



## **1.0 PROJECT REPORT COVER PAGE**

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### **PROJECT INFORMATION:**

Corporate Project Number:

18517

MTCS Project Number:

P058-1648-2018

Investigation Type:

Stage 1-2 Archaeological Property Assessment

Project Name:

Main Street West

Project Location:

1630 Main Street West and 69 Sanders Blvd, Part of Lot  
55 Concession 1 (Geographic Township of Ancaster,  
County of Wentworth), City of Hamilton

Project Designation Number:

Not Currently Available

### **MTCS FILING INFORMATION:**

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Main Street West Site (AhGx-773)

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May 22, 2018

Type of Report:

**ORIGINAL**

## **2.0 EXECUTIVE SUMMARY**

This report describes the results of the 2018 Stage 1-2 Archaeological Assessment of 1630 Main Street West and 69 Sanders Blvd, Part of Lot 55 Concession 1 (Geographic Township of Ancaster, County of Wentworth), City of Hamilton conducted by AMICK Consultants Limited. This study was conducted under Professional Archaeologist License #P058 issued to Michael B. Henry by the Minister of Tourism, Culture and Sport for the Province of Ontario. This assessment was undertaken as a requirement under the Planning Act (RSO 1990b) and the Provincial Policy Statement (2014) in order to support a Draft Plan of Subdivision application and companion Zoning By-law Amendment application as part of the pre-submission process. Within the land use planning and development context, Ontario Regulation 544/06 under the Planning Act (1990b) requires an evaluation of archaeological potential and, where applicable, an archaeological assessment report completed by an archaeologist licensed by the Ministry of Tourism, Culture and Sport (MTCS). Policy 2.6 of the Provincial Policy Statement (PPS 2014) addresses archaeological resources. All work was conducted in conformity with Ontario Ministry of Tourism and Culture (MTC) Standards and Guidelines for Consultant Archaeologists (MTC 2011), the Ontario Heritage Act (RSO 1990a).

AMICK Consultants Limited was engaged by the proponent to undertake a Stage 1-2 Archaeological Assessment of lands potentially affected by the proposed undertaking and was granted permission to carry out archaeological fieldwork. The entirety of the study area was subject to property inspection and photographic documentation concurrently with the Stage 2 Property Assessment high intensity test pit methodology at a five-metre interval between individual test pits, on April 9<sup>th</sup> 2018. All records, documentation, field notes, photographs and artifacts (as applicable) related to the conduct and findings of these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Tourism, Culture and Sport (MTCS) on behalf of the government and citizens of Ontario.

As a result of the property Assessment of the study area one scatter of historic artifacts, the Main Street West Site (AhGx-773), was identified. Based on the characteristics of this site and the analysis of artifacts, the following recommendations are made:

- 1. Further archaeological assessment of the Main Street West (AhGx-773) Site is warranted;*
- 2. A Stage 3 Site-specific assessment of the Main Street West (AhGx-773) Site must be completed for this site in accordance with the Standards and Guidelines for Consultant Archaeologists (MTC 2011). The Stage 3 Site-specific assessment will consist of the excavation of 1 by 1 metre square test units on a 5 by 5 metre square grid; the grid squares will be referred to by the intersection coordinates of their southwest corner. Each test unit will be excavated stratigraphically by hand into the first 5 centimetres of subsoil. Each unit will be examined for stratigraphy, cultural*

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*features, or evidence of fill, and all soil was screened through wire mesh of 6 millimetre width. All artifacts will be retained and recorded by the corresponding grid unit designation and will be held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Tourism, Culture and Sport (MTCS) on behalf of the government and citizens of Ontario.*

- 3. The Stage 3 Site-specific Assessment of the Main Street West (AhGx-773) must include further archival research in order to establish the details of the occupation and land use history of the rural township lot of which the study area was a part.*
- 4. No soil disturbances or removal of vegetation shall take place within the archaeological site identified as the Main Street West (AhGx-773) Site within this Stage 1-2 Archaeological Assessment report prior to the acceptance of the Ministry of Tourism, Culture and Sport (MTCS) of a report recommending that all archaeological concerns for the Main Street West Site (AhGx-773) have been addressed and that there is no further cultural heritage value or interest for this site.*
- 5. It is anticipated that the fieldwork and reporting of the Stage 4 Mitigation of Development Impacts (if required) will be completed before the end of 2018 and it is not anticipated that any development activity will be necessary within the 50 metre wide Monitoring Buffers prior to the Spring of 2019.*

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#### **4.0 PROJECT PERSONNEL**

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## **5.0 PROJECT CONTEXT**

### **5.1 DEVELOPMENT CONTEXT**

This report describes the results of the 2017 Stage 1-2 Archaeological Assessment of 1630 Main Street West and 69 Sanders Blvd, Part of Lot 55 Concession 1 (Geographic Township of Ancaster, County of Wentworth), City of Hamilton conducted by AMICK Consultants Limited. This study was conducted under Professional Archaeologist License #P058 issued to Michael B. Henry by the Minister of Tourism, Culture and Sport for the Province of Ontario. This assessment was undertaken as a requirement under the Planning Act (RSO 1990b) and the Provincial Policy Statement (2014) in order to support a Draft Plan of Subdivision application and companion Zoning By-law Amendment application as part of the pre-submission process. Within the land use planning and development context, Ontario Regulation 544/06 under the Planning Act (1990b) requires an evaluation of archaeological potential and, where applicable, an archaeological assessment report completed by an archaeologist licensed by the Ministry of Tourism, Culture and Sport (MTCS). Policy 2.6 of the Provincial Policy Statement (PPS 2014) addresses archaeological resources. All work was conducted in conformity with Ontario Ministry of Tourism and Culture (MTC) Standards and Guidelines for Consultant Archaeologists (MTC 2011), the Ontario Heritage Act (RSO 1990a).

AMICK Consultants Limited was engaged by the proponent to undertake a Stage 1-2 Archaeological Assessment of lands potentially affected by the proposed undertaking and was granted permission to carry out archaeological fieldwork. The entirety of the study area was subject to property inspection and photographic documentation concurrently with the Stage 2 Property Assessment high intensity test pit methodology at a five-metre interval between individual test pits, on 09 April 2018. All records, documentation, field notes, photographs and artifacts (as applicable) related to the conduct and findings of these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Tourism, Culture and Sport (MTCS) on behalf of the government and citizens of Ontario.

The proposed development of the study area includes a nine storied building of mixed use bordering Main Street, a three storied enclosed building of stacked townhouses within and a three storied building of stacked townhouses on Sanders Boulevard along with underground parking areas with associated services and landscape modifications. A preliminary plan of the proposed development has been submitted together with this report to MTCS for review and reproduced within this report as Map 4.

### **5.2 HISTORICAL CONTEXT**

#### **5.2.1 GENERAL HISTORICAL OUTLINE**

## ***Wentworth County***

The townships in the area of Lake Ontario called the Head-of-the-Lake were first surveyed and named between 1788 and 1793. In 1802 the Home and Niagara Districts were created, at this time the Niagara District consisted of the counties of Haldimand and Lincoln, areas that included much of what later became Wentworth County. In 1816 the Gore district was created and consisted of two counties, Wentworth and Halton. Wentworth at this time consisted of the townships of Saltfleet, Barton, Binbrook, Glanford and Ancaster (City of Hamilton 2010).

The surrounding area enters the historic record in 1626, when Father Daillon, a French missionary, spent three months in the Hamilton region attempting to conclude a trading alliance with the Neutral Confederacy. These negotiations ultimately failed due to opposition from Huron allies (White 1978:409). By 1638, the Neutral had expanded east to the Niagara River in response to a void left by the Wenro migrating to Huronia and the Erie migrating southwest. By the early 1640s, the Neutrals were engaged in large-scale warfare with the Assistaeronons to the west while maintaining a neutral stance between the Huron and the League of Five Nations Iroquois. European influence in the region was generally restricted to the beaver pelt trade, and Aboriginal groups practiced a way of life that did not differ significantly from the pre-Contact period. By the late 1640's, the increasing scarcity of beaver pelts prompted the invasion of the Neutral by the League of Five Nations Iroquois. By 1651, the Neutral were destroyed, and they either moved west out of Ontario or were absorbed into the League of Five Nations (Trigger 1994:57).

The region appears to have been relatively unpopulated by permanent settlements in the latter half of the seventeenth century, with much of southern Ontario used as a hunting territory by the Iroquois. However, Ojibwa groups previously thought to have settled along the northern shores of Georgian Bay and Lake Superior gradually migrated into southern Ontario, and by the late seventeenth/early eighteenth century the Mississauga had settled in the Hamilton region (Rogers 1978:761).

By 1784, the British government purchased from the Mississauga over a million hectares of land between Lake Ontario and Lake Erie, which became known as the Between the Lakes Purchase (Surtees 1994:102). The Mississauga eventually relocated to the Grand River at New Credit in 1847.

## ***Ancaster Township***

Ancaster is a community located on the Niagara escarpment within the greater area of the city of Hamilton. This former town was founded officially in 1793 and is one of the oldest European communities in Ontario. The first European settlers to Ancaster were United Empire Loyalists who fought with the British in the Revolutionary War. The earliest settlers came in 1789, squatting in areas until surveys established lot lines in 1793 (Woodhouse 1973:3). The town of Ancaster began with the building of several sawmills in the 1790's. The settlement grew around this industry until it began to be known in 1800 as Ancaster

(ATHS 2010). By 1823, due in large part to its easily accessible water power located nearby already existing historical trading routes, Ancaster had become Upper Canada's largest industrial and commercial center. At that time it also had the largest population in Upper Canada with 1,681 townspeople surpassing both Toronto's 1,376 and Hamilton's 1,000 residents. However, in the 1820's Dundas began to forge ahead with its greater water power and when the Burlington Beach Canal opened in 1826 Hamilton became a deep water port giving them a great economic advantage. The coming of the Great Western Railway to Hamilton in 1851 further diminished Ancaster's industrial importance (Woodhouse 1973: 3).

### ***Concession 1, Lot 5***

The history of Concession 1 Lot 55 is outlined in *Ancaster's Heritage* (1998):

Concession 1, Lot55 was granted by the crown to Jemima, Sarah, and Mary Johnson in May of 1796...The estate passed to Richard Hatt, at some point, as he sold  $\frac{3}{4}$  acre to Robert Gowie, who died in November, 1816. This land was the farm of John Binkley, who also owned part of  $\frac{1}{54}$ , but nothing indicated the year in which the Binkleys bought it...The Binkleys were settled by the War of 1812, as George, John, and William Binkley all submitted claims for damages to their property. John Binkley's claim mentions *losses sustained in consequence of His Majesty's Troops and Indians being stationed at Burlington Heights* and includes the use of his barn for 11 weeks by Artillery Horses in 1813. The land was the home of Marx Binkley, and his son John Binkley Jr. There was a 60 acre parcel which John Binkley Jr. (1807-1882) sold to his three sons Lewis A. Binkley (1842-1922); Charles D. Binkley (1846-1906) and Mark M. Binkley in 1878. There was another 60 acre parcel of land (the same parcel as above?) owned by Peter Binkley...sold by his estate to William Lyons in 1889, which was bought by these three sons in 1890.

*(Ancaster Township Historical Society. 1998:108)*

Map 2 is a facsimile segment from *Map of the County of Wentworth, Canada West* (Surtee 1859). Map 2 illustrates the location of the study area and environs as of 1859. There are no structures indicated within the study area, but the study area is shown to belong to Henry Binkley. There is one structure, a possible schoolhouse, west of the study area. In addition, there is a settlement road depicted adjacent to the southern boundary of the study area. This road is the current Main Street West, but on the 1859 map it is labelled as "Hamilton Brantford Macadamised Road." Accordingly, it has been determined that there is potential for archaeological deposits related to early Post-contact settlement within the study area. The school house depicted on this map Binkley School

Map 3 is a facsimile segment of the *Illustrated Historical Atlas of the County of Wentworth, Ont.* (Page and Smith 1875). Map 3 illustrates the location of the study area and environs as of 1875. The map shows a historic farmstead to the west of the study area and the school house to the east adjacent to the study area. This schoolhouse is the Binkley School. Originally a log school built as early as 1810 for the 15 grandchildren of Marx Binkley. It



was later replaced by a brick schoolhouse in 1881 and then demolished in 1965 (Ancaster Township Historical Society 1998). According to the 1875 map, the study area belonged to A. Binkley. A farmstead is shown on the 1875 map west of the study area in the same lot.

It must be borne in mind that inclusion of names of property owners and depictions of structures within properties on these maps were sold by subscription. While information included within these maps may provide information about occupation of the property at a specific point in time, the absence of such information does not indicate that the property was not occupied.

### **5.2.2 CURRENT CONDITIONS**

The present use of the study area is as a small commercial building on Main Street and the off-campus student housing complex of “Berkley Hall” along with parking, associated services and landscape modifications. The study area is roughly 0.56 hectares in area. The study area includes within it mostly disturbed land with either building footprints or parking areas covered in asphalt. There are several small lawn areas, most of which were determined to be disturbed upon investigation. The study area is bounded on the north by Sanders Boulevard, on the east by residential properties and commercial parking, on the west by existing residential development and West Park Avenue, and on the south by Main Street. A plan of the study area is included within this report as Map 4. Current conditions encountered during the Stage 1-2 Property Assessment are illustrated in Maps 5 & 6.

### **5.2.3 SUMMARY OF HISTORICAL CONTEXT**

The brief overview of documentary evidence readily available indicates that the study area is situated within an area that was close to the historic transportation routes and in an area well populated during the nineteenth century and as such has potential for sites relating to early Post-contact settlement in the region. Background research indicates the property has potential for significant archaeological resources of Native origins based on proximity to a natural source of potable water in the past.

