SAJECKI PLANNING

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT 904 MISSISSAUGA HEIGHTS DRIVE

JANUARY 12, 2021









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PART OF LOTS 6 AND 7 ON RANGE 3 CREDIT RIVER INDIAN RESERVE IN THE FORMER GEOGRAPHIC TOWNSHIP OF TORONTO, PEEL COUNTY, NOW CITY OF MISSISSAUGA, REGIONAL MUNICIPALITY OF PEEL.

ORIGINAL REPORT

PROJECT NO.: 20M-01451-00 DATE: JANUARY 12, 2021

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Stage 1-2 Archaeological Assessment

904 Mississauga Heights Drive

Part of Lots 6 and 7 on Range 3 Credit River Indian Reserve in the former Geographic Township of Toronto, Peel County, now City of Mississauga, Regional Municipality of Peel.

Prepared for:

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PREPARED BY

Archaeologist

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EXECUTIVE SUMMARY

WSP Canada Inc. (WSP) was retained by Sajecki Planning (the Client), to conduct a Stage 1-2 archaeological assessment of 904 Mississauga Heights Drive in Mississauga, Ontario. The assessment is part of a Zoning By-law Amendment application to the City of Mississauga to allow for the subdivision of the property into five lots, each with a single detached house.

The current study area consists of a 1.28 ha parcel of land at 904 Mississauga Heights Drive. It is situated on parts of Lots 6 and 7 on Range 3 Credit River Indian Reserve in the Geographic Township of Toronto, Peel County, now the City of Mississauga, Regional Municipality of Peel, Ontario.

This archaeological assessment was triggered by the *Planning Act* to ensure that the client is compliant with the *Ontario Heritage Act*, 1990. The boundaries of the assessment correspond to development plans provided by the Client at the outset of the assessment as shown in Appendix A. Permission to access the property to conduct the recommended Stage 1-2 archaeological assessment was granted by the Client and no limits were placed on this access. The Stage 1-2 property inspection and test pit survey was conducted on December 7th, 2020.

The archaeological assessment was carried out in accordance with the Ministry of Heritage, Sport, Tourism and Culture Industries' (MHSTCI) 2011 *Standards and Guidelines for Consultant Archaeologists*. The assessment included a review of documents pertaining to the project area including historic maps, aerial photography, land registry documents and local histories, previous archaeological assessment reports, and a property survey. **Based on the results of the Stage 1-2 archaeological assessment, no further archaeological assessment is required**.

It should be noted that if development plans are changed to include areas outside of the current study area boundaries as illustrated in Figure 2, further archaeological assessment may be required.

Should previously undocumented archaeological materials be discovered, they may constitute a new site and are therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the material must cease work immediately and a provincially licensed consultant archaeologist must assess the material's cultural heritage value or interest in accordance with Section 48 (1) of the *Ontario Heritage Act*.

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FEATURES OF ARCHAEOLOGICAL POTENTIAL

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1 PROJECT CONTEXT

1.1 OBJECTIVES

The objectives of a Stage 1-2 Archaeological Assessment are as follows:

- Provide information regarding the property's geography, history, previous archaeological fieldwork, and current land condition;
- Provide a detailed evaluation of the property's archaeological potential;
- Document all archaeological resources on the property;
- Determine whether the property contains archaeological resources requiring further assessment; and,
- Recommend appropriate Stage 3 assessment strategies for archaeological sites identified.

A property inspection allows the archaeologist to gain first-hand knowledge of the geography, topography, and current conditions of the property that allows for a more confident determination of archaeological potential. A field survey allows for the on-site documentation and inventory of all archaeological resources through systematic means as appropriate to the characteristics of the property.

1.2 DEVELOPMENT CONTEXT

WSP Canada Inc. (WSP) was retained by Sajecki Planning (the Client), to conduct a Stage 1-2 archaeological assessment of 904 Mississauga Heights Drive in Mississauga, Ontario. The assessment is part of a Zoning By-law Amendment application to the City of Mississauga to allow for the subdivision of the property into five lots, each with a single detached house.

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1.3 HISTORICAL CONTEXT

1.3.1 HISTORICAL DOCUMENTATION

The current study area consists of a 1.28 ha parcel of land at 904 Mississauga Heights Drive. It is situated on part of Lots 6 and 7 on Range 3 Credit River Indian Reserve in the former Geographic Township of Toronto, Peel County, now City of Mississauga, Regional Municipality of Peel.

The following sections provide a brief outline of the history of the study areas during the Pre-contact and Post-contact periods to provide a generalized, chronological framework which forms the basis of the archaeological assessment.

1.3.2 PRE-CONTACT PERIOD

The following provides a generalized cultural history of Indigenous people in the region surrounding the study areas. Information is primarily derived from the archaeological record and the interpretations of archaeologists.

Technological or temporal divisions have been defined to describe adaptations to changing climates, physiography, subsistence patterns, and geopolitical pressures which do not necessarily provide an accurate reflection of fluid cultural practices spanning thousands of years. The following presents a sequence of Indigenous land-use from earliest human occupation following deglaciation to the recent past based on periods defined by archaeologists as:

- The Paleo Period (formerly Paleo-Indian)
- The Archaic Period
- The Woodland Period
- The Post-Contact Period

PALEO PERIOD

Paleo period populations were the first to occupy what is now Southern Ontario, moving into the region following the retreat of the Laurentide Ice Sheet approximately 11,000 years before present (BP). The first Paleo period populations to occupy Southern Ontario are referred to by archaeologists as Early Paleo (Ellis & Deller, 1990).

Early Paleo period groups are identified by their distinctive projectile point morphological types, exhibiting long grooves, or 'flutes', that likely functioned as a hafting mechanism (method of attaching the point to a wooden shaft). These Early Paleo group projectile point types include Gainey (ca. 10,900 BP), Barnes (ca. 10,700), and Crowfield (ca. 10,500) (Ellis & Deller, 1990). By approximately 10,400 BP, Paleo projectile points transitioned to various unfluted varieties, such as Holcombe (ca. 10,300 BP), Hi Lo (ca. 10,100 BP), and Unstemmed and Stemmed Lanceolate (ca. 10,400 to 9,500 BP). These tool types were used by Late Paleo period groups (Ellis & Deller, 1990). Both Early and Late Paleo period populations were highly mobile, participating in the hunting of large game animals. Paleo period sites often functioned as small campsites where stone tool production and maintenance occurred (Ellis & Deller, 1990).

ARCHAIC PERIOD

Climatic warming, which occurred approximately 8,000 BP, was accompanied by the arrival of the deciduous forest in Southern Ontario. With this shift in flora came new faunal resources, which resulted in a change to cultural adaptations in the region. This change is reflected by new tool-kits and associated subsistence strategies, referred to archaeologically as the Archaic period.

The Archaic period in Southern Ontario is divided into three phases: the Early Archaic (ca. 10,000 to 8,000 BP), the Middle Archaic (ca. 8,000 to 4,500 BP), and the Late Archaic (ca. 4,500 to 2,800 BP). Generally, in North America, the Archaic period represents a transition from big game hunting to broader, more generalized subsistence strategies dependent on local environmental parameters. This period is characterized by the following traits:

- An increase in stone tool variation and reliance on local stone sources
- The emergence of notched and stemmed projectile point types
- A reduction in extensively flaked tools
- The use of native copper
- The use of bone tools for hooks, gorges, and harpoons
- An increase in extensive trade networks, and
- The production of ground stone tools and an increase in larger, less portable tools

The Archaic period is also marked by population growth. Archaeological evidence suggests that by the end of the Middle Archaic period (ca. 4,500 BP) populations were steadily increasing in size (Ellis, et al., 1990).

Over the course of the Archaic period, populations began to rely on more localized hunting and gathering territories. By the end of the Archaic period, populations were utilizing more seasonal encampments. The archaeological record shows populations were shifting their settlement patterns on a regular, seasonal basis. From spring to fall, settlements would exploit lakeshore/riverine locations where a broad-based subsistence strategy could be employed, while the late fall and winter months would be spent at interior site where deer hunting was likely a primary focus with some wild edibles also being collected (Ellis et al., 1990, p. 114). The steady increase in population size and adoption of a more localized seasonal subsistence strategy of the Archaic period eventually evolved into what is termed the Woodland period.

EARLY AND MIDDLE WOODLAND PERIOD

The beginning of the Woodland period is identified by archaeologists by the emergence of ceramic technology for the manufacture of pottery. Similar to the Archaic period, the Woodland period is separated into three primary timeframes: the Early Woodland (approximately 2,800 to 2,000 BP), the Middle Woodland (approximately 2,000 to 1,200 BP), and the Late Woodland (approximately 1,200 to 350 BP) (Spence et al., 1990; Fox, 1990).

