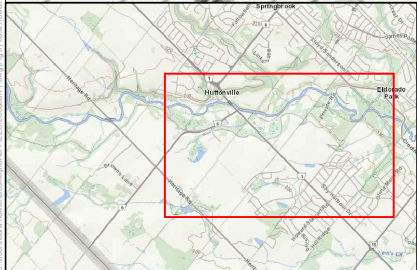
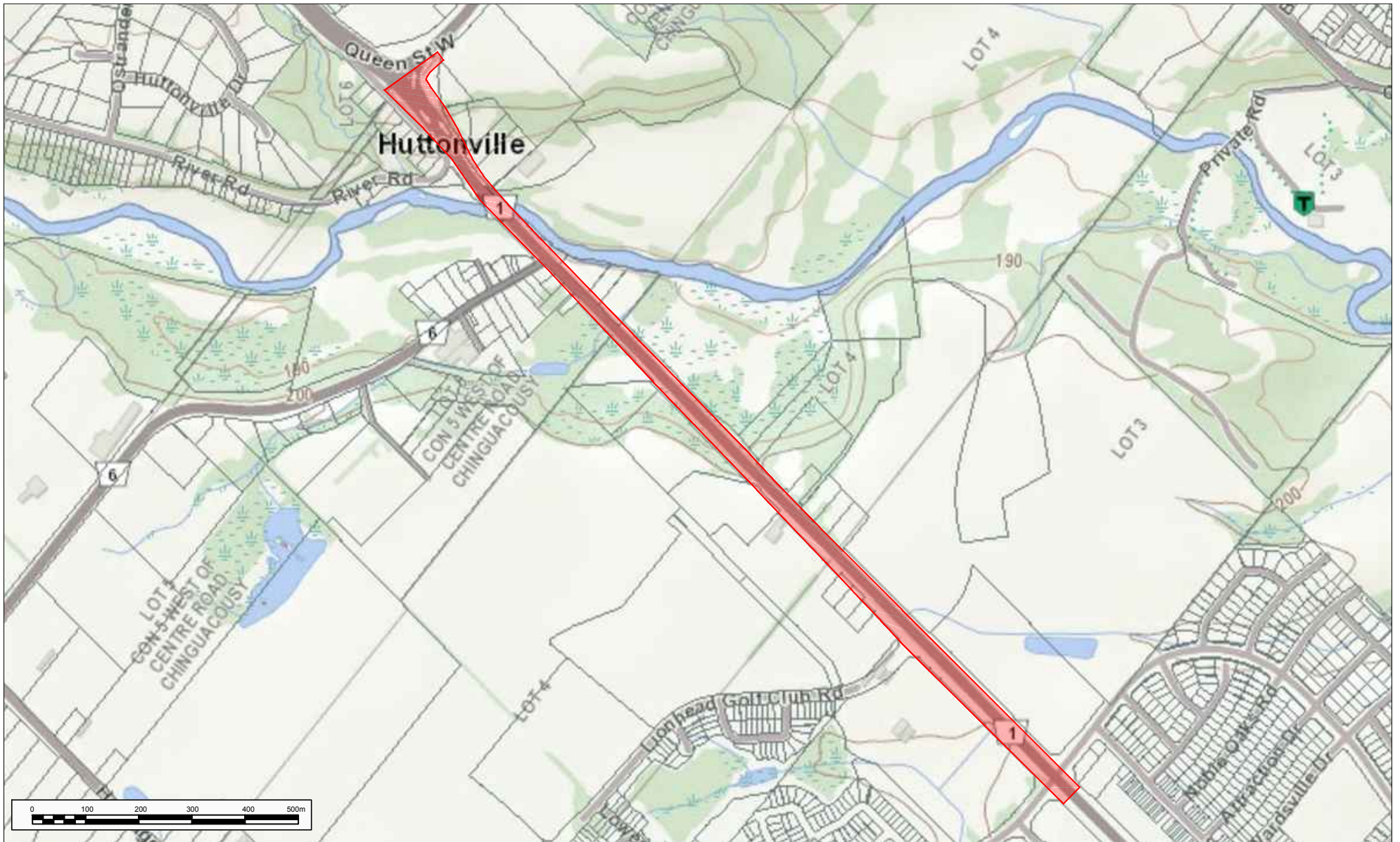
PROJECT N°: TP115085.1A.3001

DATE: 12 Dec 2017

Amec Foster Wheeler
Environment and Infrastructure
3450 Harvester Road, Suite 100, Burlington, ON
L7N3W5
tel: 905-335-2353 www.amecfw.com

FIGURE:
2





LEGEND

 Study area

NOTES:

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE REPORT No. TP115085.1A.3001.

Conditions encountered in the field may be different from the interpreted information presented on this figure.

SOURCE: Canadian Topographic Maps

CLIENT:
CITY OF BRAMPTON
REGION OF PEEL

Drawn By: CH

Checked By: SA

Revision N°: 01

Scale: 1: 10,000



STAGE 2 ARCHAEOLOGICAL ASSESSMENT
Mississauga Road (Regional Rd. 1) between Financial Dr.
and Queen St. W. (Regional Rd. 6), Brampton, Ontario

Topographic Map Showing the Location of
the Study Area

PROJECT N°: TP115085.1A.3001

DATE: 12 Dec 2017


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tel: 905-335-2353 www.amecfw.com

FIGURE:
3





LEGEND

 Study area

* NOTE best quality available

NOTES:
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Conditions encountered in the field may be different from the interpreted information presented on this figure.