## **5.3 ARCHAEOLOGICAL CONTEXT**

The Archaeological Sites Database administered by the Ministry of Tourism, Culture and Sport (MTCS) indicates that there are three previously documented sites within 1 kilometre of the study area. However, it must be noted that this is based on the assumption of the accuracy of information compiled from numerous researchers using different methodologies over many years. AMICK Consultants Limited assumes no responsibility for the accuracy of site descriptions, interpretations such as cultural affiliation, or location information derived from the Archaeological Sites Database administered by MTCS. In addition, it must also be noted that a lack of formerly documented sites does not indicate that there are no sites present as the documentation of any archaeological site is contingent upon prior research having been conducted within the study area.

On the basis of information supplied by MTCS, no archaeological assessments have been conducted within 50 metres of the study area. AMICK Consultants Limited assumes no responsibility for the accuracy of previous assessments, interpretations such as cultural affiliation, or location information derived from the Archaeological Sites Database administered by MTCS. In addition, it must also be noted that the lack of formerly documented previous assessments does not indicate that no assessments have been conducted.

Data contained in previous archaeological reports in close proximity to the study area that is relevant to Stage 1 Background Study is defined within the Standards and Guidelines for Consultant Archaeologists in Section 7.5.8 Standard 4 as follows:

*“Provide descriptions of previous archaeological fieldwork carried out within the limits of, or immediately adjacent to the project area, **as documented by all available reports that include archaeological fieldwork carried out on the lands to be impacted by this project, or where reports document archaeological sites immediately adjacent (i.e., within 50 m) to those lands.**”*

(MTCS 2011: 126 Emphasis Added)

In accordance with data supplied by MTCS for the purposes of completing this study, there are no previous reports detailing, *“archaeological fieldwork carried out on the lands to be impacted by this project”*, nor do any previous reports document known archaeological sites within 50 metres of the study area.

It must be further noted that there are no relevant plaques associated with the study area.

The study area is situated within an area subject to the City of Hamilton Archaeology Management Plan (2016). The Hamilton-specific potential model determines that high potential areas within this region are within 300 metres of water sources, 250 metres from registered and reported sites and, 100 metres from the Niagara Escarpment. The study area is within 300 meters of water sources; it is within 250 metres from known sites, but it is not within 100m of the escarpment.

### **5.3.1 PRE-CONTACT REGISTERED SITES**

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MTCS. As a result it was determined that five (5) archaeological sites relating directly to Pre-contact habitation/activity had been formally registered within the immediate vicinity of the study area. However, the lack of formally documented archaeological sites does not mean that Pre-contact people did not use the area; it more likely reflects a lack of systematic archaeological research in the immediate vicinity. Even in cases where one or more assessments may have been conducted in close proximity to a proposed landscape alteration, an extensive area of physical archaeological assessment coverage is required throughout the region to produce a

representative sample of all potentially available archaeological data in order to provide any meaningful evidence to construct a pattern of land use and settlement in the past. All previously registered Pre-contact sites are briefly described below in Table 1:

**TABLE 1      PRE-CONTACT SITES WITHIN 1KM**

<b>Site Name</b>	<b>Borden Number</b>	<b>Site Type</b>	<b>Cultural Affiliation</b>
Campus	AhGx-2	Unknown	Archaic
Ofield Road 1	AhGx-278	Othercamp/campsite	Pre-Contact, Woodland, Late
Ofield Road 2	AhGx-279	Findspot	Pre-Contact
Coldwater Creek	AhGx-280	Othercamp/campsite	Woodland, Late, Woodland, Middle
Whitney Avenue	AhGx-286	Othercamp/campsite	Pre-Contact

Sites AhGx-280 and AhGx-279 of the above noted archaeological sites are situated within 300 metres of the study area. Therefore, they demonstrate archaeological potential for further archaeological resources related to Pre-contact activity and occupation with respect to the archaeological assessment of the proposed undertaking.

The study area lies approximately 230 metres southeast of the Cold Water Creek, which is a source of potable water and a navigable water way during seasonal flooding. The distance to water criteria used to establish potential for archaeological sites suggests potential for Pre-contact occupation and land use in the area in the past.

Table 2 illustrates the chronological development of cultures within southern Ontario prior to the arrival of European cultures to the area at the beginning of the 17<sup>th</sup> century. This general cultural outline is based on archaeological data and represents a synthesis and summary of research over a long period of time. It is necessarily generalizing and is not necessarily representative of the point of view of all researchers or stakeholders. It is offered here as a rough guideline and outline to illustrate the relationships of broad cultural groups and time periods.

**TABLE 2      PRE-CONTACT CULTURAL CHRONOLOGY FOR SOUTHERN ONTARIO**

<b>Years ago</b>	<b>Period</b>	<b>Southern Ontario</b>
250	Terminal Woodland	Ontario and St. Lawrence Iroquois Cultures
1000 2000	Initial Woodland	Princess Point, Saugeen, Point Peninsula, and Meadowood Cultures
3000 4000 5000 6000	Archaic	Laurentian Culture

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7000 8000 9000 10000 11000	Palaeo-Indian	Plano and Clovis Cultures
		(Wright 1972)

### **5.3.2 POST-CONTACT REGISTERED SITES**

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MTCS. As a result it was determined that no archaeological sites relating directly to Post-contact habitation/activity had been formally registered within the immediate vicinity of the study area.

### **5.3.3 LOCATION AND CURRENT CONDITIONS**

The study area is described as 1630 Main Street West and 69 Sanders Blvd, Part of Lot 55 Concession 1 (Geographic Township of Ancaster, County of Wentworth), City of Hamilton. This assessment was undertaken as a requirement under the Planning Act (RSO 1990b) in order to support a Draft Plan of Subdivision application and companion Zoning By-law Amendment application as part of the pre-submission process.

The present use of the study area is as residential complex and a commercial convenience store with associated asphalt parking lots. A plan of the study area is included within this report as Map 4. Current conditions encountered during the Stage 1-2 Property Assessment are illustrated in Maps 5 and 6, and Images 1-23.

### **5.3.4 PHYSIOGRAPHIC REGION**

The study area is in lowlands surrounded by the Niagara escarpment physiographic regions to the north, south and east. The Niagara Escarpment extends from the Niagara River to the northern tip of the Bruce Peninsula, and continuing through the Manitoulin Islands. It is characterized by vertical cliffs along the brow often mostly outlining the edge of the dolostone of the Lockport and Amabel Formations while the slopes below are carved in red shale. From the Dundas Valley northward to Forks of the Credit the brow of the escarpment increases in elevation from 800 feet to about 1,450 feet a.s.l. in a distance of 50 miles. In this section, also, the escarpment is cut by numerous creeks (Chapman and Putnam 1984: 114-121). The *Surficial Geology of Southern Ontario* (2012) map indicates that the characteristics of surficial deposits within the study area are coarse-textured glaciolacustrine deposits of sand, gravel, minor silt and clay.

### **5.3.5 SURFACE WATER**

Sources of potable water, access to waterborne transportation routes, and resources associated with watersheds are each considered, both individually and collectively to be the highest criteria for determination of the potential of any location to support extended human activity, land use, or occupation. Accordingly, proximity to water is regarded as the primary indicator of archaeological site potential. The Standards and Guidelines for Consultant Archaeologists stipulates that undisturbed lands within 300 metres of a water source are considered to have archaeological potential (MTC 2011: 21).

Coldwater Creek is located 230 meters north west of the study area and connects to Spencer Creek which flows into the wetlands of Cootes Paradise.

### **5.3.6 CURRENT PROPERTY CONDITIONS CONTEXT**

Current characteristics encountered within an archaeological research study area determine if property Assessment of specific portions of the study area will be necessary and in what manner a Stage 2 Property Assessment should be conducted, if necessary. Conventional assessment methodologies include pedestrian survey on ploughable lands and test pit methodology within areas that cannot be ploughed. For the purpose of determining where property Assessment is necessary and feasible, general categories of current landscape conditions have been established as archaeological conventions. These include:

#### **5.3.6.1 BUILDINGS AND STRUCTURAL FOOTPRINTS**

A building, for the purposes of this particular study, is a structure that exists currently or has existed in the past in a given location. The footprint of a building is the area of the building formed by the perimeter of the foundation. Although the interior area of building foundations would often be subject to property Assessment when the foundation may represent a potentially significant historic archaeological site, the footprints of existing structures are not typically assessed. Existing structures commonly encountered during archaeological assessments are often residential-associated buildings (houses, garages, sheds), and/or component buildings of farm complexes (barns, silos, greenhouses). In many cases, even though the disturbance to the land may be relatively shallow and archaeological resources may be situated below the disturbed layer (e.g. a concrete garage pad), there is no practical means of assessing the area beneath the disturbed layer. However, if there were evidence to suggest that there are likely archaeological resources situated beneath the disturbance, alternative methodologies may be recommended to study such areas.

The study area contains a small commercial building in the south west quadrant. This building has an adjacent detached storage shed off of its eastern side. An off campus student residential complex is situated in the northeast of the study area. Maps 5 & 6 of this report illustrate the locations of these features.

#### **5.3.6.2 DISTURBANCE**

Areas that have been subjected to extensive and deep land alteration that has severely damaged the integrity of archaeological resources are known as land disturbances. Examples of land disturbances are areas of past quarrying, major landscaping, and sewage and infrastructure development (MTC 2011: 18), as well as driveways made of gravel or asphalt or concrete, in-ground pools, and wells or cisterns. Surfaces paved with interlocking brick, concrete, asphalt, gravel and other surfaces meant to support heavy loads or to be long wearing hard surfaces in high traffic areas, must be prepared by the excavation and removal of topsoil, grading, and the addition of aggregate material to ensure appropriate engineering values for the supporting matrix and also to ensure that the installations shed water to avoid flooding or moisture damage. All hard surfaced areas are prepared in this fashion and therefore have no or low archaeological potential. Major utility lines are conduits that provide services such as water, natural gas, hydro, communications, sewage, and others. These major installations should not be confused with minor below ground service installations not considered to represent significant disturbances removing archaeological potential, such as services leading to individual structures which tend to be comparatively very shallow and vary narrow corridors. Areas containing substantial and deeply buried services or clusters of below ground utilities are considered areas of disturbance, and may be excluded from Stage 2 Property Assessment. Disturbed areas are excluded from Stage 2 Property Assessment due to no or low archaeological potential and often because they are also not viable to assess using conventional methodology.

*“Earthwork is one of the major works involved in road construction. This process includes excavation, material removal, filling, compaction, and construction. Moisture content is controlled, and compaction is done according to standard design procedures. Normally, rock explosion at the road bed is not encouraged. While filling a depression to reach the road level, **the original bed is flattened after the removal of the topsoil.** The fill layer is distributed and compacted to the designed specifications. This procedure is repeated until the compaction desired is reached. **The fill material should not contain organic elements, and possess a low index of plasticity.** Fill material can include gravel and decomposed rocks of a particular size, but should not consist of huge clay lumps. Sand clay can be used. The area is considered to be adequately compacted when the roller movement does not create a noticeable deformation. **The road surface finish is reliant on the economic aspects, and the estimated usage.**” [Emphasis Added]*

(Goel 2013)

The supporting matrix of a hard paved surface cannot contain organic material which is subject to significant compression, decay and moisture retention. Topsoil has no engineering value and must be removed in any construction application where the surface finish at grade requires underlying support.

Installation of sewer lines and other below ground services associated with infrastructure development often involves deep excavation that can remove archaeological potential. This consideration does not apply to relatively minor below ground services that connect structures and facilities to services that support their operation and use. Major servicing

corridors will be situated within adjacent road allowances with only minor, narrow and relatively shallow underground services entering into the study area to connect existing structures to servicing mainlines. The relatively minor, narrow and shallow services buried within a residential property do not require such extensive ground disturbance to remove or minimize archaeological potential within affected areas.

In addition to the paved driveways and parking areas visible on Maps 5 and 6, the study area is disturbed in a roughly 30 metre north-south by 30 metre east-west manicured lawn area located south of the residential complex on Main Street. This area contains a layer of flat asphalt at an average depth of 25 cm. This layer is overlaid by a 5cm layer of light brown sand fill, which is overlaid by a 25 cm topsoil fill layer of medium brown sandy loam. This disturbed area was test pit surveyed at 5m intervals to confirm disturbance. In some areas the asphalt layer had crumbled and test pitting was able to confirm that the asphalt layer overlaid natural subsoil (Images 19-20).

#### **5.3.6.3 LOW-LYING AND WET AREAS**

Landscape features that are covered by permanently wet areas, such as marshes, swamps, or bodies of water like streams or lakes, are known as low-lying and wet areas. Low-lying and wet areas are excluded from Stage 2 Property Assessment due to inaccessibility.

The study area does not contain low-lying and wet areas.

#### **5.3.6.4 STEEP SLOPE**

Landscape which slopes at a greater than (>) 20 degree change in elevation, is known as steep slope. Areas of steep slope are considered uninhabitable, and are excluded from Stage 2 Property Assessment.

Generally, steep slopes are not assessed because steep slopes are interpreted to have low potential, not due to viability to assess, except in cases where the slope is severe enough to become a safety concern for archaeological field crews. In such cases, the Occupational Health and Safety Act takes precedence as indicated in the introduction to the Standards and Guidelines. AMICK Consultant Limited policy is to assess all slope areas whenever it is safe to do so. Assessment of slopes, except where safety concerns arise, eliminates the invariably subjective interpretation of what might constitute a steep slope in the field. This is done to minimize delays due to conflicts in such interpretations and to increase the efficiency of review.

The study area does not contain areas of steep slope.

#### **5.3.6.5 WOODED AREAS**

Areas of the property that cannot be ploughed, such as natural forest or woodlot, are known as wooded areas. These wooded areas qualify for Stage 2 Property Assessment, and are required to be assessed using test pit survey methodology.

There several large deciduous trees spread sparsely throughout the study area however they did not impede the test pitting at 5 meter intervals.