The Early Woodland period is represented in Southern Ontario by two different cultural complexes: the Meadowood Complex (ca. 2,900 to 2,500 BP), and the Middlesex Complex (ca. 2,500 to 2,000 BP). During this period, the life ways of Early Woodland populations differed little from that of the Late Archaic with hunting and gathering representing the primary subsistence strategies. The pottery of this period is characterized by its relatively crude construction and lack of decorations. These early ceramics exhibit cord impressions, likely resulting from the techniques used during manufacture (Spence et al., 1990).

The Middle Woodland period is differentiated from the Early Woodland period by changes in lithic tool forms (e.g. projectile points, expedient tools) and the increased elaboration of ceramic vessels (Spence et al., 1990). In Southern Ontario, the Middle Woodland is observed in three different cultural complexes: the Point Peninsula Complex to the north and northeast of Lake Ontario, the Couture Complex near Lake St. Clair, and the Saugeen Complex

throughout the remainder of Southern Ontario. These groups can be identified by their use of either dentate or pseudo scalloped ceramic decorations. It is by the end of the Middle Woodland period that archaeological evidence begins to suggest the rudimentary use of maize (corn) horticulture (Warrick, 2000).

LATE WOODLAND PERIOD

There is much debate as to whether a Transitional Phase is seen throughout Ontario, but it is generally agreed that the Late Woodland period of occupation begins around 1,100 BP. The Late Woodland period in Southern Ontario can be divided into three sub-phases related to cultural branches of occupation: the early Late Woodland is characterized by the Glen Meyer and Pickering branches, the middle Late Woodland is characterized by Uren and Middleport sub-phases, and the late Late Woodland is characterized by the ancestral populations of the Neutral-Erie branch and the Huron-Petun branch of the Iroquois in Southern Ontario (Smith, 1990, p. 285).

The Pickering and Glen Meyer cultures co-existed within Southern Ontario during the early Late Woodland period (ca. 1250-700 BP). Pickering territory is understood to encompass the area north of Lake Ontario to Georgian Bay and Lake Nipissing (Williamson, 1990). Glen Meyer is centred around Oxford and Norfolk counties (Noble, 1975), but also includes the southeastern Huron basin and the western extent is demarcated by the Ekfrid Clay Plain southwest of London, Ontario. Villages of either tradition were generally smaller in size (~1 ha) and composed of smaller oval houses, which were replaced by larger, longer structures as represented later in the Late Woodland period (Williamson, 1990).

In Pickering villages, the number of buildings increased over time, and middens and palisades began to appear. Early forms of ossuaries were also connected to some of these villages (Williamson, 1990). Villages tended to be built on sandy soils and there was seasonal occupation of large villages and small fishing/hunting camps. The Glen Meyer villages were generally located inland along major tributaries with the small fishing camps located on the northern shore of Lake Erie. Evidence suggested a mixed economy where hunting and gathering played an important role, but small-scale horticulture was present, indicating a gradual shift from hunting-gathering to a horticultural economy (Williamson, 1990).

Wright (1966) hypothesized that the Pickering conquered the Glen Meyer by 700 BP, thus beginning the middle Late Woodland stage, although this theory is viewed with much skepticism (Williamson, 1990). Wright's theory is based upon the greater similarity between Pickering pottery and pottery on subsequent sites across Southern Ontario. The middle Late Woodland period is more generally accepted as a brief fusion of the two cultures. The first half of this period (700-650 BP) is represented by the Uren, while the second half (650-600 BP) is known as Middleport. The end of the period is signified by the emergence of regional varieties that became the precursors for the historically known Huron, Petun, Neutral, and Erie (Dodd et al., 1990).

Uren and Middleport sites share a similar distribution pattern across much of southwestern and southcentral Ontario, indicative of the continuation of local development from the previous early Late Woodland (Dodd et al., 1990). Significant changes in material culture and settlement-subsistence patterns are noted during this short time. Iroquois Linear, Ontario Horizontal and Ontario Oblique pottery types are the most well-represented ceramic assemblages (Dodd et al., 1990). By the Middleport phase, a complex clay pipe assemblage had developed, and the use of bone for tools and adornment increased as well (Dodd et al., 1990; Ferris & Spence, 1995).

These artifact assemblages are part of a marked increase in sedentism in Southern Ontario during the Uren and Middleport Phases. This increase is visible in the archaeological record as year-round villages, the appearance of ossuaries, and what are thought to be semi-subterranean sweat lodges (Ferris & Spence, 1995). Early organization of groups into matrilineages were seen in the presence of long, non-overlapping longhouses. An increase in the reliance on staple crops such as maize, beans and squash has been intrinsically linked to these peoples' ability to permanently settle and establish such large population networks (Dodd et al., 1990; Warrick, 2000; Ferris & Spence, 1995).

Some Middleport sites have been recorded within the northern part of Southwestern and Southcentral Ontario, indicative of expanding trade networks and more complex changes in settlement subsistence patterns (Dodd et al., 1990). Population increase during the Middleport phase was rapid and expansive, resulting from a number of factors including but not limited to: fertility and mortality rates; community organization and village fissioning; productive resource acquisition; and the development of trade networks with northern Algonquian peoples (Warrick, 2000).

The movement of Middleport groups into almost every available corner of Southern Ontario, resulted in a more organized social structure. This increase in social complexity is thought to be the thread that ties middle Late Woodland groups to the large, socially complex village settlements of the late Late Woodland period (Warrick, 2000).

HURON-WENDAT

These expansions resulted in a more organized and develop social structure which formed the basis of the societies of the late Late Woodland period. It is during this period that the archaeological record documents groups that are clearly ancestral to the communities and nations encountered by French explorers in the seventeenth century: the Neutral and the Huron.

The area occupied by the ancestral Huron during the late Late Woodland period is bounded by the Trent River in the east, the Niagara Escarpment in the west, and Lake Ontario to the south (Ramsden, 1990). Research into site clusters based on ceramic attribute analysis has suggested that by the 1500's, the coalescence of smaller villages into larger ones coincided with population movement northwards into the territory typically known after contact with Europeans as Huronia or Wendake, centered on modern Simcoe County (Ramsden 1990; Birch, 2012). Village structure relied upon longhouses and associated palisade walls. Larger longhouses that were oriented slightly differently within the village are associated with primary familial groups. Longhouses outside palisade walls are theorized as being for visiting groups for either trade or social gatherings. A number of refuse pits and middens are also typical within the village proper (Ramsden, 1990). These large villages are supported by the use of a wide variety of wild game and plants, but most notably through the intensive agricultural practices that the Huron are well known for (Ramsden, 1990). More recent research has indicated that smaller, impermanent camp or cabin sites were often used seasonally for the tending of agricultural fields or as fishing camps (Ramsden, 1990).

The early period of Huron development, termed the Black Creek – Lalonde stage, is used to describe certain ceramic styles reflective of occupation during the fifteenth century (Ramsden, 1990). Decorations on these ceramics can be used as potential indicators of local ceramic traditions. Artifact assemblages recovered from Huron sites contain primarily ceramics, including globular vessels with many idiosyncratic differences. The most diagnostic decoration is of the Lalonde High Collar type, which included high collars and a complex neck decoration. Other popular motifs include punctuates beneath the collar, interior decoration, and simple castellation. Other artifact categories include pipes in a wide variety of styles including trumpet and ring. Faunal collections include awls, needles and bone beads, and deer toe toggles. Lithic assemblages among the Huron are very limited and evolved from sidenotched to triangular shaped projectile points. Groundstone axes, celts and polished stone pipes are also found. On sites early in the Huron sequence, rolled copper tubular beads are occasionally recovered. Later in the Huron sequence and after the arrival of European goods in the early sixteenth century, trade routes allowed for the procurement of iron kettles, iron axes, iron knives, and glass beads (Ramsden, 1990).

In the sixteenth century, there was wider re-structuring of groups which saw a northward population migration resulting in village coalescence farther north from the shores of Lake Ontario (Ramsden, 1990; Birch, 2012). This trend was the defining feature of the settlement pattern changes that characterize the Realignment Period (Ramsden, 1990). This coalescence and subsequent movement northward, is thought to be a result of a number of sociopolitical factors, including increased conflict, an increased complexity in political organization, and interaction with

early European traders (Ramsden, 1990; Birch, 2012; Ferris & Spence, 1995). Artifact assemblages in these coalescent villages tended to be more heterogeneous. Ceramics see a decrease in neck and sub-neck decoration but an increase in lip decoration with simple motifs favored for the collar. Castellation gained popularity in this period, particularly with turret and grooved types. Some ceramic vessels also show St. Lawrence Iroquoian influences as their populations dispersed and some communities integrated with the Huron. Earlier pipe styles continue but coronet, mortice, collared ring and effigy pipes gained popularity (Ramsden, 1990, p. 382).