SOURCE: 1859 Tremaine Map of Peel

CLIENT:
 CITY OF BRAMPTON
 REGION OF PEEL

Drawn By: CH
 Checked By: SA

Revision N°: 01
 Scale: 1: 20,000




STAGE 2 ARCHAEOLOGICAL ASSESSMENT
 Mississauga Road (Regional Rd. 1) between Financial Dr. and Queen St. W. (Regional Rd. 6), Brampton, Ontario

1859 Tremaine Map of the County of Peel, Canada West Showing the Location of the Study Area

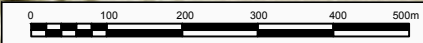
PROJECT N°: TP115085.1A.3001
 DATE: 12 Dec 2017

FIGURE: 4


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C:\Users\Newell\Documents\ESR\02\01\1\Map\Fig 4\2017\01\20170120\1859TremaineMapOfPeel.mxd



LEGEND

 Study area

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE REPORT No. TP115085.1A.3001.

Conditions encountered in the field may be different from the interpreted information presented on this figure.


SOURCE: 1877 Illustrated Historical Atlas of the County of Peel

CLIENT:
 CITY OF BRAMPTON
 REGION OF PEEL

Drawn By: CH
 Checked By: SA

Revision N°: 01

Scale: 1: 10,000



STAGE 2 ARCHAEOLOGICAL ASSESSMENT
 Mississauga Road (Regional Rd. 1) between Financial Dr. and Queen St. W. (Regional Rd. 6), Brampton, Ontario


1877 Illustrated Historical Atlas of the County of Peel
 Showing the Location of the Study Area

PROJECT N°: TP115085.2A.3001

DATE: 12 Dec 2017







FIGURE: 5

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 Environment and Infrastructure
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City of Brampton, 2017. All rights reserved.

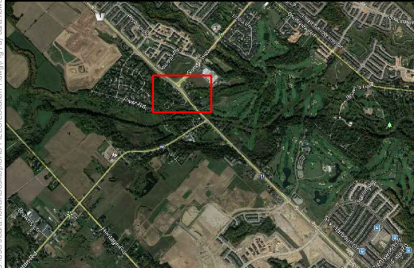
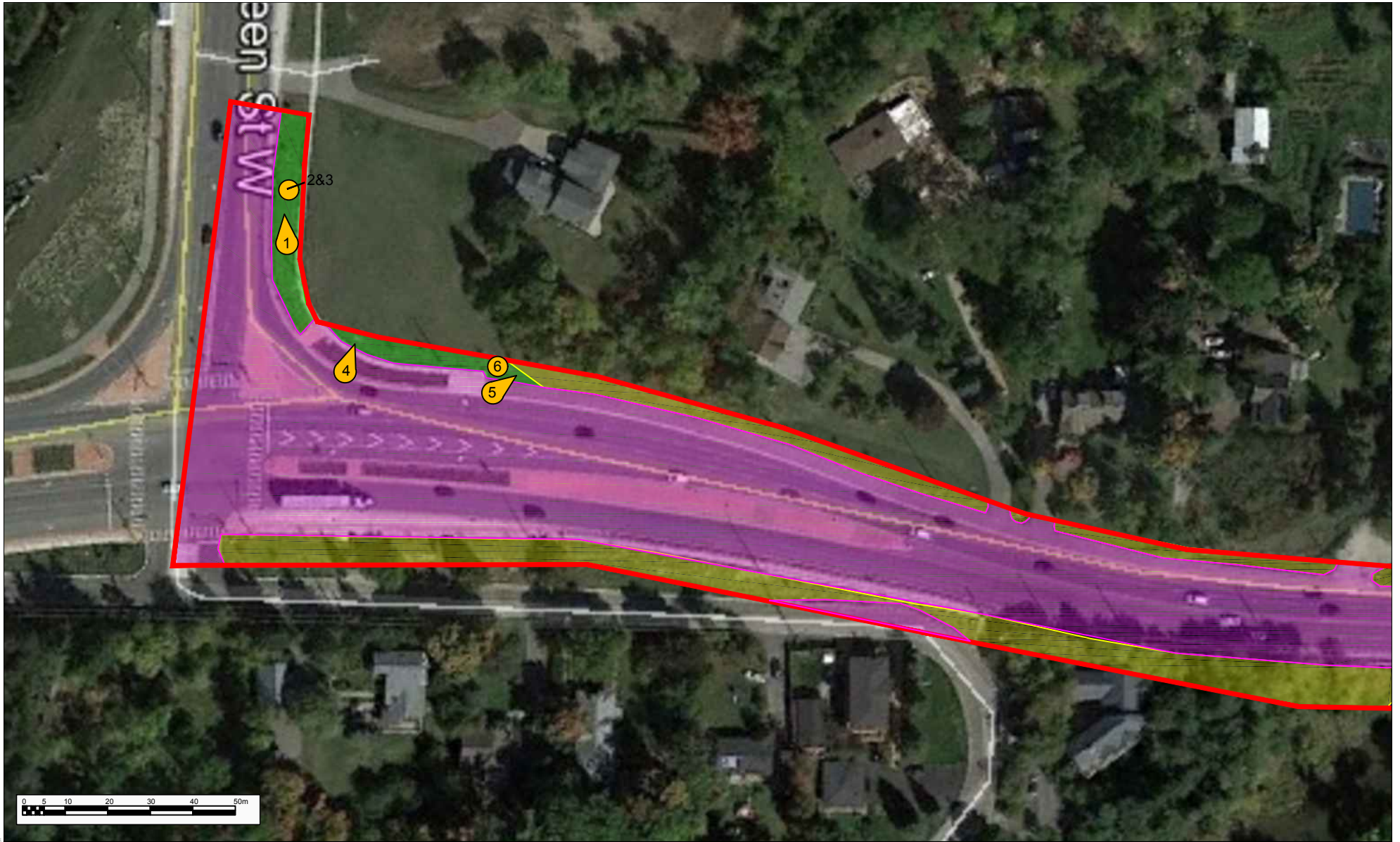