### **5.3.6.6 PLOUGHABLE AGRICULTURAL LANDS**

Areas of current or former agricultural lands that have been ploughed in the past are considered ploughable agricultural lands. Ploughing these lands regularly turns the soil, which in turn brings previously buried artifacts to the surface, which are then easily identified during visual inspection. Furthermore, by allowing the ploughed area to weather sufficiently through rainfall, soil is washed off of exposed artifacts at the surface and the visibility of artifacts at the surface of recently worked field areas is enhanced markedly. Pedestrian survey of ploughed agricultural lands is the preferred method of physical assessment because of the greater potential for finding evidence of archaeological resources if present.

The study area does not contain any ploughable lands.

### **5.3.6.7 LAWN, PASTURE, MEADOW**

Landscape features consisting of former agricultural land covered in low growth, such as lawns, pastures, meadows, shrubbery, and immature trees. These are areas that may be considered too small to warrant ploughing, (i.e. less than one hectare in area), such as yard areas surrounding existing structures, and land-locked open areas that are technically workable by a plough but inaccessible to agricultural machinery. These areas may also include open area within urban contexts that do not allow agricultural tillage within municipal or city limits or the use of urban roadways by agricultural machinery. These areas are required to be assessed using test pit survey methodology.

Manicured lawns are present in several areas including: a roughly 20 metre by 20 metre area along West Park Avenue to the west of the commercial building; two roughly 5 metre by 5 metre islands in the southwest corner of the study area on Main Street; one roughly 55 metre north-south by 35 metre east-west area located south of the residential complex on Main Street; and one roughly 20 metre by 20 metre area to the north of the residential complex on Sanders Boulevard. Maps 5 & 6 of this report illustrate the locations of these features.

### **5.3.7 SUMMARY**

Background research indicates the vicinity of the study area has potential for archaeological resources of Native origins based on proximity to previously registered archaeological sites of Pre-contact origins and proximity to a source of potable water that was also used as a means of waterborne trade and communication. Background research also suggests potential



for archaeological resources of Post-contact origins based on proximity to a historic roadway, and proximity to areas of documented historic settlement.

Current conditions within the study area indicate that some areas of the property may have no or low archaeological potential and do not require Stage 2 Property Assessment or should be excluded from Stage 2 Property Assessment. These areas would include the footprint of existing structures, and areas under pavement. A significant proportion of the study area does exhibit archaeological potential and therefore a Stage 2 Property Assessment is required.

Archaeological potential does not indicate that there are necessarily sites present, but that environmental and historical factors suggest that there may be as yet undocumented archaeological sites within lands that have not been subject to systematic archaeological research in the past.

## **6.0 FIELD WORK METHODS AND WEATHER CONDITIONS**

This report confirms that the study area was subject to a detailed examination and photo documentation concurrently with the Stage 2 Property Assessment by high intensity test pit methodology at a five-metre interval between individual test pits on 09 April 2018.

The fieldwork undertaken as a component of this study was conducted according to the archaeological fieldwork standards and guidelines (including weather and lighting conditions). Weather conditions were appropriate for the necessary fieldwork required to complete the Stage 2 Property Assessment and to create the documentation appropriate to this study. The weather was sunny with an average temperature of 6 degrees centigrade. The locations from which photographs were taken and the directions toward which the camera was aimed for each photograph are illustrated in Maps 5 & 6 of this report. Upon completion of the property inspection of the study area, it was determined that select areas would require Stage 2 Property Assessment.

It must be noted that AMICK Consultants Limited has been retained to assess lands as specified by the proponent. As such, AMICK Consultants Limited is constrained by the terms of the contract in place at the time of the Archaeological Assessment and can only enter into lands for which AMICK Consultants Limited has received consent from the owner or their agent(s). The proponent has been advised that the entire area within the planning application must be subject to archaeological assessment and that portions of the planning application may only be excluded if they are of low potential, are not viable to assess, or are subject to planning provisions that would restrict any such areas from any form of ground altering activities.

### **6.1 TEST PIT SURVEY**

In accordance with the Standards and Guidelines for Consultant Archaeologists, test pit survey is required to be undertaken for those portions of the study area where deep prior

disturbance had not occurred prior to assessment or which were accessible to survey. Test pit survey is only used in areas that cannot be subject to ploughing or cultivation. This report confirms that the conduct of test pit survey within the study area conformed to the following standards:

*1. Test pit survey only on terrain where ploughing is not possible or viable, as in the following examples:*

*a. wooded areas*

[Not Applicable – The study area does not contain any wooded areas]

*b. pasture with high rock content*

[Not Applicable - The study area does not contain any pastures with high rock content]

*c. abandoned farmland with heavy brush and weed growth*

[Not Applicable - The study area does not contain any abandoned farmland with heavy brush and weed growth]

*d. orchards and vineyards that cannot be strip ploughed (planted in rows 5 m apart or less), gardens, parkland or lawns, any of which will remain in use for several years after the survey*

[Not Applicable - The study area does not contain any of the above-mentioned circumstances]

*e. properties where existing landscaping or infrastructure would be damaged. The presence of such obstacles must be documented in sufficient detail to demonstrate that ploughing or cultivation is not viable.*

[Not Applicable - The study area does not contain the above-mentioned circumstances]

*f. narrow (10 m or less) linear survey corridors (e.g., water or gas pipelines, road widening). This includes situations where there are planned impacts 10 m or less beyond the previously impacted limits on both sides of an existing linear corridor (e.g., two linear survey corridors on either side of an existing roadway). Where at the time of fieldwork the lands within the linear corridor meet the standards as stated under the above section on pedestrian survey land preparation, pedestrian survey must be carried out. Space test pits at maximum intervals of 5 m (400 test pits per hectare) in areas less than 300 m from any feature of archaeological potential.*

[Not Applicable – The study area does not contain any linear corridors]

*2. Space test pits at maximum intervals of 5 m (400 test pits per hectare) in areas less than 300 m from any feature of archaeological potential.*

[All test pits were spaced at an interval of 5m between individual test pits]

3. *Space test pits at maximum intervals of 10 m (100 test pits per hectare) in areas more than 300 m from any feature of archaeological potential.*  
[The entirety of the test pitted areas of the study area were assessed using high intensity test pit methodology at an interval of 5 metres between individual test pits]
4. *Test pit to within 1 m of built structures (both intact and ruins), or until test pits show evidence of recent ground disturbance.*  
[Test pits were placed within 1m of all built structures]
5. *Ensure that test pits are at least 30 cm in diameter.*  
[All test pits were at least 30 cm in diameter]
6. *Excavate each test pit, by hand, into the first 5 cm of subsoil and examine the pit for stratigraphy, cultural features, or evidence of fill.*  
[Regardless of the interval between individual test pits, all test pits were excavated by hand into the first 5 cm of subsoil where possible and examined for stratigraphy, cultural features, or evidence of fill. In areas where topsoil was not present, test pits were excavated to a minimum of 30cm in depth to ensure that suspected subsoils, if present, were not layers of fill or waterborne materials overlying buried topsoil. If these areas consisted of fill soils, test pits were also excavated a minimum of 30 cm below grade in order to ensure disturbance extended below even deep topsoil layers such as those encountered in agricultural fields to ensure that the depth of disturbance was sufficient to remove archaeological potential in most contexts. Where other evidence indicates locations of potentially significant archaeological sites that may include cultural deposits below fill soils, alternative strategies to explore beneath the fill layers found in some areas may be necessary to complete the Stage 2 Property Assessment. In such cases, further Stage 2 Property Assessment may be recommended following completion of the property survey under conventional methodologies.]
7. *Screen soil through mesh no greater than 6 mm.*  
[All soil was screened through mesh no greater than 6 mm]
8. *Collect all artifacts according to their associated test pit.*  
[All artifacts were collected according to their associated test pit]
9. *Backfill all test pits unless instructed not to by the landowner.*  
[All test pits were backfilled]

(MTC 2011: 31-32)

Standard archaeological survey methodologies employed in Ontario for Stage 2 Archaeological Property Assessment (i.e. pedestrian survey and test pit survey) cannot determine if deeply buried cultural remains are or are not present. The

purpose of Stage 2 Property Assessment is not to test for deeply buried deposits. The Standards and Guidelines for Consultants Archaeologists recognize this fact and have a whole separate section covering this specific issue. The only way to determine if deeply buried remains are present is to follow those standards not via a standard Stage 1-2 Archaeological Property Assessment.

In most cases, unless there is documentation or evidence to the contrary, areas where grading has exceeded topsoil depth are areas considered to have no or low archaeological potential because in most cases removal of the topsoil will remove archaeological sites. While archaeological sites are popularly thought of as being deeply buried, archaeological sites begin on the surface of the ground and for most of humanity's history involved no substantial excavations or significant landscape alterations. Only with the rise of urbanization and sedentary settlement do sites begin to accumulate depth. This is a result of continuous building and rebuilding over top of earlier settlements. Deep archaeological sites are created by adding to the surface of an area and building the landform up. Deeply buried archaeological deposits are relatively rare outside of urban environments in Ontario and even within urban contexts, this seldom occurs outside of the historic core of the community where redevelopment has occurred since initial settlement.

If an area was not occupied during a period of potential archaeological significance, there is no potential to locate deeply buried significant archaeological resources. There are only a few very rare exceptions related to historical significance that is not tied to the time period of activity or occupation of a site but to certain historical events and/or personalities.

Areas of suspected disturbance where test pit survey was viable were shovel tested as described below.

- 2. Place Stage 2 test pits throughout the disturbed areas according to professional judgment (and where physically viable) as to confirm that these areas have been completely disturbed.*

[An area of suspected disturbance was confirmed during Stage 2 test pitting of the roughly 55 metre north-south by 35 metre east-west manicured lawn area located south of the residential complex on Main Street. This area was test-pitted at 5 metre intervals. The excavated soil and the profiles of these test pits were examined to determine if each represented an area of disturbance. Test pits were excavated a minimum of 30 cm below grade in order to ensure that test pits were excavated to depths below the surrounding natural grade. This procedure demonstrated that the entire study area consists of fill deposited within a deeply disturbed context. There is no archaeological potential within this area.]

(MTC 2011: 38)

Approximately 50% of the study area consisted of lawn area that was test pit surveyed at an interval of 5 metres between individual test pits. Approximately 50% of the study area was

not assessable due to the presence of existing structures and disturbed asphalt covered parking areas and driveways (see Map 5).

## **7.0 RECORD OF FINDS**

Section 7.8.2 of the Standards and Guidelines for Consultant Archaeologists (MTC 2011: 137-138) outlines the requirements of the Record of Finds component of a Stage 2 report:

1. *For all archaeological resources and sites that are identified in Stage 2, provide the following:*
  - a. *a general description of the types of artifacts and features that were identified*
  - b. *a general description of the area within which artifacts and features were identified, including the spatial extent of the area and any relative variations in density*
  - c. *a catalogue and description of all artifacts retained*
  - d. *a description of the artifacts and features left in the field (nature of material, frequency, other notable traits).*
2. *Provide an inventory of the documentary record generated in the field (e.g. photographs, maps, field notes).*
3. *Submit information detailing exact site locations on the property separately from the project report, as specified in section 7.6. Information on exact site locations includes the following:*
  - a. *table of GPS readings for locations of all archaeological sites*
  - b. *maps showing detailed site location information.*

## **7.1 ARCHAEOLOGICAL RESOURCES**

### **Section 7.8.2; Standard 1**

A Stage 1-2 property assessment was conducted on April 09, 2018 and resulted in the identification of one Euro-Canadian site, the Main Street West Site (AhGx-773). After intensified test pit survey at 2.5 meters in all direction around positive units, a total of seven (7) test pits containing Euro-Canadian material were found in the study area within a small manicured lawn area immediately southeast of the commercial building. The area of positive test pits measures approximately 5 metres north-south by 5 metres east-west.

**Table 3 Main Street West Site (AhGx-773) Total Artifact Assemblage**

<b>Key Characteristic</b>	<b>Number</b>	<b>percentage</b>
bottle glass, moulded	8	34.78%
bottle glass, machine-made	2	8.70%
brick fragment	2	8.70%

Coal	1	4.35%
Pearlware	1	4.35%
refined white earthenware	2	8.70%
window glass	5	21.74%
metal, wire nail	1	4.35%
yellow ware	1	4.35%
<b>Grand Total</b>	<b>23</b>	<b>100.00%</b>

A total of 23 artifacts were recovered from the Stage 2 assessment at the Main Street West Site (AhGx-773). A summary of these artifacts is presented in Table 3 and a complete catalogue of artifacts recovered is presented in Appendix B. Table 4 gives a summary of artifact frequencies by category. Descriptions of these artifact types can be found appended to this report in Appendix A. Artifact distributions are visualized in Map 7 in the Supplementary Documentation.

The following is a category based detailed analysis of the retained artifacts of the Main Street West Site (AhGx-773).

### **ARCHITECTURAL**

Two (2) artifacts categorized as Architectural were recovered comprising 8.70% of the total assemblage. These included two brick fragments (n=2). Although sometimes catalogued as architectural; nails were categorized as metal for the purposes of this study.

### **CERAMICS**

A total of three (3) ceramic artifacts were recovered comprising 13.04% of the total assemblage. These included refined white earthenware (n=2), and pearl ware (n=1). All ceramics were hollow ware in form and of unknown function.

#### ***Refined White Earthenware***

By the 1830s refined white earthenware had replaced earlier, near-white ceramics such as pearl ware and cream ware. Early white ware paste tended to be porous but became more vitrified later in the 19<sup>th</sup> century. Refined white earthenware can be identified by a near-colourless glaze. One (1) fragment of refined white earthenware was recovered from the Main Street West Site (AhGx-773).