Facing continued conflict with the Five Nation Iroquois continued to drive Huron populations northwards into Simcoe County and the Penetanguishene Peninsula and beyond the study area. Early contact with European settlers at the end of the Late Woodland period resulted in extensive change to the traditional lifestyles of most populations inhabiting Ontario (Warrick, 2000).

1.3.3 POST-CONTACT PERIOD

Early European presence within the study area began as early as 1615, with the travels of the French explorer Etienne Brulé along the Humber Trail. Samuel de Champlain spent time with the Huron-Wendat in the area during the winter of 1615-1616 where he wrote about Huron-Wendat daily life. A Récollet friar, Gabriel Sagard, also spent time with the Huron-Wendat in the winter of 1623-1624 where he wrote an ethnography, phrasebook, and comprehensive dictionary of the Huron-Wendat Language. Jesuit priests also lived among the Huron-Wendat from 1634-1650 (Williamson, 2014).

Several social, economic and environmental factors including warfare with the Five Nations Iroquois would lead to the dispersal of Huron-Wendat groups in the 1640s and 1650s from the north shore of Lake Ontario. This dispersal gave way for the Five Nations Iroquois in 1659 to occupy the territory north of Lake Ontario where they settled a series of locations along inland-running trade routes such as with the village of Ganatsekwyagon on the Rouge River, Teiaiagon on the Humber River, and Kentsio on Rice Lake. Teiaiagon was at the head of the Toronto Carrying Place Trail which connected Lake Ontario with Lake Simcoe to the north (Steckley, 1987; Ramsden, 1990). These settlements were short-lived. Due in part to increased military pressure from the French and Anishinaabe nations to the north known as the Council of Three Fires (Ojibwa, Odawa, and Potawatomi), the Iroquois abandoned their settlements on the north shores of Lake Ontario.

These Anishinaabe groups that were more mobile in settlement and subsistence strategy continued the Indigenous occupation of the area by the late 1680s and became the groups with which the British Crown eventually established treaties as a foundation of Euro-Canadian settlement of Southern Ontario (Ferris & Spence, 1995).

There remains some debate about the extent in which the Mississauga were already in the region at this time (Blair, 2008; White, 1991; Johnston, 2003). Anishinaabek oral history identifies southern Ontario as the ancestral homeland of the Anishinaabek people, who had made Treaties with the Iroquois sometime between 1450 to 950 BP to allow them to live and practice agriculture in the area. When European diseases swept through the Iroquoian villages, they retreated to their wintering ground to the north and returned once the situation had settled (Migizi & Kapyrka, 2015). The following is their history, as presented by Gitiga Migizi, a Michi Saagiig Anishinaabe Elder from Curve Lake First Nation (Migizi & Kapyrka, 2015):

The traditional homelands of the Michi Saagiig (Mississauga Anishinaabeg) encompass a vast area of what is now known as southern Ontario. The Michi Saagiig are known as "the people of the big river mouths" and were also known as the "Salmon People" who occupied and fished the north shore of Lake Ontario where the various tributaries emptied into the lake. Their territories extended north into and beyond the Kawarthas as winter hunting grounds on

which they would break off into smaller social groups for the season, hunting and trapping on these lands, then returning to the lakeshore in spring for the summer months.

The Michi Saagiig were a highly mobile people, travelling vast distances to procure subsistence for their people. They were also known as the "Peacekeepers" among Indigenous nations. The Michi Saagiig homelands were located directly between two very powerful Confederacies: The Three Fires Confederacy to the north and the Haudenosaunee Confederacy to the south. The Michi Saagiig were the negotiators, the messengers, the diplomats, and they successfully mediated peace throughout this area of Ontario for countless generations.

Michi Saagiig oral histories speak to their people being in this area of Ontario for thousands of years. These stories recount the "Old Ones" who spoke an ancient Algonquian dialect. The histories explain that the current Ojibwa phonology is the 5th transformation of this language, demonstrating a linguistic connection that spans back into deep time. The Michi Saagiig of today are the descendants of the ancient peoples who lived in Ontario during the Archaic and Paleo-Indian periods. They are the original inhabitants of southern Ontario, and they are still here today.

The traditional territories of the Michi Saagiig span from Gananoque in the east, all along the north shore of Lake Ontario, west to the north shore of Lake Erie at Long Point. The territory spreads as far north as the tributaries that flow into these lakes, from Bancroft and north of the Haliburton highlands. This also includes all the tributaries that flow from the height of land north of Toronto like the Oak Ridges Moraine, and all of the rivers that flow into Lake Ontario (the Rideau, the Salmon, the Ganaraska, the Moira, the Trent, the Don, the Rouge, the Etobicoke, the Humber, and the Credit, as well as Wilmot and 16 Mile Creeks) through Burlington Bay and the Niagara region including the Welland and Niagara Rivers, and beyond. The western side of the Michi Saagiig Nation was located around the Grand River which was used as a portage route as the Niagara portage was too dangerous.

The Michi Saagiig would portage from present-day Burlington to the Grand River and travel south to the open water on Lake Erie.

Michi Saagiig oral histories also speak to the occurrence of people coming into their territories sometime between 500-1000 A.D. seeking to establish villages and a corn growing economy – these newcomers included peoples that would later be known as the Huron-Wendat, Neutral, Petun/Tobacco Nations. The Michi Saagiig made Treaties with these newcomers and granted them permission to stay with the understanding that they were visitors in these lands. Wampum was made to record these contracts, ceremonies would have bound each nation to their respective responsibilities within the political relationship, and these contracts would have been renewed annually. These visitors were extremely successful as their corn economy grew as well as their populations.

However, it was understood by all nations involved that this area of Ontario were the homeland territories of the Michi Saagiig.

The Odawa Nation worked with the Michi Saagiig to meet with the Huron-Wendat, the Petun, and Neutral Nations to continue the amicable political and economic relationship that existed – a symbiotic relationship that was mainly policed and enforced by the Odawa people.

COUNTY OF PEEL

The County of Peel is a narrow municipality on the western edge of Lake Ontario. To its east was York County, now the Regional Municipality of York and the City of Toronto. To the north are the counties of Wellington, Dufferin, and Simcoe. To the west was former Halton County, now Regional Municipality of Halton.

In 1794, Lieutenant-Colonel John Graves Simcoe oversaw the construction of a roadway called Dundas Street. It was undertaken to improve transportation and communication between the new capital (Town of York) and the western district of the province. This road followed an old First Nations trail that ran from Cataraqui (Kingston) around Lake Ontario to Niagara. In 1798, another military road was opened along another old First Nations trail, which now forms the modern Lakeshore Road. It opened up even more lands to traders and settlers in later years (Riendeau, 1985).

In 1806, the British Crown purchased 84,000 acres from the Mississauga of the Credit First Nation for 1,000 pounds sterling as part of their effort to secure more land for 'United Empire Loyalists' who had left America in 1783 after having fought for the British. This transaction was often referred to as the Head of the Lake Purchase (Treaty No. 14) and included land to the southwest of Treaty 13 (the Toronto Purchase) and along the north shore of Lake Ontario. The newly acquired land constituted a significant portion of the southern part of Peel County where the study area is situated. It was divided into three townships: Nelson Township, Trafalgar Township and Toronto Township. The remainder of Peel County was obtained from the Mississaugas in Treaties 19 (1818), 22 (1820), and 23 (1820) (Mississaugas of the Credit First Nation, 2019; Ministry of Indigenous Affairs, 2019). As a result, the area saw some Euro-Canadian immigration after this treaty, but these population migrations were halted by the War of 1812. A large influx of Irish settlers in 1819 reinvigorated the settlement of Peel County from which the area continued to grow over the coming decades (Mika & Mika, 1983, p. 177)

In 1854, the County of Peel was established and was named after Sir Robert Peel, Prime Minister of Great Britain. Originally, the County was united with the County of York, but many inhabitants wanted independent county status. In October of 1866, a vote was taken which favoured separation. Eventually, the Village of Brampton was chosen as the county town. On January 22, 1867, the first county council of Peel met at the newly constructed court house in Brampton. At this time, the County of Peel included the Townships of Albion, Caledon, Chinguacousy, Toronto, and Toronto Gore, and the Town of Brampton and the Village of Streetsville (Mika & Mika, 1983).