LEGEND	
	Study Area
	Archaeological potential removed due to roads, driveways and gravel shoulder
	Area of archaeological potential intensive testing required
	Archaeological potential removed due to artificial slope
	Previously assessed (ASI 2005). No further assessment required
	1 Photograph location and direction

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE REPORT No. TB115085.1A.3001
 Conditions encountered in the field may be different from the interpreted information presented on this figure.
 SOURCE: ESRI

CLIENT: CITY OF BRAMPTON REGION OF PEEL	
Drawn By: CH	STAGE 2 ARCHAEOLOGICAL ASSESSMENT Mississauga Road (Regional Rd.1) between Financial Dr. and Queen St.W. (Regional Rd.6), Brampton, Ontario
Checked By: SA	
Revision N°: 01	PROJECT N°: TP115085.1A.3001
Scale: 1: 2,000	DATE: 09 Feb 2016
	

Amec Foster Wheeler (2015) Stage 1 Results	
FIGURE: 6e	
Amec Foster Wheeler Environment and Infrastructure 505 Woodward Ave., Hamilton, ON L8H6N6 tel: 905-312-0700 www.amecfw.com	
	



LEGEND

- Study area
- Disturbed areas due to roads, driveways and gravel shoulder
- Excessive slope
- Test pitted at 5 metre intervals
- 👉 Photograph number, location and direction

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE REPORT No. TP115085.1A.3001.


Conditions encountered in the field may be different from the interpreted information presented on this figure.

SOURCE: Bing Map

CLIENT:
 CITY OF BRAMPTON
 REGION OF PEEL

Drawn By: CH
 Checked By: SA

Revision N°: 01
 Scale: 1: 1,250




STAGE 2 ARCHAEOLOGICAL ASSESSMENT
 Mississauga Road (Regional Rd. 1) between Financial Dr. and Queen St. W. (Regional Rd. 6), Brampton, Ontario

Stage 2 Results with Photograph Numbers, Locations and Direction

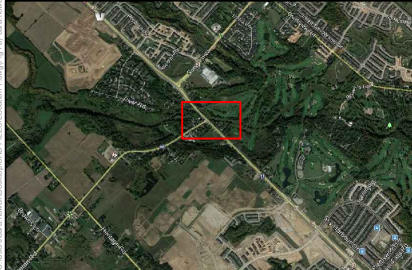
PROJECT N°: TP115085.1A.3001
 DATE: 03 Jan 2018

FIGURE: 7a

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C:\Users\Newell\Documents\115085\Drawings\1_Aerial\115085_1A_3001_7a.mxd



LEGEND	
	Study area
	Disturbed areas due to roads, driveways and gravel shoulder
	Excessive slope
	Test pitted at 5 metre intervals
	No permission to enter. Stage 2 assessment required
	Photograph number, location and direction
	Low and wet

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE REPORT No. TP115085.1A.3001.

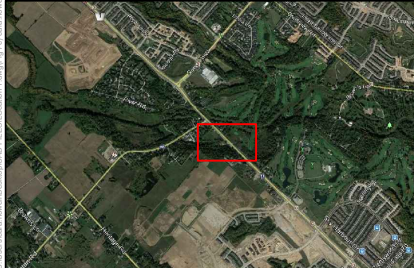
Conditions encountered in the field may be different from the interpreted information presented on this figure.

SOURCE: Bing Maps

CLIENT: CITY OF BRAMPTON REGION OF PEEL	
Drawn By:	CH
Checked By:	SA
Revision N°:	01
Scale:	1: 1,250

STAGE 2 ARCHAEOLOGICAL ASSESSMENT Mississauga Road (Regional Rd. 1) between Financial Dr. and Queen St. W. (Regional Rd. 6), Brampton, Ontario	
Stage 2 Results with Photograph Numbers, Locations and Direction	
PROJECT N°:	TP115085.1A.3001
DATE:	03 Jan 2018
Amec Foster Wheeler Environment and Infrastructure 3450 Harvester Road, Suite 100, Burlington, ON L7N3W5 tel: 905-335-2353 www.amectw.com	
FIGURE: 7b	

City of Brampton - Mississauga Road (Regional Rd. 1) between Financial Dr. and Queen St. W. (Regional Rd. 6), Brampton, Ontario



LEGEND

- Study area
- Disturbed areas due to roads, driveways and gravel shoulder
- Excessive slope
- Test pitted at 5 metre intervals
- Photograph number, location and direction
- Low and wet

NOTES:

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE REPORT No. TP115085.1A.3001.

Conditions encountered in the field may be different from the interpreted information presented on this figure.

SOURCE: Bing Maps

CLIENT:
**CITY OF BRAMPTON
REGION OF PEEL**

Drawn By: CH

Checked By: SA

Revision N°: 01

Scale: 1: 1,250



STAGE 2 ARCHAEOLOGICAL ASSESSMENT
Mississauga Road (Regional Rd. 1) between Financial Dr.
and Queen St. W. (Regional Rd. 6), Brampton, Ontario

**Stage 2 Results with Photograph Numbers, Locations
and Direction**

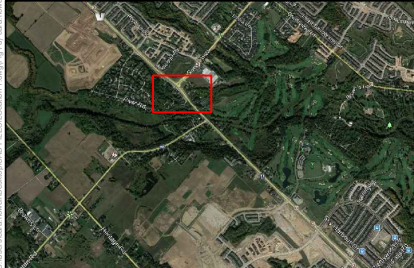
PROJECT N°: TP115085.1A.3001

DATE: 03 Jan 2018

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Environment and Infrastructure
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L7N3W5
tel: 905-335-2353 www.amectw.com

FIGURE:
7c





LEGEND

- Study area
- Disturbed areas due to roads, driveways and gravel shoulder
- Excessive slope
- Test pitted at 5 metre intervals

Photograph number, location and direction

NOTES:

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE REPORT No. TP115085.1A.3001.