#### ***Transfer Printed Refined White Earthenware***

Transfer printing was a method for transferring pictures to the surface of ceramic vessels which was developed during the late 18<sup>th</sup> Century. The use of colours other than cobalt blue for transfer printing was not attempted on any large scale until after 1828. The reason for this was that cobalt blue oxide was the only colouring agent which remained stable

during the firing when used in conjunction with the transfer printing process. In 1828, a process was patented which allowed for the use of other colours. Immediately after this development colours such as red, brown, green, black and light blue were used on a popular level. Coloured transfers were popular in England by 1830 and had achieved similar appeal in North America by the early 1830s (Collard 1984). The decorative technique of transfer printing on ironstone has no effect on the general date range of this type of ware as it was applied to ironstone throughout the history of the production of this ceramic type. One fragment of purple transfer print on refined white earthenware was recovered.

### ***Pearlware***

Pearlware is essentially a variation of creamware. The body of the ware is essentially the same with slightly higher flint content, but the real difference is in the glaze. Pearlware can be easily identified by a bluish glaze that appears along footing crevices because of the addition of cobalt as a bluing agent to the glaze. Plain undecorated pearlware fragments can be dated within the general production range of the ware itself, 1770 – 1830.

## **UTILITARIAN WARE**

### ***Yellow ware***

Yellow ware was generally used for kitchen crockery and utility bowls. Yellow ware which is decorated with coloured horizontal bands is often referred to as “banded ware”. This is the most readily recognizable of the yellow ware products which became popular after 1840. Undecorated plain yellow ware is termed “common yellow” and dates from about 1830 onward. Yellow ware did not pass out of common usage in Canada until the 1930s (Lueger 1981: 141). One fragment of yellow ware (n=1) was recovered from the Main Street West Site (AhGx-773).

## **GLASS**

### ***Machine Made Bottle Glass***

In the late 19<sup>th</sup> Century a trend started toward the manufacture of bottles with semi-automatic and fully automatic machines. Machine made bottles are hollowware containers shaped using air pressure supplied by a machine, both automatic and semi-automatic machines produce bottle with similar characteristics. The first workable semi-automatic machines were patented in 1881 in the United States and in 1886 in England, in the next few decades machine made containers become increasingly popular as they are cheaper to produce with continually refined techniques; by the early 20<sup>th</sup> Century hand blown bottle are becoming uncommon.

### ***Contact Moulded Bottle Glass***

Contact moulding is a process by which full-sized objects or portions of objects are formed in a mould using air pressure from a mouth or machine. Hot glass is introduced into a mould, that may or may not have had a design, and expanded by air pressure until it fills the mould, at which point the object or partial object is removed. This technique was used during Roman times extensively for containers. It was reintroduced in the 17<sup>th</sup> Century but did not come into wide use in containers until the 18<sup>th</sup> Century (Jones and Sullivan 1989: 23-24).

A total of 15 Glass artifacts were recovered (see Appendix A) representing 65.22% of the total assemblage. These are representative of the following broader functional classes of artifacts: architectural, kitchen/food, personal items, kitchen and food, as well as indeterminate or unidentifiable objects. The glass artifacts include machine made bottle glass (n=2), moulded bottle glass (n=8), and window glass (n=5)

### **METAL**

One metal artifact, a wire-drawn nail, was recovered from the Main Street West Site (AhGx-773). Wire nails came into production circa 1880 and displaced the predominant use of the cut nail

### **MISCELLANEOUS**

One (1) miscellaneous artifact, a piece of coal, was recovered from the Main Street West Site (AhGx-773).

**TABLE 4 MAIN STREET WEST SITE(AHGx-773) ARTIFACT CATEGORY SUMMARIES**

<b>Category</b>	<b>Sum of Number</b>	<b>Percentage</b>
Architectural	2	8.70%
Ceramic	3	13.04%
Glass	15	65.22%
Metal	1	4.35%
Miscellaneous	1	4.35%
Utilitarian ware	1	4.35%
<b>Grand Total</b>	<b>23</b>	<b>100.00%</b>

The collection of artifacts from this assessment is packaged in a single banker's box and housed at the Port McNicoll office of AMICK Consultants Limited until such time as an appropriate permanent location, as approved by MTCS, is located and appropriate arrangements for the transfer of the collection and associated responsibilities for the material is made.



**Section 7.8.2; Standard 3**

Mapping which indicates the exact site location and all UTM coordinates recorded during assessment are included in the Supplementary Documentation of this report.

**7.2 ARCHAEOLOGICAL FIELDWORK DOCUMENTATION**

**Section 7.8.2; Standard 2**

The documentation produced during the field investigation conducted in support of this report includes: 2 digital maps, one page of photo logs, 2 pages of digitized field notes, and 27 digital photographs.

**TABLE 5 MAIN STREET WEST SITE INVENTORY OF THE DOCUMENTARY RECORD**

<b>Document Type</b>	<b>Current Location of Document Type</b>	<b>Additional Comments</b>
Field Maps (2)	AMICK Consultants Ltd. office	Stored digitally in project file
Photo Logs (1 page)	AMICK Consultants Ltd. office	Stored digitally in project file
Field Notes (2 pages)	AMICK Consultants Ltd. Office	Stored digitally in project file
Digital Photographs (27)	AMICK Consultants Ltd. office	Stored digitally in project file

**8.0 ANALYSIS AND CONCLUSIONS**

AMICK Consultants Limited was engaged by the proponent to undertake a Stage 1-2 Archaeological Assessment of lands potentially affected by the proposed undertaking and was granted permission to carry out archaeological fieldwork. The entirety of the study area was subject to property inspection and photographic documentation concurrently with the Stage 2 Property Assessment on 09 April 2018, consisting of high-intensity test pit survey at an interval of five metres between individual test pits. All records, documentation, field notes, photographs and artifacts (as applicable) related to the conduct and findings of these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by

the Ontario Ministry of Tourism, Culture and Sport (MTCS) on behalf of the government and citizens of Ontario.

## **8.1 STAGE 1 ANALYSIS AND CONCLUSIONS**

As part of the present study, background research was conducted in order to determine the archaeological potential of the proposed project area.

*“A Stage 1 background study provides the consulting archaeologist and Ministry report reviewer with information about the known and potential cultural heritage resources within a particular study area, prior to the start of the field assessment.”* (OMCzCR 1993)

The evaluation of potential is further elaborated Section 1.3 of the Standards and Guidelines for Consultant Archaeologist (2011) prepared by the Ontario Ministry of Tourism and Culture:

*“The Stage 1 background study (and, where undertaken, property inspection) leads to an evaluation of the property’s archaeological potential. If the evaluation indicates that there is archaeological potential anywhere on the property, the next step is a Stage 2 assessment.”* (MTC 2011: 17)

Features or characteristics that indicate archaeological potential when documented within the study area, or within close proximity to the study area (as applicable), include:

- “ - previously identified archaeological sites*
  - water sources (It is important to distinguish types of water and shoreline, and to distinguish natural from artificial water sources, as these features affect site locations and types to varying degrees.):*
    - primary water sources (lakes, rivers, streams, creeks)*
    - secondary water sources (intermittent streams and creeks, springs, marshes, swamps)*
    - features indicating past water sources (e.g., glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, cobble beaches)*
    - accessible or inaccessible shoreline (e.g., high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh)*
  - elevated topography (e.g., eskers, drumlins, large knolls, plateaux)*
  - pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground*
  - distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings.*

- resource areas, including:
  - o food or medicinal plants (e.g., migratory routes, spawning areas, prairie)
  - o scarce raw materials (e.g., quartz, copper, ochre or outcrops of chert)
  - o early Post-contact industry (e.g., fur trade, logging, prospecting, mining)
- areas of early Post-contact settlement. These include places of early military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks.
- Early historical transportation routes (e.g., trails, passes, roads, railways, portage routes)
- property listed on a municipal register or designated under the Ontario Heritage Act that is a federal, provincial or municipal historic landmark or site
- property that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations”

(MTC 2011: 17-18)

The evaluation of potential does not indicate that sites are present within areas affected by proposed development. Evaluation of potential considers the possibility for as yet undocumented sites to be found in areas that have not been subject to systematic archaeological investigation in the past. Potential for archaeological resources is used to determine if property assessment of a study area or portions of a study area is required.

*“Archaeological resources not previously documented may also be present in the affected area. If the alternative areas being considered, or the preferred alternative selected, exhibit either high or medium potential for the discovery of archaeological remains an archaeological assessment will be required.”*

(MCC & MOE 1992: 6-7)

*“The Stage 1 background study (and, where undertaken, property inspection) leads to an evaluation of the property’s archaeological potential. If the evaluation indicates that there is archaeological potential anywhere on the property, the next step is a Stage 2 assessment.”*

(MTC 2011: 17)

In addition, archaeological sites data is also used to determine if any archaeological resources had been formerly documented within or in close proximity to the study area and if these same resources might be subject to impacts from the proposed undertaking. This data was also collected in order to establish the relative cultural heritage value or interest of any resources that might be encountered during the conduct of the present study. For example, the relative rarity of a site can be used to assign an elevated level of cultural heritage value or interest to a site that is atypical for the immediate vicinity. The requisite archaeological sites data of previously registered archaeological sites was collected from the Programs and Services Branch, Culture Programs Unit, MTCS and the corporate research library of AMICK Consultants Limited. The Stage 1 Background Research methodology also includes

a review of the most detailed available topographic maps, historical settlement maps, archaeological management plans (where applicable) and commemorative plaques or monuments. When previous archaeological research documents lands to be impacted by the proposed undertaking or archaeological sites within 50 metres of the study area, the reports documenting this earlier work are reviewed for pertinent information. AMICK Consultants Limited will often modify this basic methodology based on professional judgment to include additional research (such as, local historical works or documents and knowledgeable informants).

Section 7.7.3 of the Standards and Guidelines for Consultant Archaeologists (MTC 2011: 132) outlines the requirements of the Analysis and Conclusions component of a Stage 1 Background Study.

- 1) *“Identify and describe areas of archaeological potential within the project area.*
- 2) *Identify and describe areas that have been subject to extensive and deep land alterations. Describe the nature of alterations (e.g., development or other activity) that have severely damaged the integrity of archaeological resources and have removed archaeological potential.”*

#### **CHARACTERISTICS INDICATING ARCHAEOLOGICAL POTENTIAL**

Section 1.3.1 of the Standards and Guidelines for Consultant Archaeologists specifies the property characteristics that indicate archaeological potential (MTC 2011: 17-18). Factors that indicate archaeological potential are features of the local landscape and environment that may have attracted people to either occupy the land or to conduct activities within the study area. One or more of these characteristics found to apply to a study area would necessitate a Stage 2 Property Assessment to determine if archaeological resources are present. These characteristics are listed below together with considerations derived from the conduct of this study.

- 1) Previously Identified Archaeological Sites  
Previously registered archaeological sites have been documented within 300 metres of the study area.
- 2) Water Sources  
Primary water sources are described as including lakes, rivers streams and creeks. Close proximity to primary water sources (300 metres) indicates that people had access to readily available sources of potable water and routes of waterborne trade and communication should the study area have been used or occupied in the past.

Coldwater Creek is located 230 meters north west of the study area and connects to Spencer Creek which flows into the wetlands of Cootes Paradise.

Secondary water sources are described as including intermittent streams and creeks, springs, marshes, and swamps. Close proximity (300 metres) to secondary water

sources indicates that people had access to readily available sources of potable water, at least on a seasonal basis, and in some cases seasonal access to routes of waterborne trade and communication should the study area have been used or occupied in the past.

Coldwater Creek is located 230 meters north west of the study area and connects to Spencer Creek which flows into the wetlands of Cootes Paradise.

3) *Features Indicating Past Water Sources*

Features indicating past water resources are described as including glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, and cobble beaches. Close proximity (300 metres) to features indicating past water sources indicates that people had access to readily available sources of potable water, at least on a seasonal basis, and in some cases seasonal access to routes of waterborne trade and communication should the study area have been used or occupied in the past.

There are no identified features indicating past water sources within 300 metres of the study area.

4) *Accessible or Inaccessible Shoreline*

This form of landscape feature would include high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh, etc.

There are no shorelines within 300 metres of the study area.

5) *Elevated Topography*

Features of elevated topography that indicate archaeological potential include eskers, drumlins, large knolls, and plateaux.

There are no identified features of elevated topography within the study area.

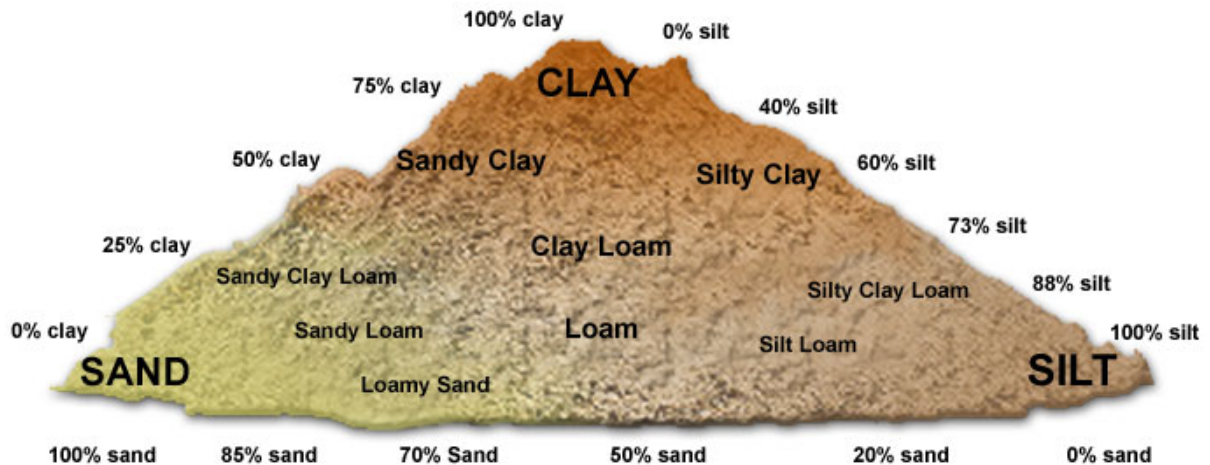
6) *Pockets of Well-drained Sandy Soil*

Pockets of sandy soil are considered to be especially important near areas of heavy soil or rocky ground.