The Regional Municipality of Peel was incorporated on October 15, 1973, and included the City of Brampton, the City of Mississauga, and the Town of Caledon. The City of Mississauga had been formed by the amalgamation of the towns of Port Credit, Streetsville, and Mississauga. By 1980, the population of Peel was 464,500 with 298,000 within Mississauga (Mika & Mika, 1983, p. 180).

TORONTO TOWNSHIP

The original survey of Toronto Township, completed in 1805, was laid out with two concessions north of Base Line (now Eglinton Avenue) and three concessions south to the Lake Ontario lakefront, excluding the reserve lands encompassing the Credit River (Riendeau, 1985). Settlement in the township concentrated around Base Line and Dundas Road. By the 1830s, four distinct villages had developed: Summerville, Dixie, Cooksville, and Erindale (Riendeau, 1985). Communities along the Lakeshore Road to the south were much slower to develop than those along Dundas Street. However, by the end of the 1830s, the community of Port Credit had taken shape along with several communities to the west of the Credit River.

The communities to the west of the Credit River included the hamlet of Burnhamthorpe, named after the birthplace of Lord Horatio Nelson. It was originally named Sandhill but confusion arose with a nearby community of the same name. Centered on the intersection of modern Dixie Road and Burnhamthorpe Road, it was founded as a Methodist Village with the first buildings situated on the northwest corner of the intersection adjacent to an early pioneer cemetery. Burnhamthorpe grew to include a school, a Methodist church, general store, a Sons of Temperance Hall, an Orange Lodge, a steam-powered grist mill, blacksmith, carriage shop, cheese factory, and shoemaker shop (Heritage Mississauga, 2018).

In the latter half of the nineteenth century the population of Toronto Township on a whole began to decline due to the urbanization of larger communities in proximity to the township such as Toronto, Hamilton and Brampton. These larger communities drew people off their farms into the more lucrative factory work and this change in lifestyle marked a change in how the small communities would develop in the township. The villages started to develop as neighbourhoods, rather than developing into small towns. These communities were surrounded by lands used for commercial agriculture which branched out from the wheat industry into livestock and orchards (Riendeau, 1985). After World War I, the area began to develop as suburbs and neighborhoods of Toronto to the east (Riendeau, 1985). By 1969, Lakeview, Cooksville, Erindale, Sheridan, Dixie, Meadowvale Village, and Malton were amalgamated to form the Town of Mississauga (Riendeau, 1985). The population continued to grow quickly and by 1974, the Town of Mississauga to incorporated as the City of Mississauga (Statistics Canada, 2016; Mika & Mika, 1983, p. 180).

MISSISSAUGAS OF THE CREDIT FIRST NATION

When the Mississaugas of the Credit First Nation signed the Ajetance Treaty with the Crown in 1818, the Nation was left with three remaining reserves on the banks of 12 Mile Creek, 16 Mile Creek, and the Credit River. William Claus, Deputy Superintendent of the Indian Department, oversaw the surrender of these remaining lands in 1820 with Treaties 22 and 23. The former saw the surrender of 12 Mile and 16 Mile Creeks along with the northern and southern segments of the Credit River lands. The latter, signed the same day, saw the remaining land on the Credit River surrendered. In exchange, they were offered instruction in Christianity, education for their children, fifty pounds sterling, and 200 acres on the Credit River Reserve where they were to establish a village (Duric, 2017). The increasing number of Euro-Canadians in the area had impacted both game and fish sources which made traditional methods of subsistence increasingly difficult (Plummer, 2015).

The Credit Village, located to the south east of the study area on present-day Mississauga Road, was established in 1826. In April of that year, Peter Jones and approximately 100 Methodist Mississauga erected temporary bark structures and began to clear the land. Over the next few years, it developed into a thriving and self-sufficient village. By the late 1930s, it is recorded as having approximately forty log and frame houses, a Methodist church, a two-storey Mission House, a schoolhouse, a blacksmith's shop, a carpenter's shop, two stores, a hospital, and two saw mills. The Mississauga also had boats, warehouses, and shipping facilities at the river mouth as majority shareholders in the Credit Harbour Company. While some residents maintained traditional subsistence strategies, the establishment of this village also represented a significant subsistence shift as many of the residents grew corn, wheat, oats, and vegetables while raising livestock (Plummer, 2015).

Despite this prosperity, they eventually abandoned the village in 1847. The government considered the land that they had settled upon as surrendered, making it Crown Land. Despite a decades long legal battle, the Mississauga were unable to secure proper legal title to the land. There were other pressures facing the Mississauga as well, including disease introduced by European settlers, increasing Euro-Canadian encroachment, and cultural discrimination. Some of the village residents left for Port Credit, while others went to the Saugeen Peninsula. The majority of the Mississauga, however, went to live on 1,940 ha of land on the Six Nations Reserve on the Treaty

land known as the Haldimand Tract. The Haldimand Tract was land that had been originally surrendered by the Mississauga to the Six Nations, led by Joseph Brant, in the eighteenth century (Plummer, 2015).

1.3.4 STUDY AREA SPECIFIC HISTORY

To better understand the historic land use of the study area, the 1859 Tremaine's *Map of the County of Peel, Canada West* (Figure 3) and the 1877 Walker & Miles' *Illustrated Historical Atlas of the County of Peel, Ontario* (Figure 4) were reviewed to examine whether historic features are located within, or in close proximity to the study area. This analysis contributes to the determination of archaeological potential. Table 1 provides a summary of the review of the historic maps of the study areas.

Table 1: Historical Land Use Summary by Lot and Concession

		Range	Lot	1859 Tremaine Map		1877 Atlas Map	
County	Township			Occupant s	Features	Occupant s	Features
			6, D, C	Ira Van Valkenburg (West)	Bluff over looking Credit River	Peel	N/A
	Toronto 3, Credit River Indian Reserve	3, Credit	6, D, C	R & J Cotton (East)	Credit River, ten houses of the "Old Indian Reserve" on Mississauga Road		One structure on Mississauga Road
Peel		7, E, F	Ira Van Valkenburg (West)	House in west, bluff over looking Credit River	Manufacturi ng Company	Two structures on Mississauga Road	
			7, E,F	R & J Cotton (East)	Credit River, three houses of the "Old Indian Reserve" on Mississauga Road		N/A

In the 1859 map, the owner associated with Lots 6 and 7 above the bluffs overlooking the Credit River was Ira Van Valkenburg. The house is located outside of the study area on Lot 7 to the northwest at the end of present-day Old Carriage Road. The land in the southeastern parts of Lots 6 and 7, on the banks of the Credit River, were owned by R & J Cotton. At least 13 houses of the old village of the Mississaugas of the Credit River First Nation were depicted within this area, concentrated entirely on what is now modern Mississauga Road.

In the 1877 Walker & Miles Map, Lots 6 and 7 on the bluff over looking the Credit Valley were split and now depicted as Lots C and D as well as E and F, respectively. The southeastern half of the Lots along the river were not been changed. The entire surrounding area is now under the ownership of the Peel Manufacturing Company. Only

three structures on the 1859 map are depicted in the area associated with the Mississauga of the Credit Village. Old Carriage Road is no longer the only established roadway northwest of the Credit River and in the vicinity of the study area. Present-day Queensway West has now been established.

To gain a better understanding of more recent land use of the study area, aerial imagery from 1954 to 2020 were reviewed, made available by the University of Toronto and Google Earth. By 1960, Mississauga Heights Drive had been established, as had the golf course to the south (Figure 5). There are several houses along the roadway, including a house on the property at 904 Mississauga Heights Drive. By 1970, the land surrounding Mississauga Heights Drive had been further developed. The areas to the southwest and northeast of the current property had been severed and residential properties had been developed (Figure 6). The house located at 904 Mississauga Heights Drive, that had been constructed before 1960, stood on the property until 2007 (Figure 7). After this time, the area around the house was subject to extensive redevelopment. The previous house has been demolished and a new one rebuilt in its place, the driveway has been redesigned, and the front yard has been subject to extensive landscaping that has been expanded into the wooded area to the northwest.

1.4 ARCHAEOLOGICAL CONTEXT

1.4.1 CURRENT CONDITIONS

The study area is generally bounded by private residential properties to the east and west, Mississauga Heights Drive to the north, and the Credit River Valley and Mississauga Golf and Country Club to the south. The study area is comprised of a wooded area in the northwest half, covering most of the property's frontage up to the edge of Mississauga Heights Drive. The paved driveway to the house and landscaped manicured lawn are located on the east portion. The current residential structure is located on the south part of the property and is surrounded on all sides by manicured lawn, a large paved area, and a series of stone-lined gardens. The steeply sloped bluff leading down into the Credit Valley is located in the southeast corner of the study area.