Conditions encountered in the field may be different from the interpreted information presented on this figure.

SOURCE: Bing Maps

CLIENT:
**CITY OF BRAMPTON
REGION OF PEEL**

Drawn By: CH

Checked By: SA

Revision N°: 01

Scale: 1: 1,250



STAGE 2 ARCHAEOLOGICAL ASSESSMENT
Mississauga Road (Regional Rd. 1) between Financial Dr. and Queen St. W. (Regional Rd. 6), Brampton, Ontario

Stage 2 Results with Photograph Numbers, Locations and Direction

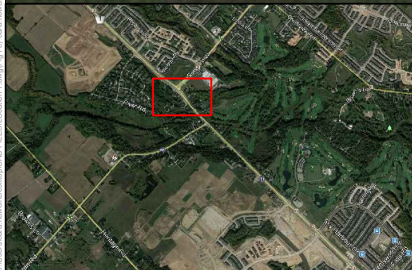
PROJECT N°: TP115085.1A.3001

DATE: 03 Jan 2018

Amec Foster Wheeler
Environment and Infrastructure
3450 Harvester Road, Suite 100, Burlington, ON
L7N3W5
tel: 905-335-2353 www.amectw.com

FIGURE:
7d





LEGEND

- Study area
- Disturbed areas due to roads, driveways and gravel shoulder
- Excessive slope
- Test pitted at 5 metre intervals
- No permission to enter. Stage 2 assessment required

Photograph number, location and direction

NOTES:

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE REPORT No. TP115085.1A.3001.

Conditions encountered in the field may be different from the interpreted information presented on this figure.

SOURCE: Bing Maps

CLIENT:
**CITY OF BRAMPTON
REGION OF PEEL**

STAGE 2 ARCHAEOLOGICAL ASSESSMENT
Mississauga Road (Regional Rd. 1) between Financial Dr.
and Queen St. W. (Regional Rd. 6), Brampton, Ontario

Drawn By: CH

Stage 2 Results with Photograph Numbers, Locations and Direction

Checked By: SA

Revision N°: 01

PROJECT N°: TP115085.1A.3001

FIGURE:
7e

Scale: 1: 1,250

DATE: 03 Jan 2018



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L7N3W5
tel: 905-335-2353 www.amectw.com



APPENDIX B
PHOTOGRAPHS

APPENDIX B - PHOTOGRAPHIC RECORD



PROJECT NO. TP115085.1A.3001

PROJECT Stage 2 Archaeological Assessment

LOCATION Mississauga Road (Financial Drive to Queen Street West), Brampton Ontario



PHOTOGRAPH	1
-------------------	----------

Description

Facing northeast at Amec Foster Wheeler archaeologist conducting Stage 2 shovel testing programme.



PHOTOGRAPH	2
-------------------	----------

Description

Facing down at soils from test-pit in photograph 3. No intact topsoil was present. Gravel fill with a mottled brown and grayish-brown fill.

APPENDIX B - PHOTOGRAPHIC RECORD

PROJECT NO. TP115085.1A.3001

PROJECT Stage 2 Archaeological Assessment

LOCATION Mississauga Road (Financial Drive to Queen Street West), Brampton Ontario



PHOTOGRAPH

3

Description

Facing down at Stage 2 test-pit advanced. No intact topsoil was present. Gravel fill with a mottled brown and grayish-brown fill.



PHOTOGRAPH

4

Description

Facing north at Amec Foster Wheeler archaeologist conducting Stage 2 shovel testing programme.

APPENDIX B - PHOTOGRAPHIC RECORD



PROJECT NO. TP115085.1A.3001

PROJECT Stage 2 Archaeological Assessment

LOCATION Mississauga Road (Financial Drive to Queen Street West), Brampton Ontario



PHOTOGRAPH	5
-------------------	----------

Description
Facing northeast at Amec Foster Wheeler archaeologist conducting Stage 2 shovel testing programme.



PHOTOGRAPH	6
-------------------	----------

Description
Facing down at Stage 2 test-pit advanced. No intact topsoil was present. Gravel fill with a mottled brown and grayish-brown fill.

APPENDIX B - PHOTOGRAPHIC RECORD



PROJECT NO. TP115085.1A.3001

PROJECT Stage 2 Archaeological Assessment

LOCATION Mississauga Road (Financial Drive to Queen Street West), Brampton Ontario



PHOTOGRAPH

7

Description

Facing west at Amec Foster Wheeler archaeologist conducting Stage 2 shovel testing programme.



PHOTOGRAPH

8

Description

Facing down at soils from test-pit in photograph 9. No intact topsoil was present. Gravel fill with a mottled brown and grayish-brown fill.

APPENDIX B - PHOTOGRAPHIC RECORD

PROJECT NO. TP115085.1A.3001

PROJECT Stage 2 Archaeological Assessment

LOCATION Mississauga Road (Financial Drive to Queen Street West), Brampton Ontario



PHOTOGRAPH

9

Description

Facing down at Stage 2 test-pit advanced. No intact topsoil was present. Gravel fill with a mottled brown and grayish-brown fill.



PHOTOGRAPH

10

Description

Facing down at Stage 2 test-pit advanced. Soils consisted of brown to dark brown mottled fill to a dark brown subsoil.

APPENDIX B - PHOTOGRAPHIC RECORD

PROJECT NO. TP115085.1A.3001

PROJECT Stage 2 Archaeological Assessment

LOCATION Mississauga Road (Financial Drive to Queen Street West), Brampton Ontario



PHOTOGRAPH

11

Description

Facing southwest at Amec Foster Wheeler archaeologist conducting Stage 2 shovel testing programme.



PHOTOGRAPH

12

Description

Facing northwest at Amec Foster Wheeler archaeologist and "MNCFN" field liaison conducting Stage 2 shovel testing programme.