The soil throughout the study area is medium brown sandy loam, which is consistent with the wider area surrounding the property. Therefore, the presence of this soil has no impact on potential within the study area, as the wider area is not known for clay soils or exposed bedrock.

The image below (Kuhlmann, Stacy 2017) shows the consistencies of soil types and how they compare to one another. The soil found within the study area was a sandy loam, which contains a higher percentage of loam with a lower percentage of sand

and an even lower percentage of clay. The lower percentage of clay allows the soil to break up from the action of ploughing alone when not compacted or bound by extensive root masses.



(Kuhlmann, Stacy 2017)

7) Distinctive Land Formations

These are landscape features that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings.

There are no identified distinctive land formations within the study area.

8) Resource Areas

Resource areas that indicate archaeological potential include food or medicinal plants (e.g., migratory routes, spawning areas, and prairie), scarce raw materials (e.g., quartz, copper, ochre or outcrops of chert) and resources of importance to early Post-contact industry (e.g., logging, prospecting, and mining).

There are no identified resource areas within the study area.

9) Areas of Early Post-contact Settlement

These include places of early military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, and farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks.

The study area is situated in close proximity to a historic schoolhouse and a 19<sup>th</sup> century homestead identified on the historic atlas map.

10) Early Historical Transportation Routes

This includes evidence of trails, passes, roads, railways, portage routes. The study area is situated within 100 metres of an early settlement road that appears on the Historic Atlas Map of 1875. These historic roads correspond to the roads presently known as Main street, which are adjacent to the study area.

**11) Heritage Property**

Property listed on a municipal register or designated under the *Ontario Heritage Act* or is a federal, provincial or municipal historic landmark or site.

There are no listed or designated heritage buildings or properties that form a part of the study area. There are no listed or designated heritage buildings or properties that are adjacent to the study area.

**12) Documented Historical or Archaeological Sites**

This includes property that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations. These are properties which have not necessarily been formally recognized or for which there is additional evidence identifying possible archaeological resources associated with historic properties in addition to the rationale for formal recognition.

There are no known heritage features, or known historic sites, or known archaeological sites within the study area in addition to those formally documented with the appropriate agencies or previously noted under a different criterion.

**CHARACTERISTICS INDICATING REMOVAL OF ARCHAEOLOGICAL POTENTIAL**

Section 1.3.2 of the Standards and Guidelines for Consultant Archaeologists specifies the property characteristics which indicate no archaeological potential or for which archaeological potential has been removed (MTC 2011: 18-19). These characteristics are listed below together with considerations derived from the conduct of this study.

The introduction of Section 1.3.2 (MTC 2011: 18) notes that “*Archaeological potential can be determined not to be present for either the entire property or a part(s) of it when the area under consideration has been subject to extensive and deep land alterations that have severely damaged the integrity of any archaeological resources. This is commonly referred to as ‘disturbed’ or ‘disturbance’, and may include:*”

**1) Quarrying**

There is no evidence to suggest that quarrying operations were ever carried out within the study area.

**2) Major Landscaping Involving Grading Below Topsoil**

Unless there is evidence to suggest the presence of buried archaeological deposits, such deeply disturbed areas are considered to have lost their archaeological potential. Properties that do not have a long history of Post-contact occupation can have archaeological potential removed through extensive landscape alterations that

penetrate below the topsoil layer. This is because most archaeological sites originate at grade with relatively shallow associated excavations into the soil. Pre-contact sites and early historic sites are vulnerable to extensive damage and complete removal due to landscape modification activities. In urban contexts where a lengthy history of occupation has occurred, properties may have deeply buried archaeological deposits covered over and sealed through redevelopment activities that do not include the deep excavation of the entire property for subsequent uses. Buildings are often erected directly over older foundations preserving archaeological deposits associated with the earlier occupation.

There is evidence to suggest that major landscaping operations involving grading below topsoil were carried out within the study area (see Map 5). Surfaces paved with interlocking brick, concrete, asphalt, gravel and other surfaces meant to support heavy loads or to be long wearing hard surfaces in high traffic areas, must be prepared by the excavation and removal of topsoil, grading, and the addition of aggregate material to ensure appropriate engineering values for the supporting matrix and also to ensure that the installations shed water to avoid flooding or moisture damage. All hard surfaced areas are prepared in this fashion and therefore have no or low archaeological potential. Disturbed areas are excluded from Stage 2 Property Assessment due to no or low archaeological potential and often because they are also not viable to assess using conventional methodology.

3) *Building Footprints*

Typically, the construction of buildings involves the deep excavation of foundations, footings and cellars that often obliterate archaeological deposits situated close to the surface.

The study area contains a small commercial building in the south west quadrant. This building has an adjacent detached storage shed off of its' eastern side. An off campus student residential complex is situated in the northeast of the study area. Maps 4 & 5 of this report illustrate the locations of these features.

4) *Sewage and Infrastructure Development*

Installation of sewer lines and other below ground services associated with infrastructure development often involves deep excavation that can remove archaeological potential.

There is evidence to suggest that substantial below ground services of have resulted in significant impacts to any significant portion of the study area. Major utility lines are conduits that provide services such as water, natural gas, hydro, communications, sewage, and others. These major installations should not be confused with minor below ground service installations not considered to represent significant disturbances removing archaeological potential, such as services leading to individual structures which tend to be comparatively very shallow and vary narrow corridors. Areas containing substantial and deeply buried services or clusters of below ground utilities



are considered areas of disturbance, and may be excluded from Stage 2 Property Assessment.

*“Activities such as agricultural cultivation, gardening, minor grading and landscaping do not necessarily affect archaeological potential.”*

(MTC 2011: 18)

*“Archaeological potential is not removed where there is documented potential for deeply buried intact archaeological resources beneath land alterations, or where it cannot be clearly demonstrated through background research and property inspection that there has been complete and intensive disturbance of an area. Where complete disturbance cannot be demonstrated in Stage 1, it will be necessary to undertake Stage 2 assessment.”*

(MTC 2011: 18)

## **SUMMARY**

Table 6 below summarizes the evaluation criteria of the Ministry of Tourism and Culture together with the results of the Stage 1 Background Study for the proposed undertaking. Based on the criteria, the property is deemed to have archaeological potential on the basis of proximity to water, proximity to known registered pre-contact sites, proximity to historic settlement structures, and the location of early historic settlement roads adjacent to the study area.

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**TABLE 6: EVALUATION OF ARCHAEOLOGICAL POTENTIAL**

FEATURE OF ARCHAEOLOGICAL POTENTIAL		YES	NO	N/A	COMMENT
1	Known archaeological sites within 300m	Y			If Yes, potential determined
<b>PHYSICAL FEATURES</b>					
2	Is there water on or near the property?	Y			If Yes, what kind of water? Coldwater creek located
2a	Primary water source within 300 m. (lakeshore, river, large creek, etc.)	Y			If Yes, potential determined
2b	Secondary water source within 300 m. (stream, spring, marsh, swamp, etc.)		N		If Yes, potential determined
2c	Past water source within 300 m. (beach ridge, river bed, relic creek, etc.)		N		If Yes, potential determined
2d	Accessible or Inaccessible shoreline within 300 m. (high bluffs, marsh, swamp, sand bar, etc.)		N		If Yes, potential determined
3	Elevated topography (knolls, drumlins, eskers, plateaus, etc.)		N		If Yes, and Yes for any of 4-9, potential determined
4	Pockets of sandy soil in a clay or rocky area		N		If Yes and Yes for any of 3, 5-9, potential determined
5	Distinctive land formations (mounds, caverns, waterfalls, peninsulas, etc.)		N		If Yes and Yes for any of 3-4, 6-9, potential determined
6	Associated with food or scarce resource harvest areas (traditional fishing locations, agricultural/berry extraction areas, etc.)		N		If Yes, and Yes for any of 3-5, 7-9, potential determined.
7	Early Post-contact settlement area within 300 m.	Y			If Yes, and Yes for any of 3-6, 8-9, potential determined
8	Historic Transportation route within 100 m. (historic road, trail, portage, rail corridors, etc.)	Y			If Yes, and Yes for any 3-7 or 9, potential determined
9	Contains property designated and/or listed under the Ontario Heritage Act (municipal heritage committee, municipal register, etc.)		N		If Yes and, Yes to any of 3-8, potential determined
<b>APPLICATION-SPECIFIC INFORMATION</b>					
10	Local knowledge (local heritage organizations, Pre-contact, etc.)		N		If Yes, potential determined
11	Recent disturbance not including agricultural cultivation (post-1960-confirmed extensive and intensive including industrial sites, aggregate areas, etc.)	Y			If Yes, no potential or low potential in affected part (s) of the study area.

If **YES** to any of 1, 2a-c, or 10 Archaeological Potential is **confirmed**

If **YES** to 2 or more of 3-9, Archaeological Potential is **confirmed**

If **YES** to 11 or No to 1-10 Low Archaeological Potential is **confirmed** for at least a portion of the study area.

## **8.2 STAGE 2 ANALYSIS AND CONCLUSIONS**

Section 7.8.3 of the Standards and Guidelines for Consultant Archaeologists (MTC 2011: 138-139) outlines the requirements of the Analysis and Conclusions component of a Stage 2 Property Assessment.

1. *Summarize all finding from the Stage 2 survey, or state that no archaeological sites were identified.*
2. *For each archaeological site, provide the following analysis and conclusions:*
  - a. *A preliminary determination, to the degree possible, of the age and cultural affiliation of any archaeological sites identified.*
  - b. *A comparison against the criteria in 2 Stage 2: Property Assessment to determine whether further assessment is required*
  - c. *A preliminary determination regarding whether any archaeological sites identified in Stage 2 show evidence of a high level cultural heritage value or interest and will thus require Stage 4 mitigation.*

## **9.0 RECOMMENDATIONS**

### **9.1 STAGE 2 RECOMMENDATIONS**

Under Section 7.8.4 of the Standards and Guidelines for Consultant Archaeologists (MTC 2011: 139) the recommendations to be made as a result of a Stage 2 Property Assessment are described.

- 1) *For each archaeological site, provide a statement of the following:*
  - a. *Borden number or other identifying number*
  - b. *Whether or not it is of further cultural heritage value or interest*
  - c. *Where it is of further cultural heritage value or interest, appropriate Stage 3 assessment strategies*
- 2) *Make recommendations only regarding archaeological matters. Recommendations regarding built heritage or cultural heritage landscapes should not be included.*
- 3) *If the Stage 2 survey did not identify any archaeological sites requiring further assessment or mitigation of impacts, recommend that no further archaeological assessment of the property be required.*

As a result of the Stage 1-2 Archaeological Assessment of 1630 Main Street West and 69 Sanders Boulevard property a total of seven positive test pits were encountered in a 5metre by 5 metre area. This was designated the “Main Street West Site” (AhGx-773). The artifacts recovered are associated with 19<sup>th</sup> century occupation of the area. In consideration of the findings of the Stage 1-2 Property Assessment, the following recommendations are made:

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6. *Further archaeological assessment of the Main Street West (AhGx-773) Site is warranted;*
7. *A Stage 3 Site-specific assessment of the Main Street West (AhGx-773) Site must be completed for this site in accordance with the Standards and Guidelines for Consultant Archaeologists (MTC 2011). The Stage 3 Site-specific assessment will consist of the excavation of 1 by 1 metre square test units on a 5 by 5 metre square grid; the grid squares will be referred to by the intersection coordinates of their southwest corner. Each test unit will be excavated stratigraphically by hand into the first 5 centimetres of subsoil. Each unit will be examined for stratigraphy, cultural features, or evidence of fill, and all soil was screened through wire mesh of 6 millimetre width. All artifacts will be retained and recorded by the corresponding grid unit designation and will be held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Tourism, Culture and Sport (MTCS) on behalf of the government and citizens of Ontario.*
8. *The Stage 3 Site-specific Assessment of the Main Street West (AhGx-773) must include further archival research in order to establish the details of the occupation and land use history of the rural township lot of which the study area was a part.*
9. *No soil disturbances or removal of vegetation shall take place within the archaeological site identified as the Main Street West (AhGx-773) Site within this Stage 1-2 Archaeological Assessment report prior to the acceptance of the Ministry of Tourism, Culture and Sport (MTCS) of a report recommending that all archaeological concerns for the Main Street West Site (AhGx-773) have been addressed and that there is no further cultural heritage value or interest for this site.*
10. *It is anticipated that the fieldwork and reporting of the Stage 4 Mitigation of Development Impacts (if required) will be completed before the end of 2018 and it is not anticipated that any development activity will be necessary within the 50 metre wide Monitoring Buffers prior to the Spring of 2019.*

## **10.0 ADVICE ON COMPLIANCE WITH LEGISLATION**

While not part of the archaeological record, this report must include the following standard advisory statements for the benefit of the proponent and the approval authority in the land use planning and development process:

- a. This report is submitted to the Minister of Tourism and Culture as a condition of licensing in accordance with Part VI 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 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.*
- b. 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 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.*
- c. 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 archaeologist to carry out archaeological fieldwork, in compliance with sec. 48 (1) of the Ontario Heritage Act.*
- d. The Cemeteries Act, R.S.O. 1990, c. C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.*
- e. Archaeological sites recommended for further archaeological fieldwork or 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 licence.*