1.4.2 NATURAL ENVIRONMENT AND PHYSIOGRAPHY

The study area is situated within the Iroquois Plain physiographic region of Southern Ontario, which is described as a former zone of beaches of ancient glacial Lake Iroquois (Chapman & Putnam, 1984, p. 190). The Iroquois Plain physiographic region borders the western portion of Lake Ontario. It reaches from the Niagara River in the south, around the Golden Horseshoe to the west and continues to the Trent River in the northeast. The Iroquois Plain was formed as a result of glacial recession and the emptying of Lake Iroquois towards New York State (Chapman & Putnam, 1984, pp. 190-196).

The study area is situated within a gently sloping plain that formed over the wave-eroded surface of the Queenston red shale formation. In other areas, the plain is characterized by stratified sands of varying depths (Chapman & Putnam, 1984, pp. 191). The soil within the study area consists of two types. Immediately over the bluff, it consists of Bookton Sandy Loam, a grey-brown podzolic with good drainage, smooth topography, a gentle slope, and no stones. Further inwards to the northwest is Mississauga Clay Loam, a dark grey gleisolic with poor drainage, smooth topography, a very gentle slope, and a few stones (Hoffman & Richards, 1953).

The sand plains just to the south were an important horticultural area during the early twentieth century. Its sandy nature, frost protection from the warmer lake temperatures, and proximity to both the lake and land transportation routes shaped it into an ideal location for the growing of fruits like apples, pears, bush fruits, strawberries, and

vegetables. The area has since been replaced by the urbanization of the Greater Toronto Area. The gravel beaches have been exhausted as a result of demand for construction material and gravel. The sand plain, themselves, provided excellent drainage which promoted their use for fill in residential areas, while areas with thin deposits of sand over bedrock where used for industrial sites. The proximity of the area to the lake has also encouraged the development of industries such as thermal-electric power, oil refineries, gypsum and clay industries, as well as small harbours such as at Port Credit (Chapman & Putnam, 1984, p. 192).

Ecoregions are parts of an ecozone and are characterized by distinctive regional ecological factors including climate, flora, fauna, physiography, soil, water and land usage. The study area lies within the Mixedwood Plains Ecozone and the Lake Erie-Lake Ontario Ecoregion (Ecoregion 7E). Climatic and geological characteristics for these ecoregions are provided below, along with a brief description of dominant vegetation and wildlife species.

The Lake Erie-Lake Ontario Ecoregion has a hot and moist climate in the summer and cool in the winter, with a mean annual temperature range of 6.3 to 9.4 degrees Celsius. Limestone bedrock of primarily Devonian and Silurian ages underlays the Ecoregion. Surface topography is generally flat and overlain with deep undulating ground moraine deposits. Historic lakes that once occupied the Ecoregion have left substantial glaciolacustrine deposits in many areas (Crins et al., 2009).

The flora and fauna of Ecoregion 7E are the most diverse in Canada. Characteristic mammals, birds, reptiles and fish include white-tailed deer, northern racoon, striped skunk, Virginia opossum, green heron, Virginia rail, Cooper's hawk, eastern kingbird, willow flycatcher, brown thrasher, yellow warbler, common yellowthroat, northern cardinal, savannah sparrow, red-backed salamander, American toad, eastern garter snake, Midland painted turtle, longnose gar, channel catfish, smallmouth bass, yellow perch, walleye, northern hog sucker, banded killifish, and spot tail shiner. Ecoregion 7E also contains the majority of Ontario's species at risk due to the vast urbanization and habitat loss. Species at risk in Ecoregion 7E include the Acadian flycatcher, king rail, prothonotary warbler, hooded warbler, spiney softshell turtle, blue racer and small mouthed salamander (Crins et al., 2009).

The Lake Erie-Lake Ontario Ecoregion is associated with the Deciduous Forest Region. However, lands around the study area are comprised primarily of land converted for pasture and agricultural uses (~78%) and urban/developed land (~7%). Forest cover in the remaining areas consists primarily of dense deciduous (10.3%), sparse deciduous (1.0%), and mixed deciduous forest. This limited forest cover means that fires are rare and small within the ecoregion (Crins et al., 2009). Common broad leaved deciduous trees still present in the area include the sugar maple, beech, white elm, basswood, red ash, white oak and butternut. It also marks the northern limit of the tuliptree, cucumber-tree, pawpaw, red mulberry, Kentucky coffee-tree, black gum, blue ash, sassafras, mockernut hickory, pignut hickory, the black oak and the pin oak. The Deciduous Forest Region also contains black walnut, sycamore and the swamp white oak. Some conifers can be found in the area including the eastern white pine, tamarack, eastern red cedar and the eastern hemlock (Rowe, 1972).

The Credit River is approximately 70 m south of the study area, which is within the Credit River Watershed. The head waters of the Credit begin in the north end of the Regional Municipality of Peel, in the Oak Ridges Moraine. It flows southeast for approximately 90 km into Lake Ontario at Port Credit, Mississauga. Along this path, approximately 1,500 km of streams and tributaries empty into the Credit which covers almost 1,000 km². This area is home to over 244 bird species, 64 fish species, 41 species of mammals, five turtle species, eight snake species, 17 amphibian species and 1,330 plant species. It also has been a centre of human occupation since the Paleo Period (Credit River Watershed and Region of Peel Natural Areas Inventory Project, 2011).

1.4.3 PREVIOUS ARCHAEOLOGICAL ASSESSMENTS

A search of the MHSTCI's Archaeology and Heritage Past Portal Database resulted in the identification of one previous archaeological assessment that has been conducted on or within 50 m of the study area (Figure 8).

In 2019, The Archaeologists Inc were retained by a private developer to conduct a Stage 1-2 archaeological assessment of the property at 900 Mississauga Heights Drive, east of the current study area. It is situated on part of Lots 1 and 2, Registered Plan 342 and part of Lots 6 & 7, Range 3, Credit River Indian Reserve. Approximately 40% of the property was subject to systematic test pit survey at 5 m intervals while 20% was determined to be disturbed, 30% was sloped and 10% was low and wet. No archaeological resources were recovered, and no further work was recommended (The Archaeologists Inc, 2019).

1.4.4 REGISTERED ARCHAEOLOGICAL SITES

A search of the *Ontario Archaeological Sites Database* indicates that there are four registered archaeological sites within 1 km of the study area (MHSTCI, 2020). None of the sites are situated within, or in close proximity to, the study area. Table 2 provides details on these archaeological sites.

Table 2: Registered Archaeological Sites within 1 km of the Study Area

Borden	Site Name	Time Period	Cultural Affinity	Site Type	Current Development Status
AjGv-14	Mississauga Indian Village	Post-Contact	Mississauga	Village	-
AjGv-15	River Flat	Archaic	Indigenous	Other, camp/campsite	-
AjGv-27	Maracle	Woodland	Indigenous*	Other, camp/campsite	-
AjGv-70	AjGv-70	Post-Contact	Mississauga*	Other, church/chapel	Further work required

⁻ denotes no information listed

Of the four sites, two are Pre-contact Indigenous sites and two are Post-contact indigenous sites associated with the Mississauga of the Credit Village. All four sites are located within the property currently operated by the Mississauga Golf and County Club.

Three of the sites are located on the south bank of the Credit River. AjGv-14 is the site specifically identified as the Mississauga of the Credit Village; however, no documented excavations have occurred at AjGv-14, specifically. It is noted as most likely being destroyed by the construction of the golf course.

The River Flat site (AjGv-15) is located west of Credit Village on the southeastern banks of the Credit River. It was noted as also having been destroyed during the construction of the golf course. It was documented as a Laurentian Archaic camp site (MHSTCI, 2020).

The Maracle Site (AjGv-27) is situated on the northwest bank of the Credit River. It was excavated by Annie Gould in 1981 and, at that time, had been already partially disturbed and under threat of further expansion by the golf course and looting. It was documented as a Woodland Period campsite (MHSTCI, 2020).

Finally, AjGv-70 was identified by AMEC Earth and Environmental in 2010 as part of a Stage 1-2 archaeological assessment for the redevelopment of the golf course driving range. It was subject to controlled surface collection in which desiccated wood, wrought nails, machine cut nails and ceramics were recovered. The site was dated to

^{*} denotes inferences made by author

between 1825 to 1847 and was believed to have been the southeastern section of the Mississauga of the Credit Village. The site was covered in durable cloth, sealed with 6 inches of sand, and a 20-m buffer around the site was then fenced off (AMEC, 2010). At the conclusion of the Stage 1-2 archaeological assessment, it was determined that the site requires additional archaeological work, and any development in this area would require mitigation to address this site.