APPENDIX B - PHOTOGRAPHIC RECORD

PROJECT NO. TP115085.1A.3001

PROJECT Stage 2 Archaeological Assessment

LOCATION Mississauga Road (Financial Drive to Queen Street West), Brampton Ontario



PHOTOGRAPH

13

Description

Facing east at Amec Foster Wheeler archaeologist conducting Stage 2 shovel testing programme.



PHOTOGRAPH

14

Description

Facing east at Amec Foster Wheeler archaeologist conducting Stage 2 shovel testing programme.


APPENDIX B - PHOTOGRAPHIC RECORD




PROJECT NO. TP115085.1A.3001

PROJECT Stage 2 Archaeological Assessment

LOCATION Mississauga Road (Financial Drive to Queen Street West), Brampton Ontario

	PHOTOGRAPH 15
	Description Facing east at area of low archaeological potential due to low and wet conditions.

	PHOTOGRAPH 16
	Description Facing west at area of low archaeological potential due to low and wet conditions.

APPENDIX C
ASSESSOR QUALIFICATIONS

ASSESSOR QUALIFICATIONS

Dr. Shaun Austin, Ph.D. – Associate Archaeologist

Dr. Austin is the Senior Advisor of Amec Foster Wheeler's cultural heritage resources group and is based in the Amec Foster Wheeler's Hamilton Office. He has been working in Canadian archaeology and heritage since 1976 and as an archaeological and heritage consultant in Ontario since 1987. He is a dedicated cultural heritage consultant with repeated success guiding projects through to completion to the satisfaction of the development proponent, the cultural heritage community and all other stakeholder groups. His areas of interest and expertise include pre-contact Aboriginal lithics and ceramics. Dr. Austin holds a Professional Archaeology License (P141) issued by the Ontario Ministry of Tourism, Culture and Sport, is MTO RAQs certified in Archaeology/Heritage and is a member of the Ontario Association of Professional Archaeologists.

Jason Seguin, M.A. – Senior Archaeologist

Mr. Seguin has been engaged in archaeology since 2004. Mr. Seguin has conducted stage 1 to 4 archaeological assessments including background searches, field surveys, archaeological excavations, analysis of cultural artifacts, laboratory work and reporting. Mr. Seguin is involved in project management and supervision as well as being an archaeological laboratory director. Mr. Seguin has developed research and communication skills through editing field reports, teaching university level students in both lecture and seminar environments, as well as preparing and presenting presentations at academic conferences. Mr. Seguin's education and work experience have provided him with an extensive knowledge base, consisting of theoretical and practical experience in cultural resource management in Canada and Central America, as well as curatorial, archival and museum management experience. Mr. Seguin holds a Master's Degree in Anthropology from Trent University, and a Post-Graduate Certificate in Museum Management and Curatorship from Sir Sandford Fleming College. Mr. Seguin holds a **Professional Archaeology License (License P354)** issued by the Ontario Ministry of Tourism, Culture and Sport.

Cara Howell B.A. – Senior Archaeologist

Ms. Howell has been working in consulting archaeology since 1999. During this time she has acquired a full range of archaeological skills, from background research to Stage 4 excavation. She has developed a comprehensive understanding of all aspects of material culture and has a specialized interest in historic Euro-Canadian artifacts. As Laboratory Director for Amec Foster Wheeler's Archaeology Group, she was instrumental in creating and implementing cataloguing systems for all types of recovered artifacts. Ms. Howell also serves as lead liaison with First Nations communities. She

Region of Peel
Stage 2 Archaeological Assessment
Mississauga Road Widening Between Financial Drive
and Queen St. West, City of Brampton, Regional
Municipality of Peel, Ontario



holds a B.A. in Physical Anthropology and a B.A. in Classical Archaeology from McMaster University, and an **Applied Research License (R180)** issued by the Ontario Ministry of Tourism, Culture and Sport.

APPENDIX D
LIMITATIONS

LIMITATIONS

1. The work performed in the preparation of this report and the conclusions presented are subject to the following:
 - (a) The Standard Terms and Conditions which form a part of our Professional Services Contract;
 - (b) The Scope of Services;
 - (c) Time and Budgetary limitations as described in our Contract; and,
 - (d) The Limitations stated herein.
2. No other warranties or representations, either expressed or implied, are made as to the professional services provided under the terms of our Contract, or the conclusions presented.
3. The conclusions presented in this report were based, in part, on visual observations of the Study Area. Our conclusions cannot and are not extended to include those portions of the Study Area which were not reasonably available, in Amec Foster Wheeler Environment & Infrastructure's opinion, for direct observation.
4. The potential for archaeological resources, and any actual archaeological resources encountered, at the Study Area were assessed, within the limitations set out above, having due regard for applicable heritage regulations as of the date of the inspection.
5. Services including a background study and fieldwork were performed. Amec Foster Wheeler Environment & Infrastructure's work, including archival studies and fieldwork, were completed in a professional manner and in accordance with the Ministry of Tourism, Culture and Sport's guidelines. It is possible that unforeseen and undiscovered archaeological resources may be present at the Study Area.
6. The utilization of Amec Foster Wheeler Environment & Infrastructure's services during the implementation of any further archaeological work recommended will allow Amec Foster Wheeler Environment & Infrastructure to observe compliance with the conclusions and recommendations contained in the report. Amec Foster Wheeler Environment & Infrastructure's involvement will also allow for changes to be made as necessary to suit field conditions as they are encountered.
7. This report is for the sole use of the parties to whom it is addressed unless expressly stated otherwise in the report or contract. Any use which any third party makes of the report, in whole or in part, or any reliance thereon, or decisions made based on any information of conclusions in the report, is the sole responsibility of such third party. Amec Foster Wheeler Environment & Infrastructure accepts no responsibility whatsoever for damages or loss of any nature or kind suffered by any such third party as a result of actions taken or not taken or decisions made in reliance on the report or anything set out therein.
8. This report is not to be given over to any third-party other than a governmental entity, for any purpose whatsoever without the written permission of Amec Foster Wheeler Environment & Infrastructure, which shall not be unreasonably withheld.