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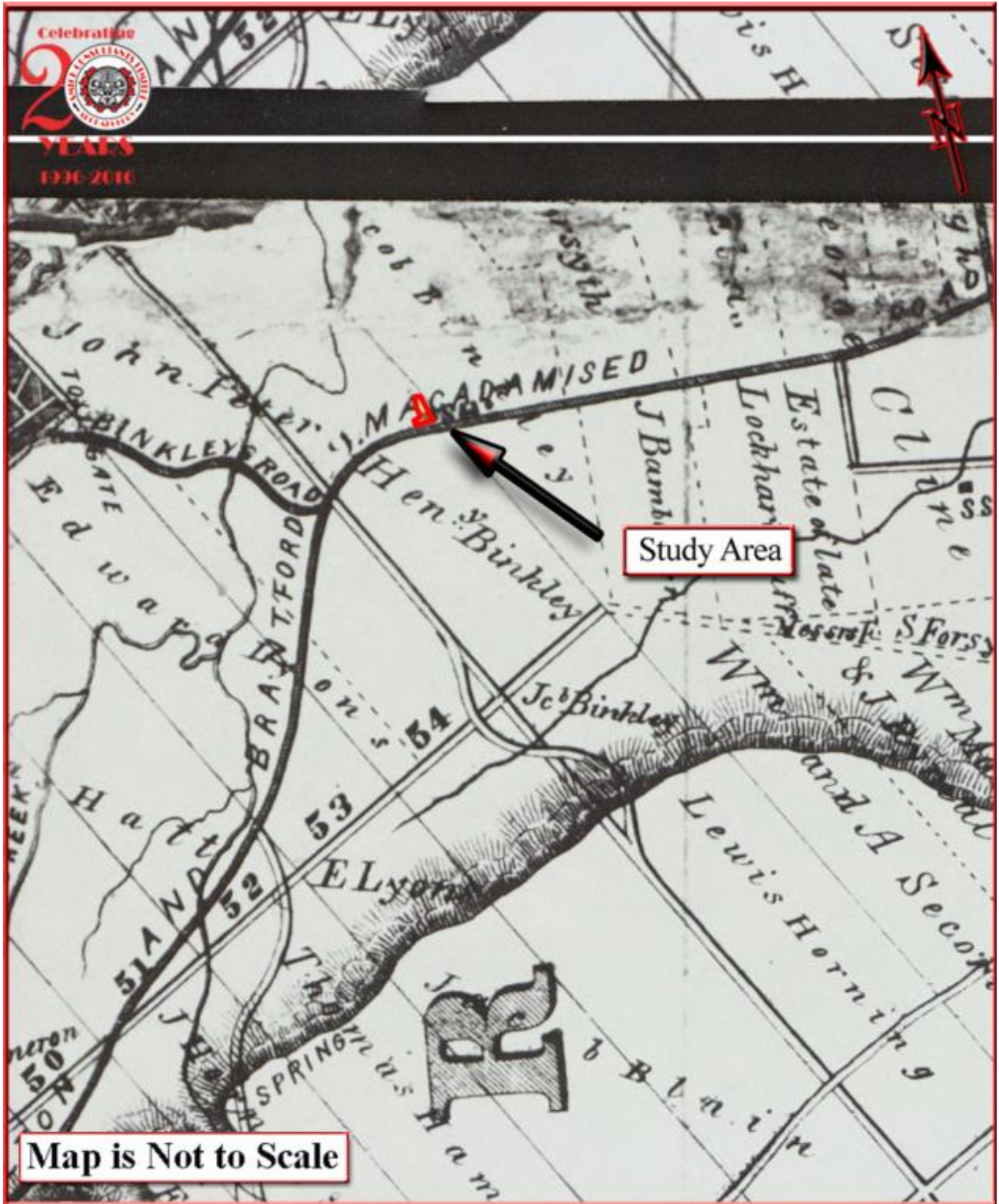
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**12.0 MAPS**



**MAP 1 LOCATION OF THE STUDY AREA (GOOGLE MAPS 2012)**

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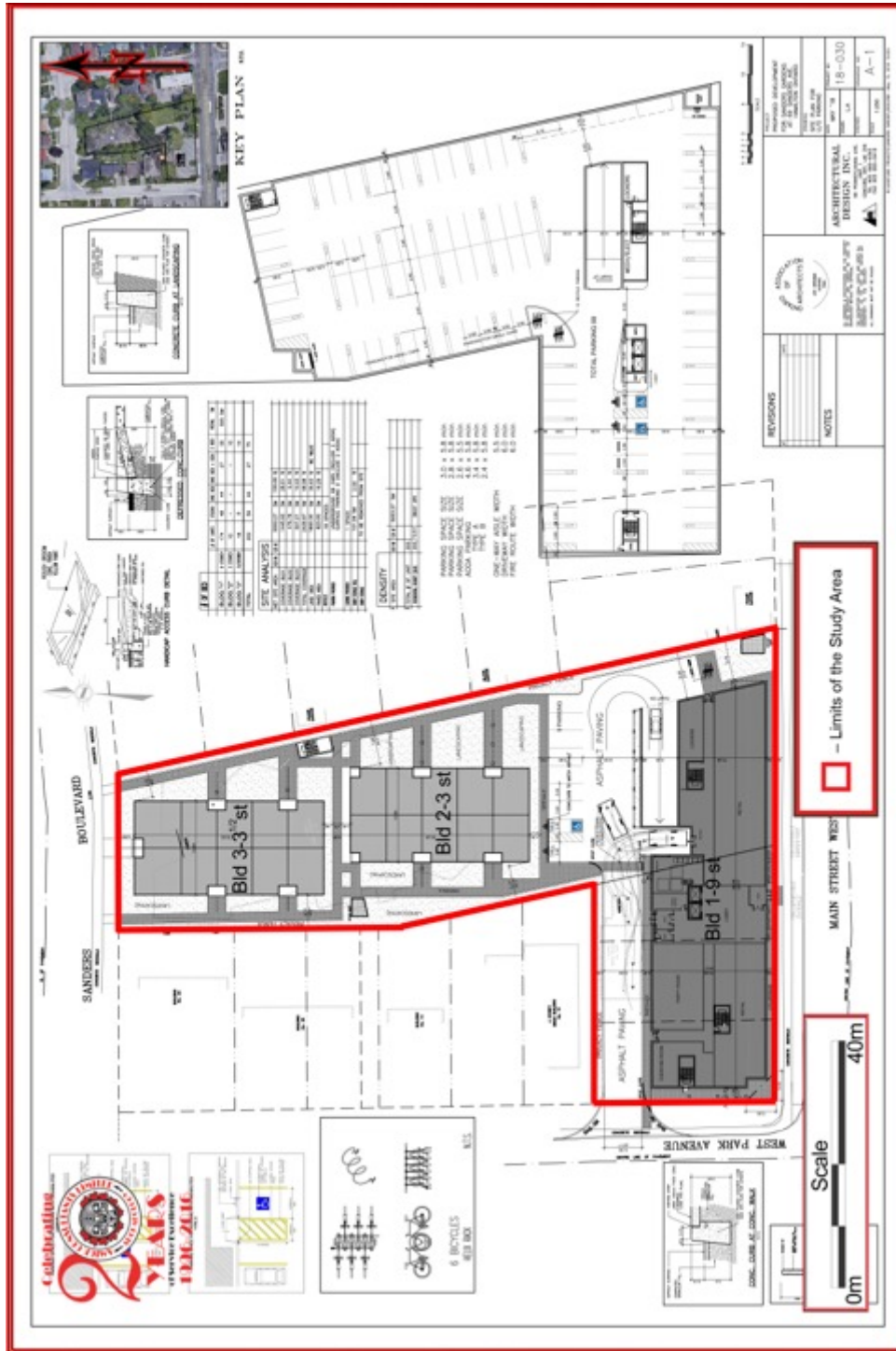
Map 2 Facsimile Segment of the *Map of the County of Wentworth, Canada West*. (Gregory 1859)

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MAP 3 FACSIMILE SEGMENT OF THE *ILLUSTRATED HISTORICAL ATLAS OF THE COUNTY OF WENTWORTH, ONT.* (PAGE AND SMITH 1875)

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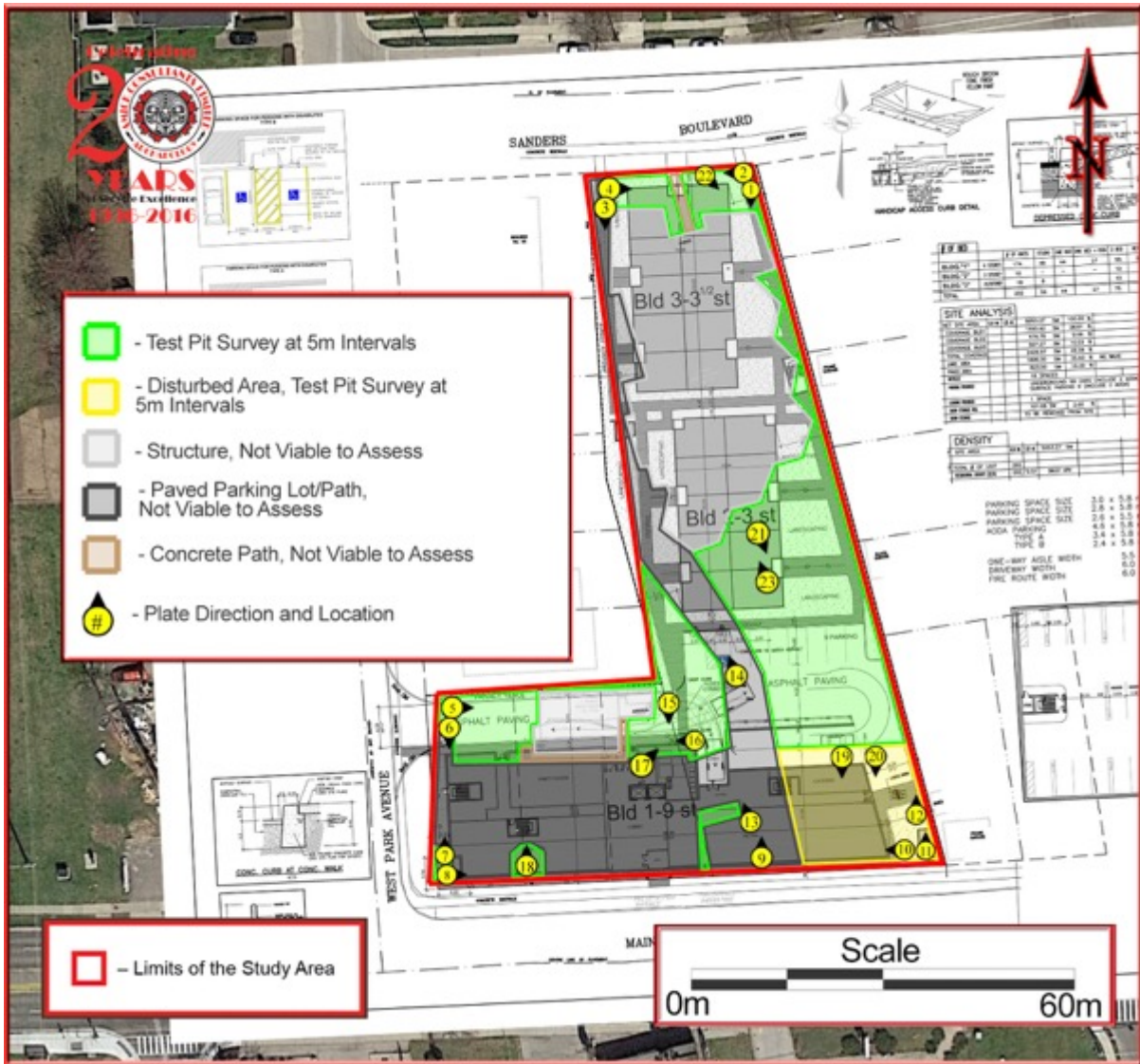
**MAP 4 PLAN OF SURVEY (ARCHITECTURAL DESIGN INC. 2018)**

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**MAP 5 AERIAL PHOTO OF THE STUDY AREA (GOOGLE EARTH 2011)**

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**MAP 6 DETAILED PLAN OF THE STUDY AREA**

**13.0 IMAGES**



**IMAGE 1 NE CORNER OF STUDY AREA (S)**



**IMAGE 2 NE CORNER OF STUDY AREA (W)**



**IMAGE 3 NW CORNER OF STUDY AREA (S)**



**IMAGE 4 NW CORNER OF STUDY AREA (E)**



**IMAGE 5 SW STUDYAREA (E)**



**IMAGE 6 STUDY AREA (S)**



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**IMAGE 7 SW CORNER OF STUDY AREA (N)**



**IMAGE 8 SW CORNER OF STUDY AREA (E)**



**IMAGE 9 MAIN PARKING ENTRANCE (N)**



**IMAGE 10 MAIN STREET WEST (W)**



**IMAGE 11 SE CORNER OF STUDY AREA (N)**



**IMAGE 12 SE CORNER OF STUDY AREA (N)**

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**IMAGE 13 PARKING AREA WITHIN STUDY AREA (N)**



**IMAGE 14 PARKING AREA WITHIN STUDY AREA (N)**



**IMAGE 15 AREA NORTH OF MAIN STREET WEST SITE (S)**



**IMAGE 16 FROM SE CORNER OF MAIN STREET WEST SITE (W)**



**IMAGE 17 AREA OF MAIN STREET WEST SITE (NE)**



**IMAGE 18 SW CORNER OF STUDY AREA (N)**

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**IMAGE 19 DISTURBED TEST PIT (N)**



**IMAGE 20 DISTURBED TEST PIT WITH ASPHALT (N)**



**IMAGE 21 TEST PIT EXAMPLE (N)**



**IMAGE 22 WORKING SHOT (NE)**



**IMAGE 23 WORKING SHOT (S)**



**IMAGE 24: SAMPLE OF ARTIFACTS RECOVERED FROM THE MAIN STREET WEST SITE (AHGX-773)**

## **APPENDIX A**

### **DATABLE HISTORIC ARTIFACT TYPE DESCRIPTIONS**

**The descriptions offered below are confined to datable historic artifacts typically recovered during field investigations. Although other materials are often found, they do not necessarily lend themselves to dating archaeological assemblages and are therefore not included in the following discussion. Additionally, the following represents a comprehensive reference guide for datable objects and is not limited to finds specific to a particular project or site assemblage.**

#### **Creamware**

Cream coloured earthenware was developed during the early 18<sup>th</sup> Century in England. It's development is attributed to Thomas Astbury of Shelton England during the reign of George I (Hughes n.d.: 104). George I reigned from 1714-1727 (Neumann 1967: 360). In the early period the lead glaze of this ware was applied in powdered form known as smithum or galena. Creamware achieved widespread production and general popularity as tableware by about 1750 as a result of Thomas Frye's development of a new process of applying the glaze in liquid form. This allowed for consistent and even application of decorative finishes and was quickly copied by other potters (Hughes n.d.: 105). Almost universal popularity was achieved by this ware when Josiah Wedgwood (founder of the renowned Wedgwood potteries) presented a creamware caudle and breakfast set of 73 pieces to Queen Charlotte as a gift to celebrate the birth of the Prince of Wales in 1762. It is said that the Queen was so impressed by this ware that she ordered a table service of the same ware but modified the design to her own taste. The resulting pattern became known as "Queen's Ware". When this set was delivered, George III saw it and likewise placed an order for an additional set altered to suit his own tastes. This further modification became known as the "Royal Pattern". As a result of these regal commissions, creamware achieved immense popularity (Hughes n.d.: 108).