1.4.5 LISTED AND DESIGNATED HERITAGE PROPERTIES

There is one listed heritage property within 300 m of the study area – The Mississauga Golf and Country Club, which was constructed in 1906. Other than this property, there are no designated heritage properties or cemeteries within 300 m of the study area (City of Mississauga, 2020).

2 FIELD METHODS

2.1 TEST PIT SURVEY

The Stage 2 archaeological assessment was conducted on December 7th, 2020. The survey was carried out following Section 2.1 of the *Standards and Guidelines for Consultant Archaeologists* (MHSTCI, 2011). The assessment was undertaken during sunny and clear skies, lighting was adequate for fieldwork, and all land conditions were photodocumented (Images 1-15). The temperatures were relatively cool (-6 to 1°C) and the soil was dry, unfrozen, and suitable for screening (Images 16-22). Despite the assessment occurring in December, at no point did weather conditions impede the archaeological assessment. Of the 1.28 ha subject to assessment, approximately 1.1 ha of the study area was subject to test pit survey while 0.17 ha was determined to be disturbed and 0.1 ha was not assessed due to slope greater than twenty degrees.

Access to the property was granted by the Client and no limits were placed on this access. The wooded area and areas of manicured lawn were subject to test pit survey at 5 m intervals (Images 23-35). Test pits measured 30 cm in diameter and were excavated at least 5 cm into subsoil. All soil was screened through 6 mm mesh and the test pits were subsequently backfilled. The test pit survey continued to within 1 m of the building footprint (Images 36-38). Areas subject to photo-documentation only include the building footprint, the driveway, landscaped gardens, and areas with steep slope.

The soil stratigraphy of the undisturbed test pits were typically a medium brown sandy loam topsoil followed by a brownish yellow (Images 39-41) or a brownish orange sandy (Image 42) subsoil that became a bleached whitish gray as depth increased. In some areas, a pale-yellow clay (Image 43) subsoil was encountered. The depth of the test pits typically ranged from 30 to 40 cm in the northwestern wooded area. In the area north of the house where there were stone-lined gardens, the test pits here increased to 40 to 50 cm in depth and were mixed with small flat cobbles and soils rich in organics. The area at the very south east of the property was not assessed due to excessive slope leading into the Credit Valley (Images 44-47).

Clear evidence of disturbance was encountered in two areas. The first area included approximately one to two metres on either side of the driveway. In this case, the disturbance consisted of a 10 to 15 cm fill above natural topsoil (Images 48, 49). As this disturbance merely capped the original topsoil, the interval of the test pit survey was not altered. Disturbance was also encountered in the area around the house. The disturbance was usually a light brownish yellow, light brown, or whitish gray sand fill that was, in some cases, intermixed with lenses of dark brown and black soil (Images 50-52). This disturbance typically continued all the way down to the brownish yellow sandy subsoil, which was often more compact than the overlying fill. A layer of geotextile, anchored by aluminium pegs, was encountered in some of the test pits which covered a layer of gravel laid on subsoil (Images 53-56). The condition of the geotextile suggests recent landscaping and construction activities likely associated with the construction of the house after 2007. The presence of a sewer drain at the front of the properties suggested that utilities were also part of the disturbance. These disturbed test pits typically ranged from 40 to 50 cm in depth and some reached depths of 80 to 90 cm. Despite this disturbance, based on the high archaeological potential for the area and the discovery of intact soils beneath disturbed fill in some areas (Image 57), an interval of 5 m between test pits was maintained.

Field notes, photographs and GPS coordinates taken during the test pit survey are retained by WSP. The results of the test pit survey and photograph locations and directions are presented on Figure 9.

2.2 INVENTORY OF DOCUMENTATION RECORDS

The following represents all the documentation taken in the field relating to this project and is being retained by WSP Canada Inc.:

- 1 page of field notes
- 210 digital photographs in JPG format
- GPS readings taken during the property inspection

3 ANALYSIS AND CONCLUSIONS

3.1 ARCHAEOLOGICAL POTENTIAL

The criteria for determining the level of Pre-contact archaeological potential is primarily focused on physiographic variables that include distance and nature of the nearest source/body of water, distinguishing features in the landscape (e.g. ridges, knolls, eskers, wetlands), the agricultural viability of soils, resource availability, and other features which would have made the area more suitable for settlement and occupation.

Background and archival research, including reviews of historic maps and county/township histories, provide the basis for determining historic archaeological potential. The proximity to historic transportation corridors such as roads, rail and water courses, as well as early Euro-Canadian settlement also contribute to this determination. A more comprehensive list of features indicative of archaeological potential, as outlined in the *Standards and Guidelines for Consultant Archaeologists* (2011), can be found in Appendix B.

Based on the results of the background study, there is potential for the presence of archaeological resources within the study area. There is high Pre-contact archaeological potential as it is situated on a bluff overlooking the Credit River and there are two Pre-contact archaeological sites, a Laurentian Archaic site and a Woodland site, within 1 km of the study area. Of particular note is the close proximity of the study area to the early to mid-nineteenth century Mississauga of the Credit Village, as well as their previous occupation of the land. As such, there is the potential for Post-contact Indigenous archaeological resources as well.

Regarding historical Euro-Canadian archaeological potential, there is high potential in the study area as Queenway West was a historical transportation corridor and the historic maps indicate significant settlement on the lot and surrounding area throughout the nineteenth century.

3.2 RECORD OF FINDS AND ANALYSIS

Despite careful scrutiny, no archaeological resources were recovered during the Stage 2 test pit survey.

3.3 CONCLUSION

The study area was considered to have archaeological potential due to its location on a bluff over the Credit River, its proximity to historical transportation routes, its proximity to known archaeological sites, and its proximity to the Mississauga of the Credit Village. The property was assessed through test pit survey at a 5 m interval on December 7th, 2020. No archaeological resources were recovered and, therefore, no further archaeological assessment is recommended.

4 RECOMMENDATIONS

The archaeological assessment was carried out in accordance with the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* supporting the *Ontario Heritage Act, 1990*. The assessment included a review of documents pertaining to the project area including historic maps, land registry documents and local histories, previous archaeological assessment reports, and a property survey. **Based on the results of the Stage 1-2 archaeological assessment, no further archaeological assessment is required**.

It should be noted that if development plans are changed to include areas outside of the current study area boundaries as illustrated in Figure 2, further archaeological assessment may be required.

Should previously undocumented archaeological materials be discovered, they may constitute a new site and are therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the material must cease work immediately and a provincially licensed consultant archaeologist must assess the material's cultural heritage value or interest in accordance with Section 48 (1) of the *Ontario Heritage Act*.

5 ADVICE ON COMPLIANCE WITH LEGISLATION

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 for Consultant Archaeologists (2011a) that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the Ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