APPENDIX E

**INDIGENOUS
ENGAGEMENT**

Indigenous Engagement Documentation

To fulfill commitments made by the Region of Peel, Amec Foster Wheeler provided information sharing letters to the three Indigenous groups noted in the table prior to commencing Stage 2 field activities for the Stage 2 archaeological assessment for Mississauga Road between Financial Drive and Queen Street West, in the City of Brampton. The information sharing letters were sent via email on 27 October, 2017 and provided project details along with an invitation to participate in the project. Copies of the letters are included within this document.

While the Haudenosaunee Development Institute and Six Nations Lands of the Grand River did not respond to the letters, the Mississaugas of New Credit First Nation elected to assign a field liaison representative. The assigned field liaison was present while Stage 2 field work was conducted on the 4 December, 2017.

Name	Contact Information
Mississaugas of New Credit First Nation	<i>Contact Name:</i> Megan DeVries <i>Address:</i> 6 First Line Road, R.R.#6 Hagersville, Ontario N0A 1H0 <i>Email:</i> megan.devries@newcreditfirstnation.com <i>Tel:</i> (905) 768-4260
Six Nations Lands of the Grand River	<i>Contact Name:</i> Joanne Thomas <i>Address:</i> 2498 Chiefswood Road, P.O. Box 5000 Ohsweken, Ontario N0A 1M0 <i>Email:</i> jthomas@sixnations.ca <i>Tel:</i> (519) 753-3449
Haudenosaunee Confederacy Chiefs Council (represented by the Haudenosaunee Development Institute)	<i>Contact Name:</i> Wayne Hill <i>Address:</i> 16 Sunrise Court Suite 600, P.O. Box 714 Ohsweken, Ontario N0A 1M0 <i>Email:</i> tworowarchaeology@gmail.com <i>Tel:</i> (519) 455-4222



October 27th, 2017

Project No. TP115085

Attention: **Megan DeVries, Archaeological Coordinator
Department of Consultation and Accommodation
Mississaugas of the New Credit First Nations**

RE: **Information Sharing, Stage 2 Archaeological Assessment for the proposed Improvements to Mississauga Road (Regional Road 1) From Financial Drive to Queen Street West (Regional Road 6), City of Brampton, Regional Municipality of Peel, Ontario.**

Dear Ms. DeVries,

Amec Foster Wheeler Environment & Infrastructure, a Division of Amec Foster Wheeler Americas Limited was retained by the Region of Peel to conduct a Stage 2 archaeological assessment for the proposed improvements to Mississauga Road (Regional Road 1) from Financial Drive to Queen Street West (Regional Road 6), City of Brampton, Regional Municipality of Peel, Ontario. It is anticipated that the Stage 2 fieldwork will take two days to complete and is scheduled to begin in November 2017 (confirmation of field dates will be forwarded).

The purpose of the Stage 2 portion of the assessment is to determine if archaeological sites with cultural heritage value or interest will be impacted by the proposed undertaking and to recommend appropriate Stage 3 assessment strategies for any such sites.

STAGE 2 SCOPE OF WORK

This assessment will be conducted in accordance with the technical standards defined in the *Standards and Guidelines for Consultant Archaeologists*, 2011, set out by the MTCS, and with the Ontario Heritage Act, R.S.O. 1990, c.0.18.

The scope of work for the Stage 2 assessment will consist of the following tasks:

-) Contact MTCS to determine whether archaeological sites have previously been recorded in the vicinity of each study area;
-) Review relevant archaeological reports that document work within 50 meters (m) of each study area;
-) Review the study area's physiographic and hydrographic setting, soils, vegetation, and proximity to important resources and transportation routes;
-) Review historical atlases and other archival sources for evidence of early Euro-Canadian land use;
-) Portions of the study area containing archaeological potential will be subjected to test pit survey at 5-m intervals, employing strategies that adhere to Section 2.1.2 of the Standards and Guidelines for Consultant Archaeologists (MTCS 2011);
-) Mapping, photographing and other relevant graphics; and
-) Artifact processing and analysis, where applicable.

Brief biographies the principal archaeologists and their roles for this particular project are included below.

Shaun Austin, P.H.D., Associate Archaeologist – Dr. Austin is the Senior Advisor to Amec Foster Wheeler's Cultural Heritage Resources Group and is based in the Hamilton Office. He has been working in Canadian archaeology and heritage since 1976 and as an archaeological and heritage consultant in Ontario since 1987. He is a dedicated consultant with repeated success guiding projects through to completion to the satisfaction of the development proponent, First Nations communities and cultural heritage stakeholder groups. His areas of interest and expertise include pre-contact Aboriginal lithics and ceramics. Dr. Austin holds a **Professional Archaeology Licence (P141)** issued by the Ontario Ministry of Tourism, Culture and Sport, is MTO RAQs certified in Archaeology/Heritage and is a member of the Ontario Association of Professional Archaeologists. Roles: Principle Project Licensee, Senior Report Reviewer.