By the late 1790s Creamware became the cheapest tableware in production. This was due to a number of factors, but it was mainly due to the introduction of pearlware which was whiter and more closely resembled oriental porcelain. This new ware quickly displaced Creamware as the most popular of the tableware produced during the late 18<sup>th</sup> and early 19<sup>th</sup> Centuries. By 1830 truly white (refined white earthenware) tableware was available. Creamware, known from about 1790 as "CC Ware", had changed as well. Officially "CC Ware" remained in production throughout the 19<sup>th</sup> Century but it became indistinguishable from refined white earthenware by about 1830.

#### **Plain Creamware**

Plain creamware was in production throughout the production history of the ware; however it is uncommon prior to 1790.

## **Pearlware**

Pearlware was the next stage after creamware in the quest for a white ceramic body. For many years the development of pearlware was attributed to Josiah Wedgwood, who, after many experiments introduced a ceramic which he termed “pearl white” in 1779 (Hume 1982: 128; Sussman 1977: 105). Recently, a reconsideration of the evidence seems to suggest that pearlware, termed “china glaze”, may have been in production sometime in the 1760s and certainly by 1775 (for a detailed discussion see Miller 1987).

Pearlware is essentially a variation of creamware. The body of the ware is essentially the same with slightly higher flint content, but the real difference is in the glaze. Cobalt was added to the glaze of this ceramic as a bluing agent to make the off-white colour of the glaze appear whiter. This ceramic was called “pearl white and “china glaze” amongst other things, but is now more commonly identified as pearlware.

### **Plain Pearlware**

Plain undecorated pearlware fragments can be dated within the general production range of the ware itself, 1770 – 1830.

### **Polychrome Hand Painted Pearlware**

Polychrome painted pearlware is simply pearlware which has been hand painted with more than one colour. There has been some attempt to differentiate polychrome painted wares based upon visibly identifiable distinctions in the particular hues employed. It has been suggested that from 1795 – 1815 colours were done in soft pastel hues, and from thence onward colours were of bright blues, greens, and pinkish reds (Humes 1982: 129). Others have suggested that underglaze pinks and reds were not seen on datable pieces prior to 1820 and that this is also true of certain shades of purple and green (Sussman and Moyle 1988: 1). While this is generally the case and can aid in the further refinement of dates applied to collections of hand painted wares, the unfamiliar should remain leery. These distinctions result from the use of chromium oxide as a constituent element of pigments beginning sometime around 1820. One must bear in mind that the particular colouring oxides used are only one of several factors which can have great effect on the final appearance of any ceramic product.

Many factors can affect the final colouration of the ware such as: the specific proportion of each of the elements used in both the underglaze pigment and the glaze itself; the constituent elements of, and colour of the vessel body; and the internal conditions of the kiln during the firing process (the purity of the atmosphere and the temperature being chief among these). With respect to the use of chromium oxide in particular, the specific ingredients of a glaze recipe and variations in the temperature used in firing will yield dramatically different results. Chromium oxide will produce the colours of red, pink, yellow, brown, green and blue-green (Rhodes 1983: 209). Each of these colours can also be

produced using other oxides which have a longer history of use in ceramic production. The essential difference is in the specific hues which chromium oxide produces in each of these colours which cannot be precisely duplicated by other means.

### **Relief Moulded Pearlware**

This decorative technique is most commonly identified with ironstone. Raised designs on the vessels were incorporated into the moulding of the objects themselves. Many of the early patterns produced in this medium persist to the present day. Many ceramics manufactured prior to the introduction of ironstone, such as pearlware, incorporated the use of embossed designs, but this form of decoration had never been so closely identified with a particular ceramic as it became with ironstone.

### **Slip Decorated Pearlware**

This type of decoration is made by applying slip in patterns to the exterior surface of vessels. This type of decoration was used on ceramics both before and after the production of pearlware and is therefore not useful in refining a date from that of general pearlware production.

### **Transfer Printed Pearlware**

Transfer printing was a method for transferring pictures to the surface of ceramic vessels which was developed during the late 18<sup>th</sup> Century. The use of colours other than cobalt blue for transfer printing was not attempted on any large scale until after 1828. The reason for this was that cobalt blue oxide was the only colouring agent which remained stable during the firing when used in conjunction with the transfer printing process. In 1828 a process was patented which allowed for the use of other colours. Immediately after this development colours such as red, brown, green, black and light blue were used on a popular level. Coloured transfers were popular in England by 1830 and had achieved similar appeal in North America by the early 1830s (Collard 1984: 117-118).

### **Shell Edge Decorated Pearlware**

Shell edge came into production on creamware during the 1770s. It remained a status item of the middle and upper classes until the close of the century. Following the War of 1812, transfer printed wares began to rise very quickly in popularity and edged wares quickly became the cheapest of the decorated wares in the 19<sup>th</sup> Century. Edged wares remained in production on refined white earthenware long after pearlware ceased to be produced as a table ware around 1830 (Miller 1990: 115).

### **Refined White Earthenware**

The various forms of refined white earthenware which came into production during the 1820s remained in production for an extended period of time and do not lend themselves

well to dating unless one has the advantage of makers' marks. In the case of this site there is not one example of refined white earthenware which has a maker's mark. This is not surprising since the ceramics from this ware category recovered from this site represent the cheapest types produced. The cheapest goods were often not marked since it was not considered worth the time and material.

### **Plain Refined White Earthenware**

Lacking any definitive attributes, these sherds have been assigned a date of post 1825.

### **Polychrome Hand Painted Refined White Earthenware**

Polychrome painted refined white earthenware is simply refined white earthenware which has been hand painted with more than one colour. There have been some attempts to differentiate polychrome painted wares based upon visibly identifiable distinctions in the particular hues employed. It has been suggested that from 1795 – 1815 colours were done in soft pastel hues, and from thence onward colours were of bright blues, greens, and pinkish reds (Humes 1982: 129). Others have suggested that underglaze pinks and reds were not seen on datable pieces prior to 1820 and that this is also true of certain shades of purple and green (Sussman and Moyle 1988: 1). While this is generally the case and can aid in the further refinement of dates applied to collections of hand painted wares, the unfamiliar should remain leery. These distinctions result from the use of chromium oxide as a constituent element of pigments beginning sometime around 1820. One must bear in mind that the particular colouring oxides used are only one of several factors which can have great effect on the final appearance of any ceramic product.

Many factors can affect the final colouration of the ware such as: the specific proportion of each of the elements used in both the underglaze pigment and the glaze itself; the constituent elements of, and colour of the vessel body; and the internal conditions of the kiln during the firing process (the purity of the atmosphere and the temperature being chief among these). With respect to the use of chromium oxide in particular, the specific ingredients of a glaze recipe and variations in the temperature used in firing will yield dramatically different results. Chromium oxide will produce the colours of red, pink, yellow, brown, green and blue-green (Rhodes 1983: 209). Each of these colours can also be produced using other oxides which have a longer history of use in ceramic production. The essential difference is in the specific hues which chromium oxide produces in each of these colours which cannot be precisely duplicated by other means.

### **Slip Decorated Refined White Earthenware**

This type of ceramic is decorated by applying slip in patterns to the exterior surface of the vessels.

### **Sponge Decorated Refined White Earthenware**

This decorative style is produced by applying pigment to the surface of vessels using sponges. This type of decoration enjoyed tremendous popularity during the middle of the 19<sup>th</sup> Century. Blue was the first colour used for this purpose and was most prevalent during the 1840s. Sponged wares were shipped to North America in quantity as cheap decorative kitchen and toiletry articles by mainly Scottish potteries until about 1890 (Collard 1984: 144-145).

### **Transfer Printed Refined White Earthenware**

Transfer printing was a method for transferring pictures to the surface of ceramic vessels which was developed during the late 18<sup>th</sup> Century. The use of colours other than cobalt blue for transfer printing was not attempted on any large scale until after 1828. The reason for this was that cobalt blue oxide was the only colouring agent which remained stable during the firing when used in conjunction with the transfer printing process. In 1828 a process was patented which allowed for the use of other colours. Immediately after this development colours such as red, brown, green, black and light blue were used on a popular level. Coloured transfers were popular in England by 1830 and had achieved similar appeal in North America by the early 1830s (Collard 1984: 117-118).

### **Ironstone**

Ironstone is partially vitrified white earthenware. Plain ironstone was first produced in the 1840s and featured no decorative elements apart from ribs, scrolls, or panels which were an intrinsic part of the vessel design. Various designs in relief moulded decoration were patterned from 1848 onward. One pattern, known generally as the “wheat” Pattern has remained in production in various styles from 1848 up to the present day (Sussman 1985: 7). Ironstone is first mentioned on Ontario store records in 1847 (Kenyon 1988: 25). This ware gained popularity throughout the second half of the nineteenth century until by the 1880s it far outsold other ceramic types (Kenyon 1988: 20).

Ironstone was manufactured specifically for the North American market. In general, those potteries which produced this ceramic did so to the exclusion of all others (Sussman 1985: 8). During its early history, throughout the 1850s and early 1860s, ironstone was evidently as expensive as the costly transfer printed wares (Sussman 1985: 9). This ware was being advertised in London (Ontario) newspapers by the early 1860s and by the 1870s was one of the most popular ceramics available on the market (Kenyon n.d.: 11). By 1897 it was the cheapest ceramic sold by the T. Eaton Company. Prices charged for either plain or relief decorated ironstone were the same (Sussman 1985: 9).

### **Plain Ironstone**

These pieces are not precisely datable and were most likely produced some time after 1840. Ironstone and a number of related vitrified and semi-vitrified wares were produced in great quantities during the second half of the 19<sup>th</sup> Century and into the 20<sup>th</sup> Century. These



ceramics were a continuation of the development techniques and styles employed in the production of other earlier contemporary wares.

### **Relief Moulded Ironstone**

The most common decorative technique identified with ironstone is relief moulding. Raised designs on the vessels were incorporated into the moulding of the objects themselves. Many of the early patterns produced in this medium persist to the present day. Many ceramics manufactured prior to the introduction of ironstone incorporated the use of embossed designs, but this form of decoration had never been so closely identified with a particular ceramic as it became with ironstone.

### **Slip Decorated Ironstone**

This type of ceramic is decorated by applying slip in patterns to the exterior surface of the vessels.

### **Sponge Decorated Ironstone**

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### **Transfer Printed Ironstone**

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### **Soft Paste Porcelain**

Porcelain was first produced in Europe at Meissen by the firm “Royal Saxon Porcelain Manufacture” in 1710, although it had been developed by Johann Friedrich Bottger two years previously in 1708 (Savage 1954:125). This development reflects the high regard

Europeans had held for porcelain imported from China and Japan. Loved for their beauty and durability, European ceramic producers lost considerable revenue to this import and were determined to discover a means of duplicating the ware. In England the discovery of a formula for porcelain production was not achieved until probably 1743 when the “Chelsea” works went into production. A patent for soft paste porcelain was made the following year in the joint names of Edward Heylyn and Thomas Frye (Savage 1954: 210). Throughout the early period of European production these wares tended to be heavily ornamented with thick overglaze polychrome enamels and as processes were refined the decorative techniques of underglaze painting and transfer patterns were used extensively. These decoration techniques predominated well into the 19<sup>th</sup> Century. It was not until the late 19<sup>th</sup> Century, and particularly, the 20<sup>th</sup> Century that porcelain became accessible as a standard household ware. By this time its decorative characteristics were substantially debased, with plain porcelain becoming increasingly common.

Soft paste porcelain is the lowest grade of this ware, and is different from the more costly hard paste porcelain in a number of ways. First, soft paste porcelain generally exhibits a greyish cast, whereas hard paste porcelain or true porcelain is white. When broken soft paste porcelain has a granular paste in appearance and a glassy glaze which is visibly distinct from the body. Hard paste is entirely glassy in cross section and it is very difficult to assess where the body ends and the glaze begins. High firing in this case ensures a more complete fusion of body and glaze which accounts for the difference in appearance of these two wares.

### **Plain Soft Paste Porcelain**

Lacking any other diagnostic datable attributes, plain sherds of this ware cannot be more precisely dated beyond the general date range of this type of ceramic.

### **Stoneware**

Stoneware is a class of ceramic which belongs under the larger heading of vitrified wares. Stoneware is manufactured from different clays that that used to make earthenware. This is because the objects in this medium are fired at much higher temperatures such that the clay is brought nearly to its melting point thereby causing the body to fuse together. It renders the body of the finished product much harder and therefore more durable. It has the added effect of rendering the paste of the fired ware wholly or partially water impermeable. Stoneware has been used to produce a wide variety of goods from the most elaborate and expensive to the most robust and utilitarian of the potter’s craft.