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

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

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

6 REFERENCES

- AMEC Earth and Environmental. (2010). Stage 1-2 Archaeological Assessment, Driving Range Redevelopment, Mississauga Golf and Country Club, 1725 Mississauga Road, Mississauga. Ontario Public Register of Archaeological Reports under MHSTCI file PIF# P141-142-2010.
- Birch, J. (2012) Coalescent Communities: Settlement Aggregation and Social Integration in Iroquoian Ontario. *American Antiquity* 77: 646-670.
- Blair, Peggy J. (2008). Lament for a First Nation: The Williams Treaties of Southern Ontario. Vancouver: UBC Press.
- Chapman L.J. & D.F. Putnam. (1984). *The Physiography of Southern Ontario*. Ontario Geological Survey, Special Volume 2. Ontario, Canada.
- City of Mississauga. (2020). Heritage Register for Mississauga. Retrieved at: https://www.mississauga.ca/wp-content/uploads/2020/06/10135918/2018-07-01_Mississauga_Heritage_Register_Web.pdf
- Credit River Watershed and Region of Peel Natural Areas Inventory Project. (2011). Credit River Watershed and Region of Peel NAI Report. Volume 1.
- Crins, W.J., P.A. Gray, P.W.C. Uhlig & M.C. Wester. (2009). *The Ecosystems of Ontario, Part 1: Ecozones and Ecoregions. Technical Report SIB TER IMA TR-01*. Ontario Ministry of Natural Resources, Science & Information Branch (Inventory, Monitoring and Assessment Section), Peterborough, Ontario.
- Dodd, C. F., Poulton, D. R., Lennox, P. A., Smith, D. G., & Warrick, G. A. (1990). The Middle Ontario Iroquoian Stage. In C. J. Ellis & N. Ferris (Eds.), *The Archaeology of Southern Ontario to A.D. 1650* (pp. 321-360). London, Ontario: London Chapter, Ontario Archaeological Society.
- Duric, D. (2017). 12 Mile Creek, 16 Mile Creek and Credit River Reserves Treaty Nos. 22 and 23 (1820). Retrieved 9-Dec-20 at: http://mncfn.ca/treaty2223/.
- Ellis, C.J. & D.B. Deller. (1990). Paleo-Indians. In C.J. Ellis & N. Ferris (Eds.) *The Archaeology of Southern Ontario to A.D. 1650* (pp. 37-74). London, Ontario: London Chapter, Ontario Archaeological Society.
- Ellis, C.J., I.T. Kenyon, & M.W. Spence. (1990). The Archaic. In C.J. Ellis & N. Ferris (Eds.) *The Archaeology of Southern Ontario to A.D. 1650* (pp. 65-124). London, Ontario: London Chapter, Ontario Archaeological Society.
- Ferris, N. & Spence, M.W. (1995). The Woodland Traditions in Southern Ontario. *Revista de Arquologia Americana* 9: 83-138.
- Fox, W (1990). The Middle Woodland to Late Woodland Transition. In C.J. Ellis & N. Ferris (Eds.) *The Archaeology of Southern Ontario to A.D. 1650* (pp. 177-181). London, Ontario: London Chapter, Ontario Archaeological Society.
- Heritage Mississauga. (2018). Burnhamthorpe. Retrieved at: https://heritagemississauga.com/burnhamthorpe/
- Hoffman, D. W. & N. R. Richards. (1953). *Soil Survey of Peel County*. Report No. 18 of the Ontario Soil Survey. Guelph: Ontario Agricultural College.
- Johnston, Darlene. (2003). "Litigating Identity: The Challenge of Aboriginality. LLM Thesis, University of Toronto.

- Migizi, G., & Kapyrka, J. (2015). Before, During, and After: Mississauga Presence in the Kawarthas. In D. Verhulst, *Peterborough Archaeology* (pp. 127-136). Peterborough, Ontario: Peterborough Chapter of the Ontario Archaeological Society.
- Mika, N. & Mika, H. (1983). *Places in Ontario: Their Name Origins and History, Part III, N-Z.* Belleville, ON: Mika Publishing Company.
- Ministry of Indigenous Affairs. (2019). Map of Ontario Treaties and Reserves. *Head of the Lake Purchase: Treaty 14*. Retrieved From: https://www.ontario.ca/page/map-ontario-treaties-and-reserves#16.
- Ministry of Heritage, Sport, Tourism, and Culture Industries. (2020, December 12). Sites within a One Kilometre Radius of the Project Area. Provided from the Ontario Archaeological Sites Database.
- Ministry of Heritage, Sport, Tourism, and Culture Industries. (2011). *Standards and Guidelines for Consultant Archaeologists*. Toronto, Ontario: Queen's Printer for Ontario.
- Mississaugas of the Credit First Nation (MCFN) (2019). *Head of the Lake, Treaty No.14 (1806)*. Retrieved 19 Dec 2019 from: http://mncfn.ca/head-of-the-lake-purchase-treaty-14/.
- Noble, W. (1975). Van Besien: A Study in Glen Meyer Development. Ontario Archaeology 24: 3-95.
- Plummer, K. (2015). *Historicist: The Credit Village*. Retrieved 10-Dec-20 at https://torontoist.com/2015/06/historicist-the-credit-village/.
- Ramsden, P. G. (1990). The Hurons: Archaeology and Culture History. In *The Archaeology of Southern Ontario to A.D. 1650*, Ed C.J. Ellis and N. Ferris, pp. 361-384. Occasional Publication of the London Chapter, OAS No. 5. London: Ontario Archaeology Society.
- Riendeau, R. E. (1985). Mississauga: An illustrated History. Windsor Publications, Ltd., Canada.
- Rowe, J. S. (1972). *Forest Regions of Canada*. Department of the Environment Canada Forestry Services, Ottawa, Ontario.
- Smith, D. (1990). Iroquoian Societies in Southern Ontario: Introduction and Historic Overview. In C.J. Ellis & N. Ferris (Eds.) *The Archaeology of Southern Ontario to A.D. 1650* (pp. 279-290). London, Ontario: London Chapter, Ontario Archaeological Society.
- Smith, D. G. & G. W. Crawford. (2002). Recent Developments in the Archaeology of the Princess Point Complex in Southern Ontario. In J. P. Hart & C. B. Reith (Eds.) *Northeast Subsistence-Settlement Change: A. D. 700-1300*, (pp. 97-116). New York State Museum Bulletin 496.
- Spence, M.W., R.H. Pihl, & C. Murphy. (1990). Cultural Complexes of the Early and Middle Woodland Periods. In C.J. Ellis & N. Ferris (Eds.) *The Archaeology of Southern Ontario to A.D. 1650* (pp. 125-170). London, Ontario: London Chapter, Ontario Archaeological Society.
- Statistics Canada. (2016). 2016 Community Profiles. 2016 Canadian Census. Retrieved 23-Oct-20 at: https://www12.statcan.gc.ca/census-recensement/2016/dp-
- Steckley, J. (1987). "Teyoyagon: Split in Two." Arch Notes 87, no. 2 (March-April): 20.
- The Archaeologists Inc. (2019). Stage 1 & 2 Archaeological Assessment for 900 Mississauga Heights Drive, Part 1 Plan of Part of Lots 1 and 2, Registered Plan 342, Part of Lots 6 & 7, Range 3, Credit River I.R., (Geographic Township of Toronto, Peel County), Now in the City of Mississauga. Ontario Public Register of Archaeological Reports under MHSTCI file PIF# P052-0939-2018

- Tremaine, G. R. & G. M Tremaine. (1862). *Map of the County of Peel, Canada West*. Toronto: G. R. & G.M. Tremaine, 1859.
- Walker & Miles. (1877). Illustrated Historical Atlas of the County of Peel, Ontario. Toronto: Walker & Miles.
- Warrick, G. (2000). The Precontact Iroquoian Occupation of Southern Ontario. *Journal of World Prehistory* 14(4), 415-456.
- White, Richard. (1991). *The Middle Ground: Indians, Empires, and Republics in the Great Lakes Region, 1650-1815*. New York and Cambridge: Cambridge University Press.
- Williamson, R.F. (1990). The Early Iroquoian Period of Southern Ontario. In C.J. Ellis & N. Ferris (Eds.) *The Archaeology of Southern Ontario to A.D. 1650* (pp. 291-320). London, Ontario: London Chapter, Ontario Archaeological Society.
- Wright, J. V. (1966). The Ontario Iroquois Tradtion. Ottawa: National Museum of Canada, Bulletin No. 210.

7 IMAGES



Image 1: Field Conditions of 904 Mississauga Heights Drive with driveway disturbance, facing southeast.



Image 2: Field Conditions of 904 Mississauga Heights Drive with driveway disturbance, facing southeast.



Image 3: Field Conditions of 904 Mississauga Heights Drive, wooded area. Facing West.



Image 4: Field Conditions of 904 Mississauga Heights Drive, wooded area. Facing Southeast.



Image 5: Field Conditions of 904 Mississauga Heights Drive, front lawn garden.



Image 6: Field Conditions of 904 Mississauga Heights Drive, front lawn.



Image 7: Field Conditions of 904 Mississauga Heights Drive, front lawn.



Image 8: Field Conditions of 904 Mississauga Heights Drive, front lawn.



Image 9: Field Conditions of 904 Mississauga Heights Drive, backyard.



Image 10: Field Conditions of 904 Mississauga Heights Drive, backyard.



Image 11: Field Conditions of 904 Mississauga Heights Drive, backyard.



Image 12: Field Conditions of 904 Mississauga Heights Drive, backyard.



Image 13: Field Conditions of 904 Mississauga Heights Drive, front yard garden.



Image 14: Field Conditions of 904 Mississauga Heights Drive, front yard garden.



Image 15: Field Conditions of 904 Mississauga Heights Drive, wooded area.



Image 16: Soil conditions during Test Pit Survey.



Image 17: Soil conditions during Test Pit Survey.

Image 18: Soil conditions during Test Pit Survey.



Image 19: Soil conditions during Test Pit Survey.



Image 20: Soil conditions during Test Pit Survey.





Image 21: Soil conditions during Test Pit Survey.

Image 22: Soil conditions during Test Pit Survey.