Cara Howell B.A., Senior Archaeologist Ms. Howell has been working in consulting archaeology since 1999. During this time she has acquired a full range of archaeological skills, from background research to Stage 4 excavation. She has developed a comprehensive understanding of all aspects of material culture and has a specialized interest in historic Euro-Canadian artifacts. As Laboratory Director for Amec Foster Wheeler's Archaeology Group, she was instrumental in creating and implementing cataloguing systems for all types of recovered artifacts. Mr. Howell also serves as lead liaison with First Nations communities. She holds a B.A. in Physical Anthropology and a B.A. in Classical Archaeology from McMaster University and an

Applied Research Licence (R108) from the Ministry of Tourism, Culture and Sport. Roles: Aboriginal Engagement, Project Manager, Field Director, Artifact Analysis and Processing Lead

Jason Seguin, M.A., Senior Archaeologist – Mr. Seguin has worked as an archaeologist / anthropologist since 2004. Mr. Seguin has conducted Stage 1 to 4 archaeological assessments including background searches, field surveys, archaeological excavations, analysis of cultural artifacts, laboratory work and reporting. Mr. Seguin is involved in project management and supervision as well as being an archaeological laboratory director. Mr. Seguin has developed research and communication skills through editing field reports, teaching university level students in both lecture and seminar environments, as well as preparing and presenting presentations at academic conferences. Mr. Seguin's education and work experience have provided him with an extensive knowledge base, consisting of theoretical and practical experience in cultural resource management in Canada and Central America, as well as curatorial, archival and museum management experience. Mr. Seguin holds a Master's Degree in Anthropology from Trent University, and a Post-Graduate Certificate in Museum Management and Curatorship from Sir Sandford Fleming College. Mr. Seguin currently holds a **Professional Archaeology Licence (P354)** issued by the Ontario Ministry of Tourism and Culture and Sport. Roles: Report Writer, Field Assistant.

Devon Brusey B.A. Hon., Staff Archaeologist – Ms. Brusey has worked as a consultant archaeologist since 2006. She holds an honours B.A. degree in Anthropology and Japanese Studies from McMaster University. Ms. Brusey has worked on over 300 Stage 1 through Stage 4 archaeological assessments throughout Ontario, many of which have been completed as part of the environmental assessment process for the development of wind and solar farms, hydro line corridors and municipal roadway improvements. Ms. Brusey has acted as a project manager, crew supervisor, artifact analyst, and report writer for many projects. Recently she has expanded her experiences to include Built Heritage/Cultural Heritage Landscape assessments, as well as Heritage Impact assessments. Ms. Brusey holds an **Applied Research Licence (R410)** issued by the Ontario Ministry of Tourism, Culture and Sport. Roles: Field technician.

We have provided this information sharing letter to demonstrate that we take your interest in this project very seriously. If you have any questions or concerns, please do not hesitate to contact me at cara.howell@amecfw.com.

Regards,

Amec Foster Wheeler Environment & Infrastructure
a division of Amec Foster Wheeler Americas Limited

A handwritten signature in cursive script, appearing to read 'Cara Howell', enclosed in a faint rectangular border.

Cara Howell, B.A.
Senior Archaeologist

cara.howell@amecfw.com



October 27th 2017

Project No. TP115085

Attention: Joanne Thomas, Six Nations Lands and Resources

RE: Information Sharing, Stage 2 Archaeological Assessment for the proposed Improvements to Mississauga Road (Regional Road 1) From Financial Drive to Queen Street West (Regional Road 6), City of Brampton, Regional Municipality of Peel, Ontario.

Dear Ms. Thomas,

Amec Foster Wheeler Environment & Infrastructure, a Division of Amec Foster Wheeler Americas Limited was retained by the Region of Peel to conduct a Stage 2 archaeological assessment for the proposed improvements to Mississauga Road (Regional Road 1) from Financial Drive to Queen Street West (Regional Road 6), City of Brampton, Regional Municipality of Peel, Ontario.

It is anticipated that the Stage 2 fieldwork will take two days to complete and is scheduled to begin in June 2017 (confirmation of field dates will be forwarded).

The purpose of the Stage 2 portion of the assessment is to determine if archaeological sites with cultural heritage value or interest will be impacted by the proposed undertaking and to recommend appropriate Stage 3 assessment strategies for any such sites.

STAGE 2 SCOPE OF WORK

This assessment will be conducted in accordance with the technical standards defined in the *Standards and Guidelines for Consultant Archaeologists*, 2011, set out by the MTCS, and with the Ontario Heritage Act, R.S.O. 1990, c.0.18.

The scope of work for the Stage 2 assessment will consist of the following tasks:

Amec Foster Wheeler Environment & Infrastructure
A division of Amec Foster Wheeler
Americas Limited
3450 Harvester Road, Suite 100
Burlington, Ontario, L7N 3W5
Tel: 905-353-2353 Fax: 905-335-1414

www.amecfw.com

-) Contact MTCS to determine whether archaeological sites have previously been recorded in the vicinity of each study area;
-) Review relevant archaeological reports that document work within 50 meters of each study area;
-) Review the study area's physiographic and hydrographic setting, soils, vegetation, and proximity to important resources and transportation routes;
-) Review historical atlases and other archival sources for evidence of early Euro-Canadian land use;
-) Portions of the study area containing archaeological potential will be subjected to test pit survey at 5-m intervals, employing strategies that adhere to Section 2.1.2 of the Standards and Guidelines for Consultant Archaeologists (MTCS 2011);
-) Mapping, photographing and other relevant graphics;
-) Artifact processing and analysis, where applicable; and,

Brief biographies the principal archaeologists and their roles for this particular project are included below.

Shaun Austin, P.H.D., Associate Archaeologist – Dr. Austin is the Senior Advisor to Amec Foster Wheeler's Cultural Heritage Resources Group and is based in the Hamilton Office. He has been working in Canadian archaeology and heritage since 1976 and as an archaeological and heritage consultant in Ontario since 1987. He is a dedicated consultant with repeated success guiding projects through to completion to the satisfaction of the development proponent, First Nations communities and cultural heritage stakeholder groups. His areas of interest and expertise include pre-contact Aboriginal lithics and ceramics. Dr. Austin holds a **Professional Archaeology Licence (P141)** issued by the Ontario Ministry of Tourism, Culture and Sport, is MTO RAQs certified in Archaeology/Heritage and is a member of the Ontario Association of Professional Archaeologists. Roles: Principle Project Licensee, Senior Report Reviewer.