### **Salt Glazed Stoneware**

Salt glazed stoneware was first made in England during the latter years of the 16<sup>th</sup> Century. This particular variety of stoneware is relatively cheap and easy to produce as it requires only one firing to harden the vessel and to apply the glaze. The name “salt glaze” derives from the process by which this product is manufactured. At the appropriate time during the firing of the vessels, salt is shovelled into the kiln. The heat of the kiln causes the salt to separate into its constituent elements of sodium and chloride. The chloride gas

escapes through the vent holes of the kiln and the sodium bonds with the silica present in the clay of the vessels to form a glass over the surface of the vessel. The manufacture of utilitarian wares of this type has been popular from the time of its development until well into the 20<sup>th</sup> Century. Salt glazed vessels rose to prominence as larger more efficient potteries were established in North America which could produce these high firing durable products at low cost. The industrial production of utilitarian stoneware goods displaced the localized red earthenware industry in the closing decades of the 19<sup>th</sup> Century.

### **Yellow Ware**

Yellow ware was generally used for kitchen crockery and utility bowls. Yellow ware which is decorated with coloured horizontal bands is often referred to as “banded ware”. This is the most readily recognizable of the yellow ware products which became popular after 1840. Undecorated plain yellow ware is termed “common yellow” and dates from about 1830 onward. Yellow ware did not pass out of common usage in Canada until the 1930s (Lueger 1981: 141).

### **Coarse Red Earthenware**

Coarse red earthenware refers to a class of ceramic which was used largely for general purpose utilitarian kitchen and household wares. It is very difficult to date with precision as this form of vessel manufacture was pursued in the main by small cottage industries supplying what was normally a local market. As a result, they appear in highly variant forms based upon the clays, glazes, and techniques of each potter. They are common on historic sites from the beginning of settlement in North America until 1900. Two of the earliest potteries to be established in Ontario both began production in 1849. Many other potteries were soon established which provided domestic and utilitarian wares to primarily local consumers.

### **Slip Lined Coarse Red Earthenware**

This type of ceramic is decorated by applying slip in patterns to the exterior surface of the vessels.

### **Bottle Glass**

#### **Machine Made Bottle Glass**

In the late 19<sup>th</sup> Century a trend started toward the manufacture of bottles with semi-automatic and fully automatic machines. Machine made bottles are hollowware containers shaped using air pressure supplied by a machine, both automatic and semi-automatic machines produce bottle with similar characteristics. The first workable semi-automatic machines were patented in 1881 in the United States and in 1886 in England, in the next few decades machine made containers become increasingly popular as they are cheaper to

produce with continually refined techniques; by the early 20<sup>th</sup> Century hand blown bottle are becoming uncommon.

### **Undiagnostic Bottle Glass**

These pieces are likely from two-piece moulded vessels or from vessels produced using two-or-more vertical body moulds with separate bases. However these pieces were too small or did not have any diagnostic traits needed to identify the technology used in their manufacture.

### **Contact Moulded Bottle Glass**

Contact moulding is a process by which full-sized objects or portions of objects are formed in a mould using air pressure from a mouth or machine. Hot glass is introduced into a mould, that may or may not have had a design, and expanded by air pressure until it fills the mould, at which point the object or partial object is removed. This technique was used during Roman times extensively for containers. It was reintroduced in the 17<sup>th</sup> Century but did not come into wide use in containers until the 18<sup>th</sup> Century (Jones and Sullivan 1989: 23-24).

### **Pressed Glass Tableware**

During the press moulding manufacturing process hot glass is dripped into a mould which might consist of any number of pieces. The only limitation to the process is that the plunger must be able to enter and exit the mould without the necessity of it being opened. For decorated pieces, a design is embossed on the interior surface of the mould. The glass takes the form of the mould on its outer surface while the plunger shapes the inner surface. Once the object is removed from the mould it may be fire polished to restore the brilliance of the glass which has been lost due to contact with the mould (Jones and Sullivan 1989: 33)

Press moulding has been used on a small scale in England since the late 17<sup>th</sup> Century. At this time it was employed in the production of small solid objects such as imitation precious stones, glass seals, watch faces, etc. By the 1780s decanter stoppers and feet for vessels were being made using this technique. During the 1820s the technique was further developed in the United States and applied to the manufacture of complete vessels. By the early 1830s mass production of pressed table wares was underway in the New England states. Early pressed glass was manufactured primarily out of lead glass. William Leighton developed a lime glass in 1864 which resembled lead glass, but was one third cheaper. Non-lead glass becomes common on Canadian sites from about 1870 onward (Jones and Sullivan 1989: 34-35)

### **Nails**

#### **Cut Nails**

Around 1800, machines for cutting nails began to be used. At first these were simple machines resembling a table with a guillotine-like knife at one end. Strips of metal which were as broad as the resulting nails were to be long were fed against the blade. The strip of metal was shifted from side-to-side following each cut. This produced the tapered shank of the nail. Nails made by this method remained square in cross section and still required heads to be fashioned by hand. Around 1820 improved machines were developed for the manufacture of cut nails which included mechanical headers (Rempel 1980: 369). In general terms, cut nails dominated the construction industry from roughly 1825 to 1890 when they were displaced by wire nails.

### **Forged Nails**

Towards the end of the 18th Century all nails were made by the blacksmith out of nail stock. Nail stock was typically produced by a special mill on location at the iron works. Wrought iron strips were fed into the mill which cut it into sections which were square in cross-section. The resulting nail stock was cut into the required length by the smith, then heated, tapered and headed. These nails were not displaced by cut nails until around 1825 in developed areas. In more remote areas forged nails remained in use quite longer. This was especially the case with larger spikes which were often required to meet very particular specifications and not required in quantity (Rempel 1980: 367). Blacksmiths continued to fill the void between accessibility to commercial products and the needs of their clients into the first three decades of the twentieth century. Forged nails most likely date to the first half of the 19th Century although it is possible that they were produced at a later date.

<b>Borden</b>	<b>Location</b>	<b>Key Characteristic</b>	<b>Total #</b>	<b>category</b>	<b>secondary characteristic</b>	<b>form</b>	<b>function</b>	<b>burnt</b>	<b>Notes</b>	<b>CAT #</b>	<b>BOX #</b>
AhGx-773	PTP1	yellow ware	1	utilitarian	plain	hollow	unknown		rim	1	1
AhGx-774	PTP1	bottle glass, moulded	1	glass	olive					2	1
AhGx-775	PTP1	pearlware	1	ceramic	plain	hollow	unknown	1		3	1
AhGx-776	PTP2	bottle glass, moulded	1	glass	olive					4	1
AhGx-777	PTP2	window glass	1	glass						5	1
AhGx-778	PTP2	bottle glass, machine-made	1	glass	green					6	1
AhGx-779	PTP2	rwe	1	ceramic	plain	flat	unknown			7	1
AhGx-780	PTP3	brick fragment	2	architectural						8	1
AhGx-781	PTP4	window glass	3	glass						9	1
AhGx-782	PTP4	wire nail	1	architectural						10	1
AhGx-783	PTP5	bottle glass, moulded	2	glass	olive					11	1

**2018 Stage 1-2 Archaeological Assessment of 1630 Main Street West and 69 Sanders Blvd, Part of Lot 55 Concession 1 (Geographic Township of Ancaster,  
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(AMICK File #18517/MTCS File # P058-1648-2018)**

AhGx-784	PTP5	bottle glass, moulded	1	glass	blue						<b>12</b>	1
AhGx-785	PTP5	coal	1	miscellaneous							<b>13</b>	1
AhGx-786	PTP6	window glass	1	glass							<b>14</b>	1
AhGx-787	PTP7	bottle glass, moulded	1	glass	olive					base, molded "M"	<b>15</b>	1
AhGx-788	PTP7	bottle glass, moulded	1	glass	olive						<b>16</b>	1
AhGx-789	PTP7	bottle finish, machine-made	1	glass	aqua						<b>17</b>	1
AhGx-790	PTP7	bottle glass, machine-made	1	glass	aqua						<b>18</b>	1
AhGx-791	PTP7	rwe	1	ceramic	transfer print, purple	hollow	unknown				<b>19</b>	1



## **14.0 PROJECT REPORT SUPPLEMENTARY PACKAGE**

### **LICENSEE INFORMATION:**

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P058

### **PROJECT INFORMATION:**

Corporate Project Number:

18517

MTCS Project Number:

P058-1648-2018

Investigation Type:

Stage 1-2 Archaeological Property Assessment

Project Name:

Main Street West

Project Location:

1630 Main Street West and 69 Sanders Blvd, Part of  
Lot 55 Concession 1 (Geographic Township of  
Ancaster, County of Wentworth), City of Hamilton

### **APPROVAL AUTHORITY INFORMATION:**

File Designation Number:

Not Currently Available

### **REPORTING INFORMATION:**

Site Record/Update Forms:

Main Street West Site (AhGx-773)

Date of Report Filing:

May 22, 2018

Type of Report:

**ORIGINAL**

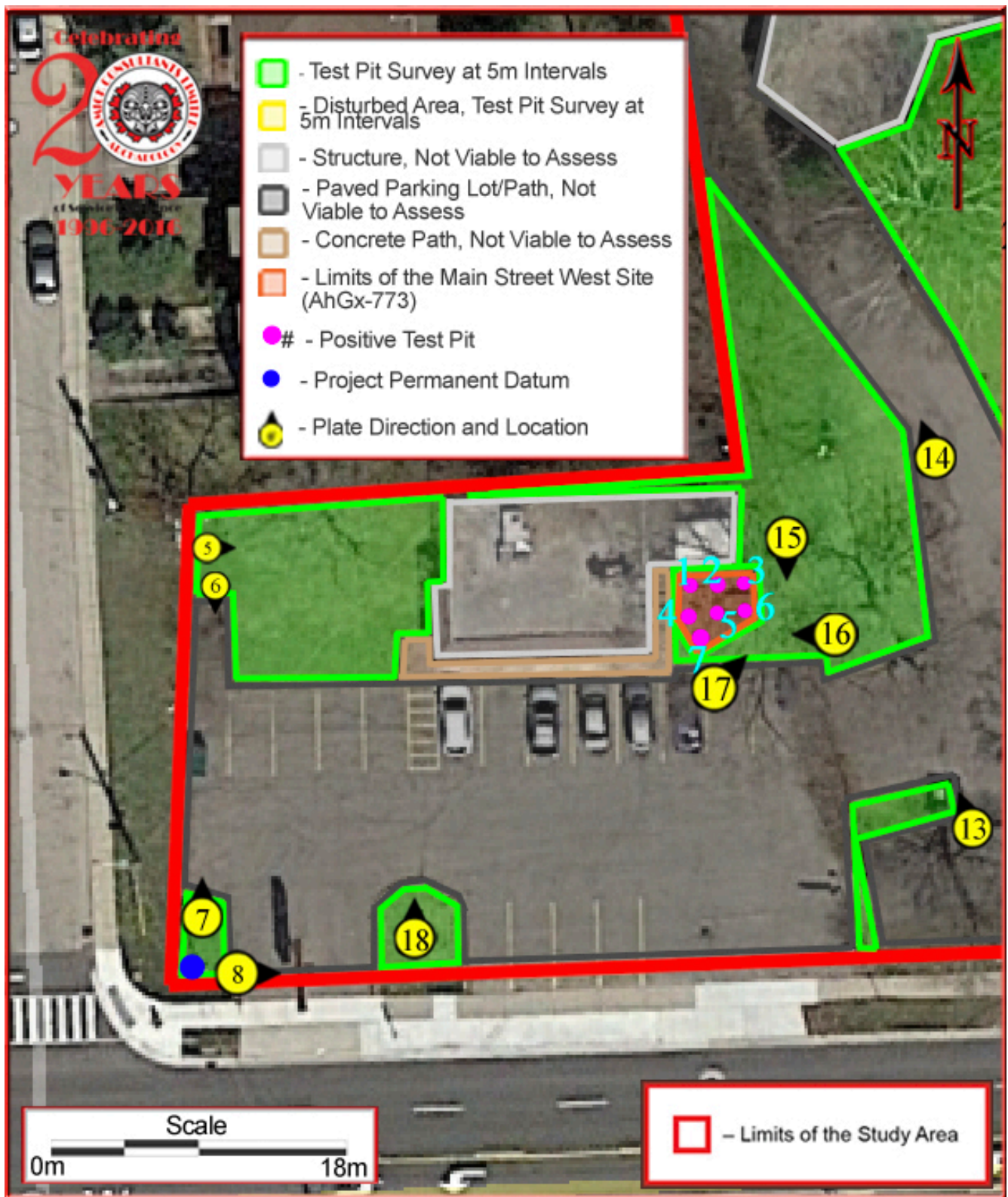


*2018 Stage 1-2 Archaeological Assessment of 1630 Main Street West and 69 Sanders Blvd, Part of Lot 55  
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Supplemental Documentation  
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**MAP 7: AERIAL IMAGERY OF THE MAIN STREET WEST SITE (AHGX-773)**

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**MAP 8: AERIAL IMAGERY CLOSE-UP OF THE MAIN STREET WEST SITE (AhGx-773)**



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**Project Permanent Datum:**

Within the property is a light pole along the southwest boundary. This was used as the project datum.

**Table 7: Main Street West Site GPS Coordinates (UTM Grid reference 17T NAD 83)**

<b>Location</b>	<b>Easting</b>	<b>Northing</b>
<b>Northwest corner (PTP1)</b>	0586751	4789991
<b>Northeast corner (PTP3)</b>	0586755	4789991
<b>Southwest corner (PTP4)</b>	0586752	4789987
<b>South east corner (PTP6)</b>	0586755	4789987
<b>Center</b>	0586754	4789989
<b>DATUM</b>	0586722	4789965

GPS Points were taken using a Garmin 64st High-sensitivity GPS and GLONASS receiver with quad helix antenna (2m accuracy).