Image 23: Test Pit Survey of 904 Mississauga Heights Drive at 5 m intervals



Image 24: Test Pit Survey of 904 Mississauga Heights Drive at 5 m intervals



Image 25: Test Pit Survey of 904 Mississauga Heights Drive at 5 m intervals, wooded area.



Image 26: Test Pit Survey of 904 Mississauga Heights Drive at 5 m intervals, front lawn.



Image 27: Test Pit Survey of 904 Mississauga Heights Drive at 5 m intervals, front lawn.



Image 28: Test Pit Survey of 904 Mississauga Heights Drive at 5 m intervals, front lawn.



Image 29: Test Pit Survey of 904 Mississauga Heights Drive at 5 m intervals, backyard.



Image 30: Test Pit Survey of 904 Mississauga Heights Drive at 5 m intervals, backyard.



Image 31: Test Pit Survey of 904 Mississauga Heights Drive at 5 m intervals, backyard.



Image 32: Test Pit Survey of 904 Mississauga Heights Drive at 5 m intervals, front yard.



Image 33: Test Pit Survey of 904 Mississauga Heights Drive at 5 m intervals, front lawn.



Image 34: Test Pit Survey of 904 Mississauga Heights Drive at 5 m intervals, front lawn.



Image 35: Test Pit Survey of 904 Mississauga Heights Drive at 5 m intervals, wooded area.



Image 36: Test Pit Survey of 904 Mississauga Heights Drive to within 1 m of standing structures.



Image 37: Test Pit Survey of 904 Mississauga Heights Drive to within 1 m of standing structures.



Image 38: Test Pit Survey of 904 Mississauga Heights Drive to within 1 m of standing structures.



Image 39: Natural Test Pit



Image 40: Natural Test Pit



Image 41: Natural Test Pit



Image 42: Natural Test Pit



Image 43: Natural Test Pit



Image 44: Excessive slope towards Credit Valley.



Image 45: Excessive slope towards Credit Valley.



Image 46: Excessive slope towards Credit Valley.



Image 47: Excessive slope towards Credit Valley.



Image 48: Test pit capped by driveway disturbance.



Image 49: Test pit capped by driveway disturbance.



Image 50: Disturbed test pit with mixture of brownish yellow and light brown sand fill with dark brown and black sandy loam lenses.



Image 51: Disturbed test pit with mixture of brownish yellow and light brown sand fill with dark brown and black sandy loam lenses. Profile of previous.



Image 52: Disturbed test pit with mixture of brownish yellow and light brown sand fill with dark brown and black sandy loam lenses.



Image 53: Disturbed test pit with predominantly light brownish yellow fill. Note: geotextile and gravel underneath and on top of subsoil.



Image 54: Close up of previous test pit. Note: geotextile and gravel on top of subsoil.



Image 55: Disturbed test pit with mixture of light brownish yellow and light brown sand fill with dark brown and black sandy loam lenses.



Image 56: Disturbed test pit with mixture of brownish yellow and whitish gray sand fill for irrigation system.



Image 57: Disturbance of light brownish yellow sand fill capping buried topsoil.

8 FIGURES

PROJECT NO: DATE: DECEMBER 2020 PROJECT: CREDITS: STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT 904 MISSISSAUGA HEIGHTS DRIVE 500 1,000 m

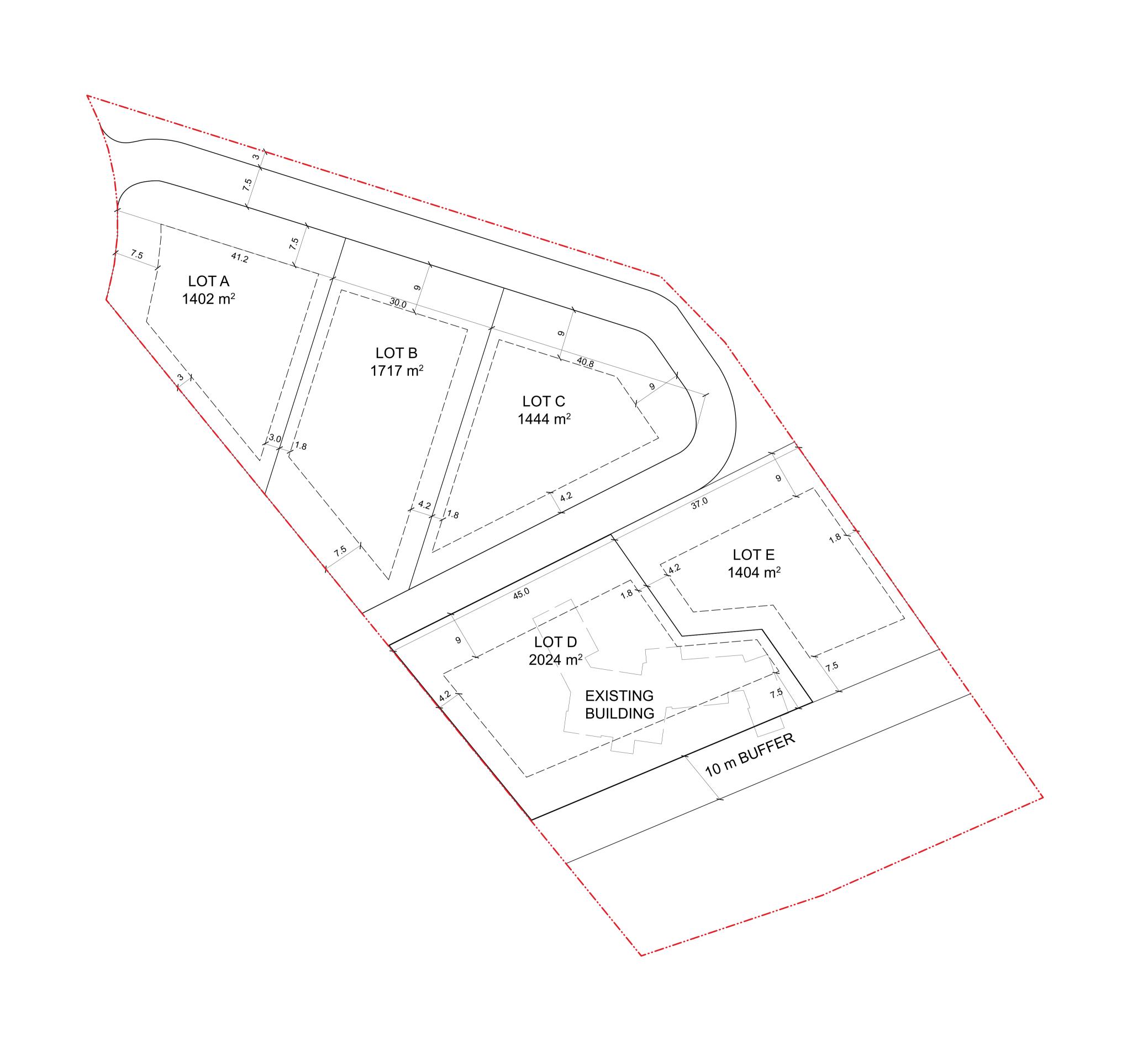
PROJECT NO: DATE: DECEMBER 2020 40 m







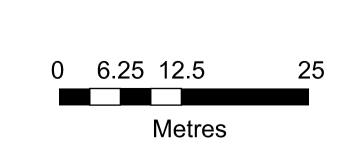
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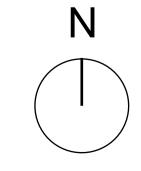


Sajecki→ Planning

904 MISSISSAUGA HEIGHTS DR MISSISSAUGA, ON

PROPOSED SITE PLAN





MEASURED IN METRES

FEATURES OF ARCHAEOLOGICAL POTENTIAL

APPENDIX

FEATURES INDICATING ARCHAEOLOGICAL POTENTIAL

The following are features or characteristics that indicate archaeological potential:

- Previously identified archaeological sites.
- Water sources:
- 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, relic river or stream channels, 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.
- Resource areas, including:
- Food or medicinal plants (e.g. migratory routes, spawning areas, prairie).
- Scarce raw materials (e.g. quartz, copper, ochre, or outcrops of chert).
- Early Euro-Canadian industry (e.g. fur trade, logging, prospecting, mining).
- Areas of early Euro-Canadian 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.
- 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 or that is federal, provincial or municipal historic landmark or site.
- Property that local histories or informants have identified with possible archaeological sites, historic events, activities, or occupations

Source

Ontario Ministry of Heritage, Sport, Tourism, and Culture Industries

2011 Standards and Guidelines for Consultant Archaeologists

Section 1.3