Cara Howell B.A., Senior Archaeologist Ms. Howell has been working in consulting archaeology since 1999. During this time she has acquired a full range of archaeological skills, from background research to Stage 4 excavation. She has developed a comprehensive understanding of all aspects of material culture and has a specialized interest in historic Euro-Canadian artifacts. As Laboratory Director for Amec Foster Wheeler's Archaeology Group, she was instrumental in creating and implementing cataloguing systems for all types of recovered artifacts. Mr. Howell also serves as lead liaison with First Nations communities. She holds a B.A. in Physical Anthropology and a B.A. in Classical Archaeology from McMaster University and an **Applied Research Licence (R108)** from the Ministry of Tourism, Culture and Sport. Roles: Aboriginal Engagement, Project Manager, Field Director, Artifact Analysis and Processing Lead

Jason Seguin, M.A., Senior Archaeologist – Mr. Seguin has worked as an archaeologist / anthropologist since 2004. Mr. Seguin has conducted Stage 1 to 4 archaeological assessments including background searches, field surveys, archaeological excavations, analysis of cultural artifacts, laboratory work and reporting. Mr. Seguin is involved in project management and supervision as well as being an archaeological laboratory director. Mr. Seguin has developed research and communication skills through editing field reports, teaching university level students in both lecture and seminar environments, as well as preparing and presenting presentations at academic conferences. Mr. Seguin's education and work experience have provided him with an extensive knowledge base, consisting of theoretical and practical experience in cultural resource management in Canada and Central America, as well as curatorial, archival and museum management experience. Mr. Seguin holds a Master's Degree in Anthropology from Trent University, and a Post-Graduate Certificate in Museum Management and Curatorship from Sir Sandford Fleming College. Mr. Seguin currently holds a **Professional Archaeology Licence (P354)** issued by the Ontario Ministry of Tourism and Culture and Sport. Roles: Report Writer, Field Assistant.

Devon Brusey B.A. Hon., Staff Archaeologist – Ms. Brusey has worked as a consultant archaeologist since 2006. She holds an honours B.A. degree in Anthropology and Japanese Studies from McMaster University. Ms. Brusey has worked on over 300 Stage 1 through Stage 4 archaeological assessments throughout Ontario, many of which have been completed as part of the environmental assessment process for the development of wind and solar farms, hydro line corridors and municipal roadway improvements. Ms. Brusey has acted as a project manager, crew supervisor, artifact analyst, and report writer for many projects. Recently she has expanded her experiences to include Built Heritage/Cultural Heritage Landscape assessments, as well as Heritage Impact assessments. Ms. Brusey holds an **Applied Research Licence (R410)** issued by the Ontario Ministry of Tourism, Culture and Sport. Roles: Field technician.

We have provided this information sharing letter to demonstrate that we take your interest in this project very seriously. If you have any questions or concerns, please do not hesitate to contact me at cara.howell@amecfw.com.

Regards,

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Senior Archaeologist

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October 27th, 2017

Project No. TP115085

Attention: Wayne Hill, Haudenosaunee Development Institute

RE: Information Sharing, Stage 2 Archaeological Assessment for the proposed Improvements to Mississauga Road (Regional Road 1) From Financial Drive to Queen Street West (Regional Road 6), City of Brampton, Regional Municipality of Peel, Ontario.

Dear Mr. Hill,

Amec Foster Wheeler Environment & Infrastructure, a Division of Amec Foster Wheeler Americas Limited was retained by the Region of Peel to conduct a Stage 2 archaeological assessment for the proposed improvements to Mississauga Road (Regional Road 1) from Financial Drive to Queen Street West (Regional Road 6), City of Brampton, Regional Municipality of Peel, Ontario.

It is anticipated that the Stage 2 fieldwork will take two days to complete and is scheduled to begin in June 2017 (confirmation of field dates will be forwarded).

The purpose of the Stage 2 portion of the assessment is to determine if archaeological sites with cultural heritage value or interest will be impacted by the proposed undertaking and to recommend appropriate Stage 3 assessment strategies for any such sites.

STAGE 1 AND 2 SCOPE OF WORK

This assessment will be conducted in accordance with the technical standards defined in the *Standards and Guidelines for Consultant Archaeologists*, 2011, set out by the MTCS, and with the Ontario Heritage Act, R.S.O. 1990, c.0.18.

The scope of work for the Stage 1 and 2 assessment will consist of the following tasks:

Amec Foster Wheeler Environment & Infrastructure
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- J Contact MTCS to determine whether archaeological sites have previously been recorded in the vicinity of each study area;
- J Review relevant archaeological reports that document work within 50 meters of each study area;
- J Review the study area's physiographic and hydrographic setting, soils, vegetation, and proximity to important resources and transportation routes;
- J Conduct a property inspection to gather current, first-hand information and to aid in delineating areas where archaeological potential may have been impacted or removed by recent land-use practices;
- J Review historical atlases and other archival sources for evidence of early Euro-Canadian land use;
- J Prepare appropriate recommendations;
- J Portions of the study area containing archaeological potential will be subjected to test pit survey at 5-m intervals, employing strategies that adhere to Section 2.1.2 of the Standards and Guidelines for Consultant Archaeologists (MTCS 2011);
- J Mapping, photographing and other relevant graphics;
- J Artifact processing and analysis, where applicable; and,

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was instrumental in creating and implementing cataloguing systems for all types of recovered artifacts. Mr. Howell also serves as lead liaison with First Nations communities. She holds a B.A. in Physical Anthropology and a B.A. in Classical Archaeology from McMaster University and an **Applied Research Licence (R108)** from the Ministry of Tourism, Culture and Sport. Roles: Aboriginal Engagement, Project Manager, Field Director, Artifact Analysis and Processing Lead

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Regards,

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